

EU Environmental Policies and Strategies in South-Eastern Europe

Training guidelines for involving CSOs
from SEE in the implementation of EU
nature-related legislation

Edited by Veronika Ferdinandova

INTERNATIONAL UNION FOR CONSERVATION OF NATURE



This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union.





IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges.

IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGOs, the UN and companies together to develop policy, laws and best practice.

IUCN is the world's oldest and largest global environmental organization, with more than 1,000 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world.

www.iucn.org

The designation of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

For the purpose of this publication the name Macedonia has been used to refer to Former Yugoslav Republic of Macedonia.

The views expressed in this publication do not necessarily reflect those of IUCN.

This publication has been made possible in part by funding from the EU.

Published by: IUCN, Gland, Switzerland and Belgrade, Serbia

Copyright: © 2011 International Union for Conservation of Nature and Natural Resources

Reproduction of this publication for educational or other non-commercial purposes is authorized without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder.

Collaborators: Lawrence Jones-Walters, Kristijan Čivić (ECNC), Delphine Morin, Danielle Boivin (Biotope), Mark Redman (ENRD)

Design and layout: Imre Sebestyen, jr. / UNITgraphics.com

Produced by: IUCN Programme Office for South-Eastern Europe

Printed by: Stojkov, Novi Sad

Available from: IUCN Programme Office for South-Eastern Europe

Dr Ivana Ribara 91

11070 Belgrade, Serbia

see@iucn.org

Tel +381 11 2272 411

Fax +381 11 2272 531

www.iucn.org/southeasterneurope

2011

Table of Contents

Preface	9
Acknowledgements	10
ACRONYMS	11
Part A: Ecological Networks and Green Infrastructure	14
I.Theory of ecological networks.....	16
II.Policy framework of ecological networks	18
1.International policies	19
2.EU policies.....	20
III.Ecological networks in practice.....	21
1.MAK-NEN - an example of a National Ecological Network.....	21
2.Spatial planning and sectoral integration	21
3.Ecological networks: costs, benefits and ecosystem services	22
4.Ecological networks and climate change	23
IV.Ecological Networks and Green Infrastructure	24
V.Stakeholder participation and capacity building of civil society.....	25
VI.Practical exercises	29
VII.References.....	32
Part B: Environment Impact Assessment and Strategic Environmental Assessment	36
I.Introduction to EIA and SEA	38
II.Overview of the EIA and SEA procedures	39
1.The basics of the EIA procedure	39
2.The basics of the SEA procedure	39
III.SEA and EIA: two complementary decision making tools	40
1.The SEA, an assessment of the sustainability of a general economic development framework on a territory	40
2.The EIA: an assessment of the sustainability of a single project on a limited project area	40
IV.The role of civil society organizations in SEAs and EIAs	42
1.Consultation of civil society.....	42
2.The limitations of public consultation in the SEA and EIA Directives	43
V.Practical exercises	43
VI.References	44
Part C: Ecological connectivity	46
I.Ecological connectivity: a solution to prevent biodiversity loss	48
1.Brief introduction to the concept of ecological connectivity	48
2.The promotion of ecological connectivity in the international regulatory framework	48
II. Methodology for assessing ecological continuity on a territory	50

1.Assessing landscape fragmentation	50
2.Identification of ecological connectivity	51
III.Practical exercises	51
IV.References	52
Part D: Natura 2000	54
I.Natura 2000: the ecological network of the European Union.	56
II.Benefits and limits of the Natura 2000 network.	57
1.Benefits	57
2.Limits	59
III.Designating a Natura 2000 site	59
1.The three steps leading to the selection of Special Areas of Conservation (SACs)	59
2.How to chose Sites of Community Importance.	60
3.From IBAs to SPAs	62
IV.Managing a Natura 2000 site	64
1.Elaborating Natura 2000 Management Plans	64
2.Reporting for the Habitats Directive	64
V.Appropriate assessment of plans and projects significantly affecting Natura 2000 sites	65
VI.The role of the civil society in the development of Natura 2000: a new governance experience to be maintained	67
1.Public participation in the designation of Natura 2000 sites	67
2.Public participation and Natura 2000 Management Plans	67
3.Public participation and Appropriate Assessments for Natura 2000 sites	68
VII.Practical exercises	69
VIII.References	72
Part E: EU Rural Development Policy and Nature Conservation—Concept and Implementation Measures	76
I.EU Rural Development Policy	78
1.Background	78
2.Current (2007–2013) EU Support for Rural Development	79
3.Natura 2000 Payments (EAFRD measures 213 + 224)	79
4.Agri-Environment Payments (EAFRD measure 214)	81
4.1 How do agri-environment payments work?	83
4.2. IPARD Preparatory Actions for the Implementation of Agri-environmental Measures	83
II.High Nature Value (HNV) Farming.	84
1.Definition of High Nature Value (HNV)	84
2.Key Characteristics of HNV Farming.	85
3.HNV Farming in Southern Transylvania (Romania)	87
4.Public Benefits of HNV farming	87

4.1 Conservation of Biodiversity	87
4.2 Maintenance of Cultural Landscape	89
4.3 Mitigation of Climate Change	89
5. Policy Support for HNV Farming	90
III. Future Policy Developments	92
IV. Practical exercises	92
V. References	94
ANNEXES	96
Annex I. Important environmental definitions	98
Annex II. Public participation in EIAs, SEAs and AAs	99
Annex III. Communication tips in public participation events	100
Annex IV. Giving your opinion about a project	101

Preface

By Veronika Ferdinandova

The countries of the Western Balkans share a similar political setting and development issues. Currently, they are all heading towards the EU and therefore their governments have assumed the demanding task of implementing the EU acquis. One of the cornerstones in this process is engaging and cooperating with CSOs who can provide expertise, resources and information channels, as well as express society's opinion, concerns and needs. The pre-accession period is important for several reasons and largely predetermines processes after accession—it is a moment for designing the national legislation and embedding EU standards, and it is also a time for transforming and empowering a society capable of shaping its own environment. According to the EC progress reports on enlargement for 2011, the countries of the Western Balkans generally recognize democracy and human right principles, still consultation with CSOs is modest and they remain excluded from the decision-making process. Therefore further support for CSOs development and strengthening, increased transparency and better access to information are needed.

As part of the EU efforts to protect its natural environment, in early 2011 the Council of Ministers endorsed the EU Biodiversity Strategy, including six targets towards reversing the decline of biodiversity and ecosystems by 2020. These range from properly managing the EU's Natura 2000 network to better protection for ecosystems, greater use of green infrastructure, and more sustainable agriculture and forestry. The Western Balkan countries are by far among the richest areas in Europe in terms of ecosystems and species diversity, and as future EU Member States they should reach the level of EU standards in order to contribute to its common targets.

There are a number of EU policy areas that could have a direct or indirect impact on nature and biodiversity, and without effective application of cross-compliance principles, conservation efforts cannot be successful. The current publication does not make an attempt to cover all those areas but instead it presents in detail those most relevant to the protection of nature. It covers the concept of Green Infrastructure as an effective approach of combating the increasingly fragmented European landscape. The concept components, among others, include ecological connectivity and its implementation in practice through Environmental Impact Assessments (EIAs), Strategic Environmental Assessment (SEA), Appropriate Assessments (AA) and land use planning documents. Ecological networks, as one of the most important tools for effective conservation, are presented through the special case of the Natura 2000 network. The section on Natura 2000 explains the steps, from the selection and designation of Natura 2000 sites to the process of management planning and monitoring the efficiency of conservation and restoration measures. The final section gives an overview of the most influential policy in the EU since its establishment and the way it was steered during recent decades in order to bring about greater benefits for the environment, namely the Common Agricultural Policy and its second pillar Rural Development.

Special attention in all sections of the publication is given to the role CSOs can play in the planning and implementation of conservation measures in the wider countryside and engagement of other stakeholders for coherent decision making. Mechanisms of involvement of CSOs during decision-making in the processes of EIA and SEA, Natura 2000 designation and management, and involvement of CSOs in the process of development of the National Rural Development Strategic Plans and Programmes are outlined in the theoretical and practical sections.

The current publication was developed within the project “EU Support to Partnership Actions EU Environmental Policies and Strategies in South Eastern Europe: Capacity Building for the Implementation of EU Environmental Policies and Strategies in Macedonia, Montenegro and Serbia”. The publication is intended to assist conservation experts in their effective engagement in national conservation efforts and to provide them with a tool for delivering knowledge to CSO members. It contains theoretical sections under each topic, practical exercises and a section listing further reading and references to various sources of information, such as websites, presentations, guidelines, etc.

We hope that the current publication will help CSOs to increase their understanding of EU nature-relevant legislation and their role in the implementation of this legislation in their countries.

This publication has been translated into Macedonian, Montenegrin and Serbian to enable all interested CSOs to make a difference at the local and the national level.

Acknowledgements

We would like to thank the authors of the chapters who comprehensively presented the policy fields with clear-cut theoretical information and practical activities: for the section on Ecological networks and green infrastructure Lawrence Jones-Walters & Kristijan Čivić, ECNC-European Centre for Nature Conservation; for EIA, SEA, Ecological Connectivity and Natura 2000 Delphine Morin and Danielle Boivin, Biotope; for Rural Development Mark Redman, ENRD. We appreciate the experience and advice shared by Andrej Kovachev, Balkani Wildlife Society, Alexander Dountchev, Association of Parks in Bulgaria and Vyara Stefanova, European Forum on Nature Conservation and Pastoralism on those topics during the study visit in Bulgaria.

We would also like to acknowledge the project partners from Macedonia, Montenegro and Serbia, respectively Ecologists' Movement of Macedonia, Greens of Montenegro and Bird Protection and Study Society of Serbia and all experts who inspired participants at the workshops, training and the study tour with their enthusiasm.

We extend our thanks to the translators and proofreaders: Linda Zanella, Jelena Pantić, Zen Translation, Jadranka Nikolic, Robertina Brajanoska and Jelena Burazerovic.

ACRONYMS

AA	Appropriate assessment
AEWA	Agreement on conservation of African-Eurasian Migratory Waterbirds
ASCI	Area of Special Conservation Interest
CAP	Common Agricultural Policy
CBD	Convention on Biological Diversity
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of Parties
CSO	Civil Society Organization
EAFRD	European Agricultural Fund for Rural Development
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECNC	European Centre for Nature Conservation
EEA	European Environment Agency
EEC	European Economic Community
EHF	European Habitats Forum
EIA	Environmental Impact Assessment
ENRD	European Network for Rural Development
ETC/BD	European Topic Centre on Biological Diversity
EU	European Union
EU-27	The 27 Member States of the European Union
GDP	Gross Domestic Product
HD	Habitats Directive
HNV	High Nature Value
IBA	Important Bird Area
IPA	Instrument for Pre-Accession Assistance
IPARD	Instrument for Pre-Accession Assistance – Rural Development
IROPI	Imperative Reasons of Overriding Public Interest
IUCN	International Union for Conservation of Nature
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale (Links between the Rural Economy and Development Actions)
MA	Millennium Ecosystem Assessment
MEA	Multilateral Environmental Agreement
NGO	Non Governmental Organization
PA	Protected Area
PEBLDS	Pan-European Biological and Landscape Diversity Strategy
PEEN	Pan-European Ecological Network
RDP	Rural Development Programme

RDR	Rural Development Regulation
SAC	Special Area of Conservation
SCI	Site of Community Importance
SEA	Strategic Environmental Assessment
SEE	South-Eastern Europe
SPA	Special Protection Areas
TEEB	The Economics of Ecosystems and Biodiversity
UNECE	United Nation Economic Commission for Europe
UNEP	United Nations Environment Programm
UNDP	United Nations Development Programm
WB	World Bank
WFD	Water Framework Directive
WWF	World Wildlife Fund

Part A:

Ecological Networks and

Green Infrastructure

Lawrence Jones-Walters and Kristijan Čivić, ECNC



I. Theory of ecological networks

The concept of ecological networks is not new. The model has developed over the past 35-40 years in the context of increasingly fragmented European landscapes, beginning in the 1970s and 1980s, in countries where a strong land use planning tradition had created the institutional environment for allocating functions at the landscape scale. The concept is the translation of ecological knowledge on fragmentation processes in the landscapes of Europe and its consequences for populations of natural species.

Whether protected or not, natural areas often represent isolated islands of varying size, though often too small, in the midst of intensive agriculture, built development or transport and energy infrastructure. Habitat isolation and loss prevent natural species from reaching migration and dispersal destinations, force them to live in habitats that may not be large enough for them to maintain viable populations, reduce or remove the potential for them to achieve genetic exchange, and prevent them from responding to the consequences and impacts of climate change, which is likely to force many species to migrate to new habitats.

Protected areas alone cannot therefore be sufficient to conserve biodiversity, or to meet the national, regional or international targets and commitments on biodiversity conservation. While many species are increasingly threatened throughout their distribution range, protected areas can only offer small islands of protection. Many protected areas are too small to contain viable populations of the species they aim to protect, especially in the case of large mammals such as Brown bear, Wolf or Lynx.

The main goal of the ecological networks is to conserve biodiversity by maintaining and strengthening the integrity of ecological and environmental processes, and to counter the above effects by linking fragmented ecosystems in order to promote the exchange between populations of species and to enable the migration and spread of species. As a conservation approach, ecological networks are characterized by two generic objectives, namely (1) maintaining the functioning of ecosystems as a means of facilitating the conservation of species and habitats, and (2) promoting the sustainable use of natural resources in order to reduce the impacts of human activities on biodiversity and/or to increase the biodiversity value of man-managed landscapes (Bennett & Wit, 2001).

Ecological networks are based around the idea of core areas, ecological corridors, buffer zones and restoration areas. They are designed and managed in such a way as to preserve biological diversity and to maintain or restore ecosystem services through the interconnectivity of its physical elements within the landscape. They should also allow for the sustainable use of natural resources and the maintenance of existing social and institutional structures (loosely based on UNEP, 2003). The ecological network concepts makes a major contribution to the overall effort to protect, maintain and enhance biodiversity. The concept has gained significant political support over the past decade and a half and has been accepted in many European countries.

All ecological networks share common conservation objectives and operational features, as well as a characteristic spatial architecture. This architecture is a derivation of spatial relationships and processes that are key to biodiversity conservation, particularly the distribution of local species populations, arrangement of habitats, geographical processes and human activities. Specific functions are allocated to different areas depending on their respective ecological value and natural-resource potential (Bennett, 2004). These functions are reflected in a coherent system of ecological network elements (Figure 1):

- **Core areas**, where the conservation of biodiversity takes primary importance, even if the area is not legally protected. The primary objective of core areas is to ensure the conservation of a representative array of characteristic habitats and species populations;
- **Corridors**, which serve to conserve vital ecological or environmental interactions by maintaining connectivity between the core areas where necessary. These linkages may be of three broad kinds:
 - *linear corridors* in the form of landscape elements such as hedges, shelterbelts, woods and rivers or infrastructure such as tunnels and ecoducts that allow species to traverse an obstacle,
 - *'stepping stones'*, as an array of small patches of habitat that individuals use during movement for shelter, feeding, resting and other ecological functions,
 - *landscape corridors* are various forms of interlinked landscape matrices, usually in the form of extensively managed landscapes, that retain sufficient natural elements to allow individuals to survive during movement between habitat patches (Figure 2).

- **Buffer zones**, which insulate areas where biodiversity conservation is the primary objective from potentially damaging external influences, and particularly those caused by inappropriate forms of land use. This function therefore permits in principle a range of sustainable human activities;
- **Restoration areas** are those where the degraded functions of an ecosystem can be restored, especially in cases where habitat fragmentation disables normal functioning of ecosystems or endangers the local populations. These areas are important because they can improve ecological connectivity and functionality of the system. This concept includes the development or redevelopment of biodiversity values;
- **Sustainable use areas**, which may surround the network and where opportunities are exploited within the landscape mosaic for the sustainable use of natural resources together with the maintenance of most ecosystem services.

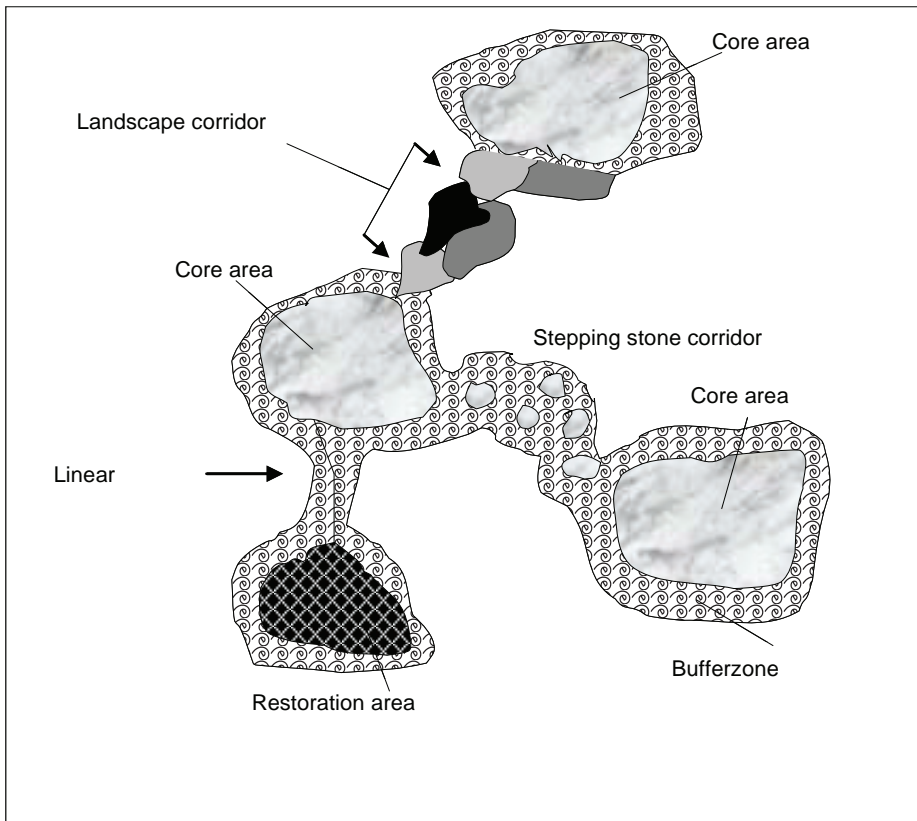


Figure 1. The ecological network model (Source: Bouwma et al., 2002).

The ecological network model can be applied at various scales. Many ecological networks encompass a geographical region, such as a watershed, a mountain range or a biome, e.g. temperate broad-leaf forest. On the other hand, if it is a part of government policy or planning, it can be a national, regional (e.g. county or province) or even transboundary network between neighbouring countries. At present, it is possible to find examples of the ecological network model being used as a strategic approach to biodiversity conservation at the supra-continental scale, all the way down to detailed conservation plans at the local (e.g. municipal) level.

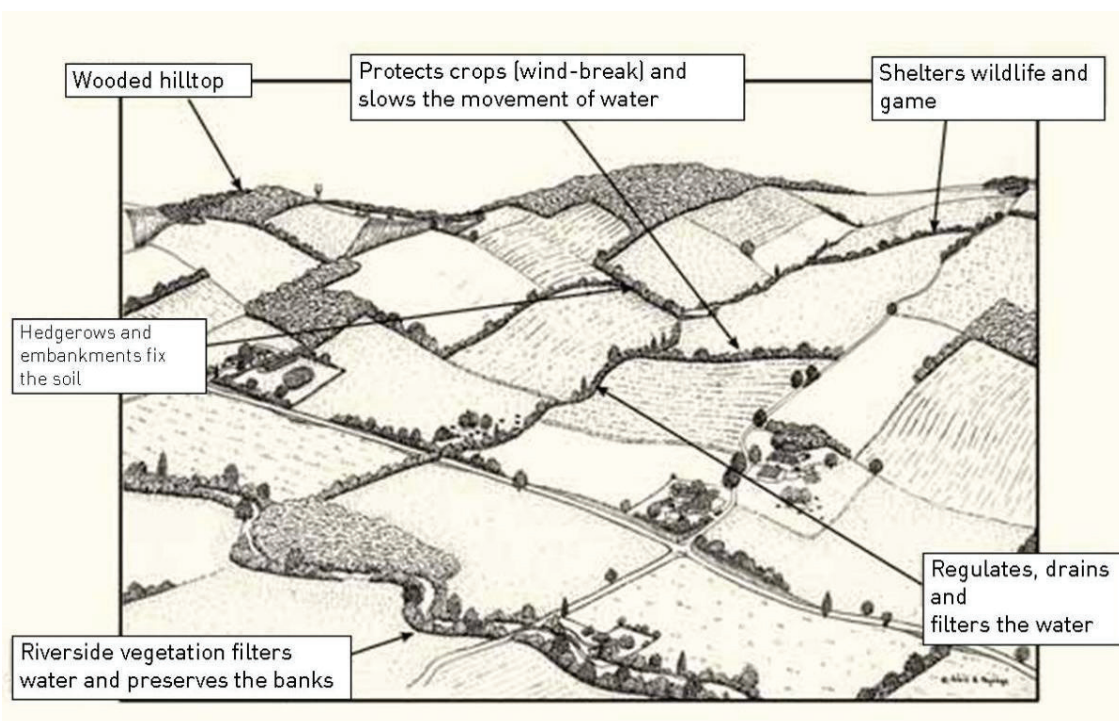


Figure 2. Multifunctional landscape (Source: *Arbres et Paysages*, p. 32, in Bonnin et al., 2007).

II. Policy framework of ecological networks

The concept of ecological networks is implicit in a variety of international conventions (Ramsar Convention, Bern Convention), European agreements (Habitats and Birds Directives) and related policy implementation (Natura 2000 and Emerald Networks). It has become operational in national and European strategies (Jongman *et al.*, 2004). Thus, the development of a European Ecological Network forms one of the priorities and activities of European nature conservation under the Pan-European Biological and Landscape Diversity Strategy (PEBLDS) which was endorsed by 54 Pan-European countries in Sofia, in 1995. In PEBLDS, the aims of the Pan-European Ecological Network (PEEN) are to set out in order to ensure that (see also Rientjes & Roumelioti, 2003):

- a full range of ecosystems, habitats, species and landscapes of European importance are conserved;
- habitats are large enough to guarantee key species a favourable conservation status;
- there are sufficient opportunities for species dispersal and migration;
- damaged parts of the key environmental systems are restored;
- the key environmental systems are buffered from threats.

Several Multi-lateral Environmental Agreements (MEAs) and international and regional policy processes have created an enabling framework for the development and implementation of ecological networks at different levels. These agreements and policies either refer directly to ecological networks (like the PEEN or the Carpathian Convention), or they embrace provisions that are relevant from an ecological connectivity perspective (e.g. recognizing the importance of maintaining ecological coherence and connectivity as a contribution to biodiversity conservation, designating protected areas and buffer zones, protecting migratory species, etc.). The following sections will provide an overview of the most relevant international and regional MEAs, as well as European policy processes that are most relevant for the establishment of ecological networks.

1. International policies

Convention on Biological Diversity

At the global level, the Convention on Biological Diversity (CBD) provides the main framework for the conservation of the world's biodiversity. The convention text does not explicitly mention the concept of ecological networks. However, in its Article 8 (d) and (e), it emphasizes the need to preserve nature outside of protected areas and the importance of buffer areas by calling on the Parties to "promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas." Furthermore, the CBD Programme of Work on Protected Areas specifically emphasizes the need for ecological connectivity and refers to the concept of ecological networks. Its target under Goal 1.2 is to ensure that all protected areas and protected area systems are integrated into the wider land- and seascape by 2015. This should be achieved, *inter alia*, by taking into account ecological connectivity and, where appropriate, the concept of ecological networks (CBD, 2004). In addition, the Plan of Implementation adopted at the 2002 World Summit on Sustainable Development gives a prominent place to promoting the development of national and regional ecological networks and corridors in order to achieve the 2010 biodiversity targets (CBD, 2002).

Ramsar Convention

The Convention on Wetlands of International Importance (Ramsar Convention) has been a pioneer in promoting the ecosystem approach by considering wetland ecosystems in their entirety. The Ramsar Convention pays special attention to the conservation of migratory bird populations, which raises issues concerning connectivity between core areas. Furthermore, the New Guidelines for Management Planning for Ramsar Sites and other Wetlands adopted by the 8th Conference of the Parties (COP) in 2002 recommend a zoning system that should consider the importance of connectivity among the core areas of the Ramsar sites (Ramsar, 2002; paragraphs 55–57). Furthermore, the COP also urged Parties to take joint measures to ensure the management of transboundary wetlands.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) aims at conserving terrestrial, marine and avian migratory species throughout their range. Such restoration or protection of migration routes is one of the functions inherent in the ecological network concept (Bonin *et al.*, 2007). The agreements negotiated under CMS are equally important in this regard. For example, the African-Eurasian Waterbird Agreement (AEWA) relates to bird species' entire ranges in an effort to ensure that there are no breaks in the protection afforded along their migration routes.

Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) has the objective to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the cooperation of several States. Article 4 of the Bern Convention stresses the importance of transboundary protected areas. Furthermore, the Standing Committee of the Bern Convention has repeatedly invited States to introduce ecological networks. For example, its Recommendation No. 25 on the conservation of natural areas outside of protected areas encourages the conservation, implementation of mitigation measures, and, where necessary, the restoration of ecological corridors. This is suggested in particular in relation to the building and maintenance of roads, railways and high-voltage lines, and interventions on watercourses (Council of Europe, 1991). Following these Recommendations, the process for setting up the Emerald Network of Areas of Special Conservation Interest (ASCIs) began in 1996, with the possibility of participation by 'observer countries'.

Landscape Convention

The European Landscape Convention (Florence Convention) promotes the protection, management and planning of European landscapes and organizes European cooperation on landscape issues. It was the first international treaty to be exclusively concerned with all dimensions of the European landscape. The European Landscape Convention is part of the Council of Europe's work on natural and cultural heritage, spatial planning and the environment (Brajanoska *et al.*, 2009).

Carpathian Convention

The Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) foresees that its Contracting Parties "shall pursue a comprehensive policy and cooperate for the protection and sustainable development of the Carpathians, with a view to *inter alia* improving quality

of life, strengthening local economies and communities, and conservation of natural values and cultural heritage.” This Convention is the first international agreement to refer explicitly to the need of States to develop and implement a Carpathian ecological network. Indeed, Article 4(1) of the Convention requests Parties to “take appropriate measures to ensure a high-level of protection and sustainable use of natural and semi-natural habitats, their continuity and connectivity”. Furthermore, the Convention calls for integrated river basin management in order to reduce fragmentation of aquatic habitats and recognizes the importance of biodiversity integration in sectoral policies (Bonin *et al.*, 2007).

2. EU policies

The European Union has been one of the most pro-active regional organizations in the field of environmental protection and biodiversity conservation. The EU has developed different legal instruments to protect and conserve biodiversity. Some of these are related to the establishment or management of ecological networks. The following section will provide an overview of those EU legal instruments that offer the most interesting opportunities for the establishment of ecological networks.

Birds and Habitats Directives and Natura 2000

The Natura 2000 network is an EU-wide network of designated nature conservation areas that aims at assuring the long-term survival of Europe’s most valuable and threatened species and habitats. Natura 2000 comprises Special Protection Areas (SPAs) under the EC Birds Directive (Council Directive 79/409/EEC), and Special Areas of Conservation (SACs) under the EC Habitats Directive (Council Directive 92/43/EEC).

There are several steps in fulfilling the objectives of the Natura 2000 network. The first phase of implementation has focused on the proposal and designation of sites for species and habitats of European interest by all Member States. The next steps will aim at establishment of the operational character of the network, to ensure that species and habitats of Community interest in the designated sites are maintained in a ‘favourable conservation status’. Member States should establish the necessary conservation measures, including preparing management plans and adapting appropriate national statutory, administrative or contractual measures. However, it is clearly stated that conservation measures should ‘take account of economic, social, and cultural requirements and the regional and local characteristics of the area’ in order to maintain dynamic rural areas.

Natura 2000 is an example of an EU-wide ecological network-building process. Through involvement of all relevant stakeholders—landowners, land users, local, national and European authorities—across all sectors, it aims at ensuring biodiversity conservation beyond national boundaries.

Connectivity measures are required to maintain or restore the coherence of the Natura 2000 network:

Article 3(3) of the Habitats Directive states that “*where they consider it necessary, Member States shall endeavor to improve the ecological coherence of Natura 2000 by maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora, as referred to in Article 10*”;

Additionally, Article 6(4) stipulates that if a plan or project with negative impacts on a site is to take place (due to “imperative reasons of overriding public interest”), the Member States are to take “*all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected*”;

There are also more general provisions related to connectivity included in the directives. These relate to land use planning and development policies and imply that such measures should be taken both inside and outside of protected areas. However, the decision of how and where to implement such connectivity measures is left to the full discretionary power of the Member States.

Article 10 of the Habitats Directive refers to the concept of corridors, providing that “*Member States shall endeavor, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and contiguous structure (such as rivers with their banks, or traditional systems for marking field boundaries) or their function as stepping-stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species*”;

Article 3 of the Birds Directive also states that “*... Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds*

referred to in Article 1. 2. The preservation, maintenance and re-establishment of biotopes and habitats shall include [...] (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones”;

According to Article 4(3) of the Birds Directive, “Member States shall send the Commission all relevant information so that it may take appropriate initiatives with a view to the coordination necessary to ensure that the areas provided [...] form a coherent whole which meets the protection requirements of these species in the geographical sea and land area where this Directive applies.” In addition, Article 4(4) stipulates that “[...] Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats”.

EIA and SEA Directives

In addition to the Birds and Habitats Directives, Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) are further preventative mechanisms aimed at avoiding adverse impacts to the environment. For example, environmental assessment can be undertaken for individual projects such as dams, motorways, airports or factories (EIA) or for plans, programmes and policies (SEA). These kinds of assessments are particularly significant in regards to connectivity, as they enable the evaluation of the effects of projects on the fragmentation of natural habitats.

III. Ecological networks in practice

1. MAK-NEN - an example of a National Ecological Network

In June 2011, ECNC and the Macedonian Ecological Society (MES) presented the final results of the MAK-NEN project, concluding three years of work devoted to the development of a Macedonian Ecological Network (funded by the Dutch government). The presentation was held in Skopje and attended by numerous representatives of ministries, scientific and expert institutions representing sectors relevant to the implementation of the National Ecological Network in Macedonia, all of whom had been actively involved in the development of the final map.

Two of the main outputs of the project that were presented were the final MAK-NEN map (Figure 3), published in A1 format, and a Bear Corridor Management Plan. The Plan lists the 23 existing and potential bottlenecks for functioning of the ecological network identified on the map, elaborating the potential solutions and measures to be implemented by different stakeholders in order to ensure the full functionality of the network (Brajanoska *et al.*, 2011). It provides compelling and plausible evidence for the need to provide effective spatial planning at the national level for threatened and other wildlife. Project outputs are available at ECNC website at: <http://www.ecnc.org/programmes/green-infrastructure-completed-projects?action=detail&id=63>.

As a result of the three-year stakeholder involvement process, the discussion that followed the presentations showed that the participants have a high level of understanding, acceptance, ownership and support of the ecological network concept. This indicates that MAK-NEN has a bright future in Macedonia and, whilst the Macedonian ecological network is not the first national level network to be developed, it clearly should not be the last. It is pertinent to profile it here because it provides a recent example of best practice, and not least because it includes a high level of stakeholder participation.

Following the development of the PEEN, the elaboration of national level networks is a pressing need and a high priority in the route to implementation. However, national ecological networks are unlikely to function effectively unless they cross national boundaries. Again, there are a number of particularly good examples of cross boundary and regional ecological networks (e.g. within the framework of the Carpathian Convention and in the Dinaric Arc, etc.). In the context of the Western Balkans and the Macedonian ecological network, there is a clear need to develop the potential of national-regional ecological networks through funded programmes and projects.

2. Spatial planning and sectoral integration

There is significant scope to explore and further strengthen the integration of ecological networks and its related concepts into sectoral policy, for instance, spatial planning and economic and infrastructure development. At the same time, the increasing demand among economic actors and the civil society to influence the shaping of the spatial environment has led to greater stakeholder involvement in the decision-making processes.

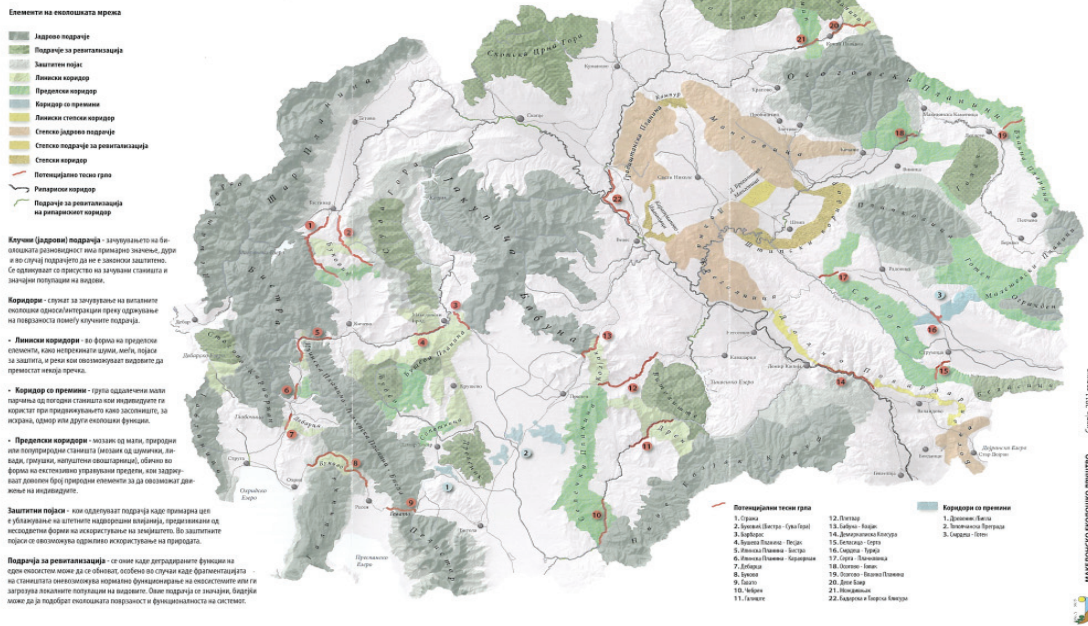


Figure 3. Map of the Macedonian National Ecological Network (MAK-NEN).

The primary function of spatial planning is to guide and govern decisions about land use, such as the design and location of built and other development (as opposed to land management). As a spatial concept, maps presenting ecological networks are easily accommodated by spatial planners into their strategic documents. Perhaps the elaborated concept of green infrastructure, with its inclusion of ecosystem services and other aspects, will provide an added impetus.

Modern spatial planning is now defined by stakeholder participation. There is growing evidence that spatial planning and ecological network programmes in some European countries have come together to more actively seek the involvement of a wide range of stakeholders (namely, municipalities, regional political authorities, developers, investors, environmental and other NGOs, public utilities, business, education, religious organisations and individual citizens).

Linking ecological networks to spatial planning at different geographical scales can therefore be seen as a key to effective delivery in the future. This is not only because of the obvious functional relationship between ecological networks and other forms of land use and infrastructure, but also because delivering the concept through the vehicle of spatial planning is one of the main mechanisms for sectoral integration.

In 2009, ECNC implemented a project exploring the links between spatial planning and ecological networks. The findings of the project can be found here: <http://www.ecnc.org/programmes/green-infrastructure-completed-projects?action=detail&id=59>.

3. Ecological networks: costs, benefits and ecosystem services

The failure of society to place a value on nature has resulted in the degradation of ecosystems, a consequent reduction in ecosystem services and has contributed to a significant decline in biodiversity. The lack of comprehensive methodologies for providing economic valuation for biodiversity and ecosystem services, the results of which can be easily communicated to policy and decision-makers, has hampered efforts to protect, maintain and enhance habitats and species.

There has been much recent activity around demonstrating the financial value of natural assets, biodiversity and the ecosystem services that they provide, evidenced, for example, by The Economics of Ecosystems and Biodiversity (TEEB) process and specifically their recommendations within the TEEB for policy-makers document (TEEB, 2011). Ecological networks and green veining provide a range of services. These include shelter and the reduction of erosion, pollination, adaptation to climate change, corridors for the movement of animals and to a lesser extent plants, recreational and cultural services.

It is certainly important to ensure that the full value of ecological networks is incorporated into policy appraisal and decision-making mechanisms in order to increase the likelihood of the sustainable use of natural resources and the protection of the natural environment. Such an approach could be applied to existing networks but also to the creation of new networks.

Spatial planning could provide a useful framework within which values and specific ecosystem services could be attributed to aspects of the ecological network (and to green infrastructure) as part of a further policy and decision-making layer of a map-based approach. There is presently no detailed guidance available as to how this approach might be implemented.

4. Ecological networks and climate change

As made clear in the 2005 Millennium Ecosystem Assessment (MA, 2005), climate change is increasingly impacting biodiversity, both in Europe and globally. Scientific results of the possible impact on climate change increasingly provide evidence of considerable consequences for habitats and species. Species migrations, extinctions and changes in populations, range and seasonal and reproductive behaviour are among the responses that have been recorded, and these are likely to continue apace as climate continues to change in the decades to come. Climate change is also poised to significantly alter the supply of European ecosystem services over the next century. While it may result in the enhancement of some ecosystem services, a large portion will be negatively affected through the impact of drought, reduced soil fertility, fire, and other climate change-driven factors.

From a biodiversity perspective in Europe, and particularly relevant to ecological networks, the climate change issue is highly relevant because:

- the range of some species will increase or decrease, and both aspects will have impacts on a variety of ecosystems;
- due to these range shifts, some species will find themselves at the end of their ecological range (e.g. mountain summits) and will face extinction at the national, European or even global levels; and
- some species that migrate or shift their range during and between the seasons will increasingly find themselves restrained in their movement due to insurmountable barriers such as urban areas, major roads and other infrastructure, cleared former forest areas and high intensity agricultural land.

For those that are now forced to move further due to climate change, the removal or absence of animal and plant ‘highways’ becomes a major issue. Ecological networks will therefore play a significant role in providing adaptation to the impacts of climate change by allowing animals to migrate to areas where they can find favourable conditions. Where they do not exist, it is highly desirable to increase the connectivity of habitats through the restoration and creation of new ecological networks. New habitat creation, such as the widespread planting of forests, hedgerows and shelterbelts, can act to sequester carbon and creates soils, substrate and vegetation with the potential to retain carbon.

Ecological networks can provide physical measures for combating the effects of extreme weather, such as more shade for farm animals or through flood relief by providing a ‘natural sponge’ to retain water. With higher connectivity, the existing habitat is better able to fulfil an adaptation function. In addition to connecting wildlife areas and connecting people to wildlife, green infrastructure in towns and cities can provide shade and many other functions. In fact, certain elements of ecological networks, in particular buffer zones, could provide important functions in terms of providing increased resilience and adaptive capacity for vulnerable protected areas and habitats. The vulnerability is a function of the character, magnitude, and the rate of climate variation to which the system is exposed, its sensitivity and its adaptive capacity (Natural England, 2011).

It is quite possible that the argument for maintaining, restoring and creating ecological networks in order to provide adaptation to climate change can be enhanced through linking it to green infrastructure.

IV. Ecological Networks and Green Infrastructure

In the past, the term ‘green infrastructure’ has been used to describe natural, connected habitats within urban areas. Recently, it has been launched as a new concept that is now included within the European Commission’s EU 2020 European biodiversity headline target and 2050 vision, aimed at halting and reversing the loss of biodiversity across the territory of the EU Member States and in response to the Aichi targets signed at the CBDs COP 10 (EC, 2011).

It is likely that a common definition of green infrastructure will be developed in due course; however, at present it is articulated and is an ‘approach’ that calls for the protection and restoration of ecosystems in so far as possible to strengthen their resilience and sustain the key services that they provide, whilst also achieving conservation objectives and enabling Member States to adapt to climate change. In terms of a working definition, the European Habitats Forum, a member of the European Commission Working Group on Green Infrastructure, has come up with the following: *Green infrastructure is a strategically planned and delivered network of high-quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits to local communities. Green infrastructure includes forests, rivers, coastal zones, parks, eco-corridors and other natural or semi-natural features which constitute key elements for the provision of ecosystem services.*

However it is finally interpreted, green infrastructure will clearly have some form of coherent ecological network at its core. It would therefore seem prudent to take into account the work that has been done at various geographical levels to define areas of existing and potential ecological connectivity. Below the level of ecological corridors that cross within and between countries, this includes the green and blue veining that makes up the patchwork quilt of traditionally managed multifunctional landscapes and, as such, still remains at the heart of the description of ecological networks that is given above.

Potential components of green infrastructure include (EC, 2010a):

- protected areas, such as Natura 2000 sites;
- healthy ecosystems and area of high nature value outside protected areas such as floodplain areas, wetlands, coastal areas, natural forests, etc.;
- natural landscape features such small water courses, forest patches or hedgerows that can act as eco-corridors or stepping stones for wildlife;
- restored habitat patches created with specific species in mind, e.g. to help expand the size of a protected area, increase foraging areas, breeding or resting for these species and assist in their migration/dispersal;
- artificial features such as eco-ducts or eco-bridges that are designed to assist species movement across insurmountable landscape barriers;
- multifunctional zones where land uses that help maintain or restore healthy biodiverse ecosystems are favoured over other incompatible activities;
- areas where measures are implemented to improve the general ecological quality and permeability of the landscape;
- urban elements such as green parks, green walls and green roofs, hosting biodiversity and allowing for ecosystems to function and deliver their services by connecting urban, peri-urban and rural areas;
- features for climate change adaptation and mitigation, such as marshes, floodplain forests and bogs for flood prevention, water storage and CO₂ intake, giving space to species to react to changed climate conditions.

An Expert Working Group on Green Infrastructure set up by the European Commission will provide recommendations on what the EC work on Green Infrastructure should tackle from the view of stakeholders, Member States and scientists. The results of the working group are expected to be published soon. During their work, the working group identified a number of benefits that green infrastructure can offer:

- It can provide environmental, economic and social benefits, mainly by encouraging partnerships—the active involvement of relevant stakeholders and resource holders on the ground is a crucial element.
- It promotes integrated spatial planning by identifying multi-functional zones and incorporating habitat restoration measures and other connectivity elements into various land-use plans and policies.

- It addresses the healthy functioning of ecosystems, their protection and the provision and sustainable use of ecosystem goods and services, while increasing their resilience by addressing mitigation and adaptation to climate change. More specifically:
 - it is an effective and cost-efficient tool for absorbing and sequestering atmospheric carbon dioxide (CO₂);
 - it contributes to the minimization of risks of natural disasters, by using ecosystem-based approaches for coastal protection through marshes/flood plain restoration rather than constructing dikes;
 - efficient use of green infrastructure can reduce energy usage through passive heating and cooling, filter air and water pollutants, decrease solar heat gain, provide wildlife habitat, reduce the public cost of storm water management infrastructure and provide flood control, offer food sources, and stabilize soil to prevent or reduce erosion;
 - it may contribute to landscape aesthetics, preservation of archaeological and cultural heritage, provision of accessible open spaces, sustainable transportation and energy, opportunities for environmental education, strengthen community sense for nature and quality of life.
- Green infrastructure ultimately aims to contribute to the development of a more sustainable economy by investing in ecosystem-based approaches delivering multiple benefits in addition to technical solutions, and mitigating adverse effects of transport and energy infrastructure. In other words, the ultimate aim is to provide the framework for the territorial development of a green and low carbon economy.

Perhaps the step that green infrastructure can take beyond what has already been achieved (with ecological networks) is to provide further context for informing about the important decisions to be made in relation to the planning and management of the wider countryside outside of protected areas and other special sites. Thus, the consideration of issues such as ecosystem services, climate change adaptation and ecological resilience can be integrated within the new approach.

In many ways, this was indeed the desired and intended objective for the future development of the ecological networks concept, leading to the conclusion that green infrastructure is a natural evolution of ecological networks.

It is highly likely that, with or without green infrastructure, countries should continue to consider the development of national ecological networks particularly where large carnivores and herbivores occur and where the benefits of such an approach are clear.

V. Stakeholder participation and capacity building of civil society

Consensus development through stakeholder participation is a promising trend that takes into account the interactive character of the communication process. Stakeholder participation already has a successful track record in assisting in management, such as Integrated Coastal Zone Management, or the management of invasive alien species and species protection issues. It now needs to be applied to the practical implementation of ecological networks and to green infrastructure. Indeed, guidance already exists for the implementation of ecological networks through stakeholder participation (Jones-Walters *et al.* 2009) and in relation to local biodiversity action planning (Jones-Walters *et al.* 2010).

The greatest problem remains the ‘top down’ organisational paradigm. Participation is a daunting prospect for those who are used to making policy and then implementing it through legislation, regulation or the power that comes with owning land. They have difficulty in dealing with a range of people and organisations that may previously have been seen as the cause of the problem rather than the solution.

There is clearly potential for biodiversity related initiatives, such as the ecological network and green infrastructure implementation, to provide a platform for civil society engagement and to build its capacity by applying a participative approach to the delivery of projects and programmes; particularly when such enterprises are associated with training in relevant skills (many of which are highly transferable). In this respect, it should also be noted that project funding is increasingly tied to the development of capacities in the civil

society (particularly in Eastern and South Eastern Europe). All this provides an opportunity for biodiversity policy-makers and practitioners, while also setting up a challenge to which they must now respond.

a. Who are the stakeholders?



Whatever the main driver for a project about ecological connectivity is, a whole range of stakeholders will be affected in the process. One thing that should not be forgotten is that stakeholders in the practical implementation of ecological networks are people. These are people:

- who are directly involved in the project and who need to carry out the practical decisions and actions in terms of planning, design and actual implementation in terms of protection, management, restoration or creation of habitat and associated work with species (e.g. landowners and managers, contractors, conservation NGOs and volunteers, etc.);
- who are directly affected by the plan or activity and can influence it but who are not directly involved in the work (e.g. adjacent landowners, local residents, hunters, birdwatchers, recreational users, etc.);
- whose permission, approval or (financial) support will be needed (e.g. regional or municipal authorities, local representatives of ministries, agencies and state institutes, etc.);
- who may participate in implementation via community mobilisation efforts or by representing a particular segment of society (e.g. environmental organizations, elected officials, chamber of commerce representatives, neighbourhood advisory council members, religious leaders, etc.);
- who may not be directly involved but who can influence opinions for or against the plan or activity (e.g. local celebrities, local media, elected officials, business or trade union leaders, environmental organizations, chamber of commerce representatives, teachers, neighbourhood group members, religious leaders, etc.).

b. Stakeholder involvement

It is now well known that the process of involving stakeholders in planning for the implementation of projects or programmes, and the implementation itself, is likely to lead to much more effective delivery. Stakeholders gain a level of ownership for actions and outcomes that cannot be achieved through a more traditional, less inclusive approach. The choice of stakeholders who should be involved depends on local circumstances. Generally, in areas with more people there is more competition for land and there are likely to be more stakeholders associated with any given issue or action (and an increased potential for conflict and resistance). Specifically, conflict and resistance can occur in any situation, especially if the process is poorly handled. Stakeholder involvement in ecological network implementation has proved to be a complex and iterative

- consultation,
- participation,
- conflict management, and
- decision-making.

Discussions supporting the development of plans should be based on the best available **information**. This information may be in the form of ecological knowledge but may also be the socioeconomic context and knowledge of sectors that depend on or influence the ecological networks, as well as the attributes of the stakeholders (education, income, psychology, etc.). The information will enable an **analysis** of the situation in terms of ecological priorities and the socioeconomic interests that might be influenced by the plans. An analysis of the stakeholders will result in a better understanding of who they are in terms of their ability to influence the process and their interest in the issue. This helps to define the **communication** strategy by adapting the message and means to the different stakeholder groups identified in the analysis. Informed stakeholders can then be **consulted** on a number of issues. Their responses will be fed back into the **information** and **analysis** process and will help to define the appropriate **participation** strategy in which the stakeholders or their representatives will be involved. Where necessary, **conflict management** techniques will be employed as part of the participatory process. **Decision making** will therefore be informed and consensual.

The relative importance of each of these basic ingredients and their sequence differs according to the local situation and the stage of advancement of each project. In essence, practitioners should build their approach on flexibility: expect that some of these stages will be implemented in parallel; anticipate that there will be time spent jumping backwards and forwards between points in the delivery cycle; prepare to leave stages out; and assume that aspects will have to be redesigned or repeated to accommodate changing local circumstances. There are successful examples of initiatives being closed down and restarted (often with a different name) in order to bypass immovable problems and disagreements. Others originate from chance meetings, opportunities and the unlikely, even chaotic coming together of a number of favourable circumstances that could never have been predicted within a logical framework. In these circumstances, success is generated from strong leadership and the ability to act quickly; often without any clearly defined plan or process.

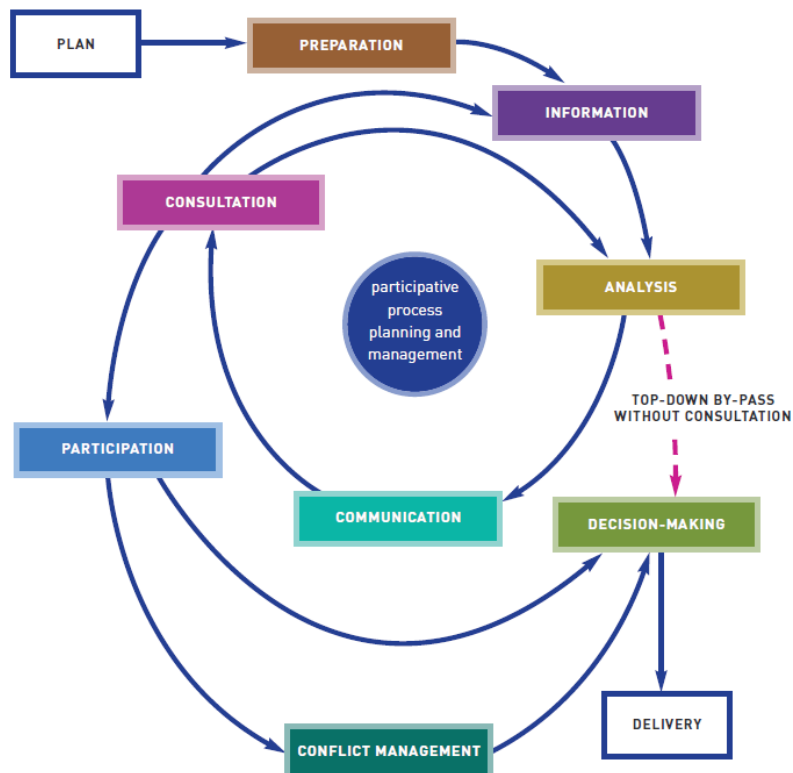


Figure 4. From planning to delivery: the key stages in project implementation.

VI. Practical exercises

One of the key issues in relation to green infrastructure is to understand how it differs from the ecological network concept both in principle and in practice. Indeed, the move from one to the other is a form of paradigm shift; a broadening of the approach to include socioeconomic issues whilst remaining biodiversity-led. The following practical exercises are therefore proposed to take participating individuals from their understanding one approach to the other. These exercises can be carried out with between 10–30 participants (ideally). It is difficult to develop the group dynamic with less than 10, and it becomes potentially unmanageable with more than 30.

1. General organisation

The individual exercises should be carried out in small groups of 4 to 5 people; they will then come together and form a plenary group for presentations of their work. Each group should therefore nominate rapporteurs who will give feedback to the plenary. It is important that the overall moderator/facilitator keeps the groups to time (each exercise is allocated the approximate time given below). It is important that the seating arrangements can be modified to allow the groups to sit at separate tables.



© Lawrence Jones-Walters

2. Essential materials

Each group will need a supply of flipchart paper and up to four coloured flipchart pens. Ideally, a flipchart should be available in order that the groups can place their flipchart papers on it for the feedback to the plenary.

3. Activities

Activity 1: Critical success factors in the design, implementation and management of ecological networks

Method: Visualisation

Time allocation: 30 min

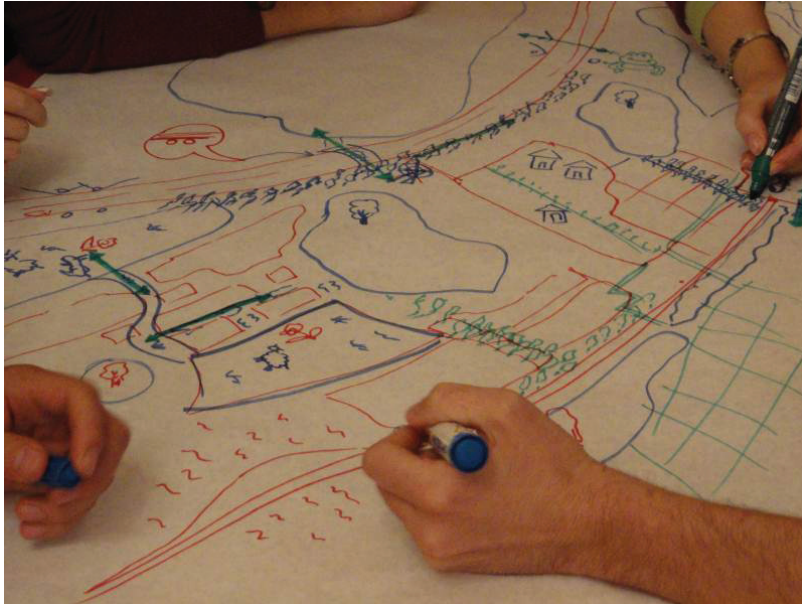
Process:

Divide participants into groups of four or five.

They should draw a fragmented, topographically varied (hills or mountains, floodplains) landscape including: roads, energy infrastructure, a town/ villages/ smaller settlements, farms and natural habitat such as rivers, streams, forests, grasslands (and other habitats as desired by the group).

Having drawn their landscape, they should then consider bottlenecks in the landscape for the movement of: a) mammals, amphibians and reptiles; b) invertebrates; c) plants. Mark the bottlenecks on the map and, on a separate flip chart, briefly describe them (e.g. hydroelectric dam causing a blockage to fish migration, etc).

Next they should identify solutions to the bottlenecks (e.g. that will allow for increased movement of animals



© Lawrence Jones-Walters

and plants, etc.); these can also be marked on the map.

Method: Prioritising and delivery

Time allocation: 60 min

Process:

Continuing in the same groups of four or five.

Groups should prioritise the solutions to the bottlenecks that they have identified based on: ecological imperatives, financial issues and likely political constraints. The groups should discuss and agree on the top three solutions.

Then they should decide who/which key actors should be involved in implementation of the specific solutions. This is not a broad stakeholder analysis but should be a consideration of the specific individuals/organisations to be involved in delivering the solution.

Finally, they need to consider how the solutions are going to be implemented. The groups should consider key issues such as: how to communicate with/ influence the key individuals and organisations identified in 2) above; the kind of policy framework needed for implementation (focusing on local but with some consideration of national); suitable sources of financing; public/ voluntary involvement, etc.

Method: moderated plenary session

Time allocation: 10 min per group

Process:

Each group has up to 10 minutes to present the results of their work.

Questions will be allowed at the end of each presentation from the other delegates/moderator. At the end

of the final presentation, time will be allocated for a general discussion. The flipchart should be used by the moderator to record the key points emerging from the discussion.

Activity 2: Green infrastructure, ecosystem services, issues and delivery

Method: Visualisation

Time allocation: 45 min

Process:

Each group should re-draw the fragmented landscape including the same features (or use the map from Workshop 1 if it is of sufficient quality/not too cluttered with information).

They should then take the map as a basis to identify ecosystem services delivered by the various natural features on the map (e.g. economic and health benefits provided by medicinal herbs present in traditionally managed grasslands, etc.).

Next they must consider how the plans and priorities that they outlined in Workshop 1 would change when taking into consideration ecosystem services. This should include a consideration of what changes might be required in the selection of stakeholders and the use of communication methods, messages, etc.

Method: moderated plenary session

Time allocation: 10 min per group

Process:

Each group has 10 minutes to present the results of their work. Questions will be allowed at the end of each presentation from the other delegates/ facilitator.

At the end of the final presentation there will be time allocated for a general discussion. The moderator should try to draw out the specific changes/ elements of paradigms shift that the group can identify in relation to the difference between planning for ecological networks and planning for green infrastructure. The flipchart should be used by the moderator to record the key points emerging from the discussion.



© Lawrence Jones-Walters

VII. References

Green Infrastructure – EU Green Infrastructure concept: general policy framework – supporting EU documents and processes, integration in other EU policy sectors; overview and examples of the components of EU Green Infrastructure concept and their relevance to biodiversity conservation

- EEA (2009). Progress towards the European 2010 biodiversity target. EEA Report No 4/2009.
http://www.eea.europa.eu/publications/progress-towards-the-european-2010-biodiversity-target/at_download/file
- European Commission (2009a). White paper: Adapting to climate change: Towards a European framework for action. COM(2009) 147 final.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF>
- European Commission (2009b). Nature and Biodiversity Newsletter Natura 2000: Green infrastructure.
http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000newsl/nat27_en.pdf
- European Commission (2010a). Green Infrastructure Fact Sheet.
<http://ec.europa.eu/environment/nature/info/pubs/docs/greeninfrastructure.pdf>
- European Commission (2010b). Green Infrastructure Implementation: EC Conference 19 November 2010. Conference Background.
http://ec.europa.eu/environment/nature/ecosystems/docs/GI_background_doc.pdf
- European Commission (2010c). Green Infrastructure Implementation: Proceedings of the EC Conference 19 November 2010.
http://ec.europa.eu/environment/nature/ecosystems/docs/Green_Infrastructure_Conference_Proceedings191110.pdf
- European Commission (2010d). LIFE building up Europe's green infrastructure: Addressing connectivity and enhancing ecosystem functions. LIFE Nature publication.
http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/green_infra.pdf
- European Commission (2011). Our life insurance, our natural capital: an EU biodiversity strategy to 2020. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. COM(2011) 244 final.
http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_ACT_part1_v7%5B1%5D.pdf
- European Environment and Sustainable Development Advisory Councils (EEAC) (2009). Towards Sustainable European Infrastructures – Statement and background document.
http://www.eeac-net.org/download/EEAC1762Stat_3_7-10-09_final.pdf
- European Environmental Bureau (EEB) (2008). Building green infrastructure for Europe.
http://www.eeb.org/publication/documents/EEB_GreenInfra_FINAL.pdf
- Lucius, I., Dan, R., Caratas, D., Mey, F., Steinert, J. and Torkler, P. (2011). Green Infrastructure: Sustainable Investments for the Benefit of Both People and Nature. Surf Nature Interreg IVC Project.
http://www.surf-nature.eu/uploads/media/Thematic_Booklet_Green_Infrastructure.pdf
- Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC.
- Sundseth, K. and Sylwester, A. (2009). Towards Green Infrastructure for Europe – Proceedings of the European Commission workshop. Ecosystems LTD, Brussels, Belgium. Available at:
<http://green-infrastructure-europe.org/download/EC%20Workshop%20proceedings%20Green%20Infrastructure%20final>
- TEEB (2011) TEEB for policy-makers.
<http://www.teebweb.org/ForPolicymakers/tabid/1019/Default.aspx>
- Van Zeijts, H., Overmars, K., van der Bilt, W., Schulp, N., Notenboom, J., Westhoek, H., Helming, J., Terluin, I. and Janssen, S. (2011). Greening the Common Agricultural Policy: Impacts on Farmland Biodiversity on an EU Scale. Policy Studies. PBL Netherlands Environmental Assessment Agency.
http://www.pbl.nl/sites/default/files/cms/publicaties/002799_CAP%20rapport+kaft%28def%29_0.pdf

Relevant EU Level Policies and Funds:

EU forestry strategy:

http://ec.europa.eu/agriculture/fore/index_en.htm

Water Framework Directive:

http://ec.europa.eu/environment/water/water-framework/index_en.html

Marine Strategy Framework:

http://ec.europa.eu/environment/water/marine/index_en.htm

The Cohesion Fund:

http://europa.eu/legislation_summaries/regional_policy/provisions_and_instruments/l60018_en.htm

Agriculture and Rural Development:

http://ec.europa.eu/agriculture/index_en.htm

European Regional Development Fund:

http://europa.eu/legislation_summaries/employment_and_social_policy/job_creation_measures/l60015_en.htm

Trans-European Networks:

http://ec.europa.eu/ten/index_en.html

European Union Solidarity Fund:

http://europa.eu/legislation_summaries/regional_policy/provisions_and_instruments/g24217_en.htm

European Union Structural and Cohesion Funds:

http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/newregl0713_en.htm

Competitiveness and Innovation Framework Programme:

<http://ec.europa.eu/cip/>

European Fisheries Fund:

http://ec.europa.eu/fisheries/cfp/eff/index_en.htm

7th Research Framework Programme:

http://cordis.europa.eu/fp7/home_en.html

Ecological networks as part of the Green Infrastructure concept and a measure for enhancing functional connectivity in fragmented landscapes: linking habitats and sites to ensure species population viability

Documents:

Bennett, G. and Mulongoy, K. J. (2006). Review of experience with ecological networks, corridors and buffer zones. CBD Technical Series No. 23.

<http://www.cbd.int/doc/publications/cbd-ts-23.pdf> CBD report in EN

Biró, E., Bouwma, I. and Grobelnik, V. (eds.) (2006). Indicative Map of the Pan-European Ecological Network in South-Eastern Europe. ECNC Technical Report Series. ECNC-European Centre for Nature Conservation: Tilburg, the Netherlands.

http://www.ecnc.org/file_handler/documents/original/view/68/2006--indicative-map-of-the-peen-see-backgroundpdf.pdf

Bonnin, M., Bruszk, A., Delbaere, B., Lethier, H., Richard, D., Rientjes, S., van Uden, G. and Terry, A. (2007). The Pan-European Ecological Network: Taking Stock. Nature and Environment, No. 146. Council of Europe: Strasbourg, France.

Brajanoska R., Čivić, K., Hristovski, S., Jones-Walters, L., Levkov, Z., Melovski, Lj., Melovski, D. and Veleviski, M. (2009). Background document on Ecological Networks - Project : Development of the National Ecological Network in FYR Macedonia (MAK-NEN). MES, Skopje, Republic of Macedonia; ECNC, Tilburg, the Netherlands.

http://www.ecnc.org/file_handler/documents/original/view/418/2009--maknen-background-document-on-ecological-networkspdf.pdf

Brajanoska R., Melovski Lj., Hristovski S., Sarov A. And Avukatov, V. (2011) Brown Bear Corridors Management Plan - Project : Development of the National Ecological Network in FYR Macedonia (MAK-NEN). Macedonian Ecological Society, Skopje, Republic of Macedonia

CBD (2002). Plan of Implementation of the World Summit on Sustainable Development. Paragraph 44. (g). http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf .

CBD (2004). Decision VII/28, Annex Programme of Work on Protected Areas. <http://www.cbd.int/decision/cop/?id=7765>.

Cil, A., Snethlage, M., Jones-Walters, L. and van Uden, G. (Eds.) (2008). Catalyzing stakeholder involvement in the practical implementation of ecological networks (KEN – Knowledge for Ecological Networks). ECNC, Tilburg, The Netherlands.

Council of Europe (1991). Recommendation No. 25 (1991), Appendix Examples of Conservation Measures, available at <https://wcd.coe.int/ViewDoc.jsp?id=1485897&Site=DG4-Nature&BackColorInternet=DBDCF2&BackColorIntranet=FDC864&BackColorLogged=FDC864> .

Čivić, K. and Jones-Walters, L. (2010). Ecological Networks in Europe: Current status of implementation. <http://www.ecnc.org/download/normal/ProjectManagement/215/Ecological%20Networks%20in%20Europe%20-%20current%20status%20of%20implementation.pdf>

Kettunen, M., Terry, A., Tucker, G. and Jones, A. (2007). Guidance on the maintenance of landscape connectivity features of major importance for wild flora and fauna. Institute for European Environmental Policy (IEEP). http://ec.europa.eu/environment/nature/ecosystems/docs/adaptation_fragmentation_guidelines.pdf

Natural England (2011). A national climate change vulnerability assessment. Natural England Technical Information, Note TIN095.

Ramsar (2002). Resolution VIII/14, Annex New Guidelines for Management Planning for Ramsar Sites and other Wetlands. http://www.ramsar.org/cda/ramsar/display/main/main.jsp?zn=ramsar&cp=1-31-107^21393_4000_0__.

Rientjes, S. and Roumelioti, K. (2003). Support for ecological networks in European nature conservation, an indicative social map. ECNC Technical Report Series. Tilburg, The Netherlands/Budapest, Hungary.

Snethlage, M. and Jones-Walters, L. (Eds.) (2008). Interactions between policy concerning spatial planning policy and ecological networks in Europe (SPEN – Spatial Planning and Ecological Networks). ECNC, Tilburg, The Netherlands.

Websites:

Alpine Ecological Network website:
<http://www.alpine-ecological-network.org/>

Carpathian Ecological Network website:
<http://www.carpat.es.org/>

Council of Europe website on Ecological Networks:
http://www.coe.int/t/dg4/cultureheritage/nature/econetworks/default_en.asp

ECNC website <http://www.ecologicalnetworks.eu> with results of two projects:
KEN – Involving stakeholders in the implementation of ecological networks in Europe;
SPEN “Interaction between policy concerning spatial planning and ecological networks in Europe”

European Commission Natura 2000 website:
http://ec.europa.eu/environment/nature/natura2000/index_en.htm

Involvement of CSOs in the planning and implementation of conservation measures in the wider countryside and engagement of other stakeholders for coherent decision making

Jones-Walters, L., Catchpole, R., Mladenović, A., Čil, A., Snethlage, M., Čivić, K., Schrauwen, A., Sušić, S.

and Solujić, A.S. (2010). Local Biodiversity Action Planning for Southeastern Europe. ECNC, Tilburg, The Netherlands.

http://www.ecnc.org/file_handler/documents/original/view/406/2010--lbap-handbook-englishpdf.pdf

Jones-Walters, L., Snethlage, M., Čivić, K., Çil, A., and Smit, I. (2009). Making the connection! Guidelines for involving stakeholders in the implementation of ecological networks. ECNC, Tilburg, the Netherlands.

http://www.ecnc.org/file_handler/documents/original/view/385/2009--making-the-connection-kenpdf.pdf

Rientjes, S. (Ed.), with contributions by L. Jones-Walters *et al.* (2000). Communicating nature conservation: a manual on using communication in support of nature conservation policy and action. ECNC, Tilburg, the Netherlands.

http://www.ecnc.org/file_handler/documents/original/view/44/2000--communicating-nature-conservation-compressedpdf.pdf ECNC Communicating nature conservation

Part B:

Environment Impact Assessment and Strategic Environmental Assessment

Delphine Morin and Danielle Boivin, Biotopie



I. Introduction to EIA and SEA

Human activities such as infrastructure development for tourism, industry, transportation and energy can be destructive for the environment. The idea that the human impacts on the environment should be assessed and mitigated by the states was presented for the first time at the Conference on the Human Environment, held in Stockholm in 1972 (principle 21 in the Declaration). In 1975, the concept of the Environmental Impact Assessment (EIA) was born.



Figure 1. Dam La Reunion © Biotope

The first regulatory tool that was developed was the Environmental Impact Assessment of individual projects, such as projects for the construction of dams, motorways, airports or factories. According to this, project developers have to undertake a study in order to point out the impacts of the project on the environment. This can be carried out by the company itself (in the case of large companies) or they can hire independent environmental consulting offices. If the EIA reveals that impacts will be caused by the project, solutions to reduce them should be given in the EIA report. To reduce environmental impacts of a project, recommendations may include a change in the project location, or a modification of its design or process. If there is no scenario found to reduce the environmental impacts, the project should not be implemented, or measures might be proposed to compensate for the impacts. The construction permit should only be granted if the EIA shows that the impact on the environment is considered minimal and acceptable by the legal authorities, and that measures have been proposed to reduce the impacts, or to compensate for them.

In 1985, the European Economic Community (currently the EU) adopted the EIA Directive (85/337/EEC). In 1997, the International Espoo Convention on EIA organized by the United Nation Economic Commission (UNECE) for Europe was signed by 30 parties, including Serbia, Montenegro and Macedonia.

When conscientiously followed by the project developer, the EIA procedure is a very effective tool to reduce the impact of infrastructure projects on the environment. However, the need arose to address the issues at an earlier stage by defining a general regulatory framework that would allow economic development with minimum environmental impacts. Therefore, a second regulatory tool was elaborated: the Strategic Environmental Assessment (SEA). The SEA is the “*formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme*”¹. These “plans or programmes” are national or local (region, county, municipality) strategies that serve as frameworks for public and individual project development. They have to be shaped so as to promote sustainable development.

In 2001, the European Union adopted the SEA Directive (2001/42/EC) on the environmental impact assessment of public plans or programmes. In 2003, the Kyiv Protocol on SEA organized by the UNECE was signed by 37 parties, including Serbia, Montenegro and Macedonia.

According to the European Commission², “*The common principle of both Directives is to ensure that plans, programmes and projects likely to have significant effects on the environment are made subject to an environmental assessment, prior to their approval or authorisation. In both cases, consultation with the public is a key feature of environmental assessment procedures.*”



Figure 2. High Speed Train ©Biotope

1 Government of Ireland. 'Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities'. [online publication], (November 2004). <http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,1616,en.pdf> Accessed 26 September 2011

2 European Commission. 'Environmental Impact Assessment'. [website], <http://ec.europa.eu/environment/eia/home.htm>

According to the UNECE³, the main difference between SEAs and EIAs is that SEAs are undertaken much earlier in the decision-making process than EIAs. SEAs are the assessments that set up the general framework for long-term sustainable development.

II. Overview of the EIA and SEA procedures

1. The basics of the EIA procedure

The EIA procedure, as defined in the EIA Directive (85/337/EEC), is comprised of five main steps:

- a. Scoping stage: the developer asks the competent authority to define what should be covered by the EIA information;
- b. EIA study: the developer undertakes the study, or pays a consulting office to do it, in order to be able to provide information to the environmental authorities and the public regarding the environmental impact of the project. Very often, the developer has to hire consulting offices and scientific laboratories to do the study;
- c. Public consultations: the environmental authorities and the public are informed about the project and consulted about its impacts;
- d. Decision: the competent authority decides whether the project is too detrimental for the environment, and gives consideration to the results of public consultations;
- e. Public announcement: the public is informed of the decision and can challenge the decision.

Article 3 of the EIA Directive explains that the EIA study should evaluate the projects impacts on:

- humans, fauna and flora;
- soil, water, air, climate and the landscape;
- the interaction between these factors, and
- material assets and the cultural heritage.

Article 4 of the EIA Directive states that undertaking an EIA study is mandatory for the most important infrastructure projects listed in Annex I. For projects listed in Annex II, the Member States are free to decide whether an EIA is needed, based on thresholds/criteria that are described by law. This decision is called the “**screening procedure**”.

2. The basics of the SEA procedure

The SEA of a plan or programme as defined in the SEA Directive (2001/42/EC) is comprised of four main steps:

- a. Preparing an Environmental Report where the likely significant environmental effects are identified and evaluated;
- b. Consulting the public, environmental authorities, and any affected EU Member State on the environmental report and draft plan or programme;
- c. Taking account of the findings of the report and the outcome of these consultations in deciding whether to adopt or modify the draft plan or programme;
- d. Making known the decision on adoption of the plan or programme and how the SEA influenced the outcome.

³ United Nations Economic Commission for Europe. 'Introduction to Espoo Convention'. [website], <http://live.unece.org/env/eia/eia.html>

III. SEA and EIA: two complementary decision making tools

1. The SEA, an assessment of the sustainability of a general economic development framework on a territory

The SEA procedure does not focus on a precise project and a precise location but instead examines the “bigger picture” and assesses the impact of a strategic plan implemented on a national or regional territory. It is not necessary to have a detailed inventory of fauna and flora and of other physical features on a territory to undertake a SEA. A general assessment of the environmental state of the territory is sufficient. The decision makers have to think at a broader scale while implementing a development strategy. They have to consider all the individual projects that will be developed in the framework of the plan, so as to address the cumulative impact that they may have on the environment.

For example, if the strategic plan aims to develop road infrastructure on a territory, the decision makers will have to consider prohibiting construction in natural protected areas or designing a threshold of the number of roads that can be built in these areas. This interdiction, or limitation, gives the project developers a precise regulatory framework that will guide them in deciding where to build the roads.

2. The EIA: an assessment of the sustainability of a single project on a limited project area

The EIA procedure offers a good framework to undertake a detailed study of the technical characteristics of a project, the environmental features of the project location and the impacts of the project on its surroundings. Detailed field surveys have to be undertaken regarding the geology, hydrogeology, fauna and flora, air quality, etc. The results of the study provide the legal authority, project developer and the general public with extensive details about the natural features of the project area.

The main objectives of the EIA procedure are:

- to ensure that the project developer is correctly implementing the law;
- to have the project developer finance scientific research in the project area: ecological inventories, bird and bat monitoring studies, maps, etc., that can be useful for the legal authorities;
- to raise the level of environmental awareness of the project developer, local stakeholders, legal authorities and the general public;
- to offer a solution to design a more sustainable project, plainly respectful of the environment:
 - create ecological engineering infrastructure: wildlife crossing, setting devices leading species towards wildlife crossings,
 - create continuities: hedges, trees, river restoration,
 - create new habitats favourable for target species: ponds, forests, meadows,
 - have an environmental engineer monitoring the project site during construction works,
 - adapt the construction timetable to biological cycles,
 - reduce light disturbances with street lighting management (no vertical lights), etc.

However, when undertaking an EIA study, it is difficult to look at the bigger picture and to assess the cumulative impacts on the environment of this project when it will be added to existing or future projects that have been/will be implemented in the same area. For example, building a road in a protected natural area can reduce the level of biodiversity, whereas building one road when two roads have already been built and two other are planned to be built has a much higher impact and can entirely destroy the natural value of the protected natural area.

Figure 3 shows that a good EIA study allows: 1) impacts to be prevented by avoiding areas that are important for biodiversity while choosing the project site, 2) if impossible to avoid certain areas important for diversity, the study proposes measures that can reduce the impact on biodiversity, 3) after the project is developed or after the activities linked to the project are over, it is important to undertake measures to restore biodiversity on the project site, and 4) in the framework of the EIA, compensation measures are designed to offset the negative impacts of the projects.

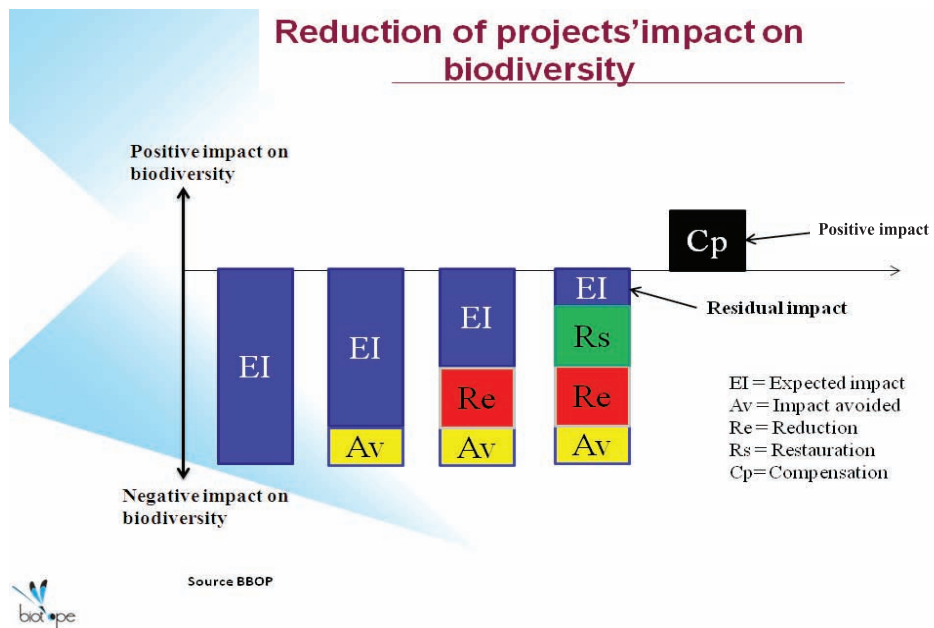


Figure 3. Reduction of project impacts on biodiversity ©Biotope

Figure 4 shows two maps of a quarry site located in Mondragon, France. The left map shows the natural habitats that are important for biodiversity and/or protected by the Habitat Directives, the right map shows the natural habitats that are important for the conservation of animal species protected by EU and/or the French Law. These maps are the result of an ecological assessment undertaken in the framework of an EIA and an AA in 2004.

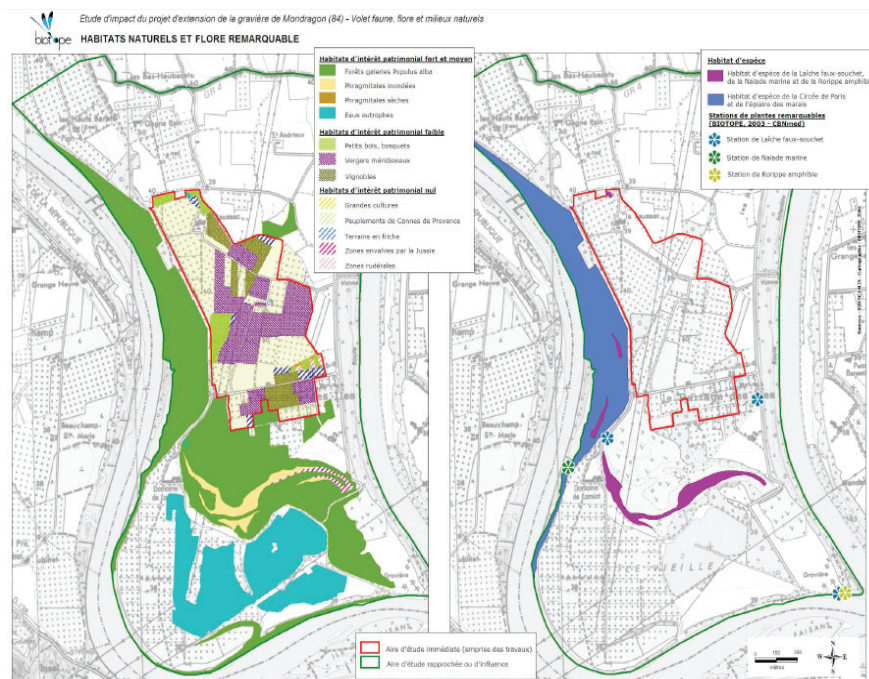


Figure 4. An example of an ecological assessment output ©Biotope

In conclusion:

- firstly, with the SEA, the legal authorities will verify that the strategic plans they adopt define a sustainable regulatory framework that does not favour the development of projects that may have a negative impact on the environment;



2007



2011

Figure 5. Example of mitigation measures at a quarry site: biodiversity restoration at a site where vegetation was destroyed because of the exploitation of a sandstone quarry, Thedirac, France. ©Biotope

- secondly, the relevant authority will decide whether or not a single project has a negative impact on the environment while considering the EIA study of this project.

NB: According to the European Commission⁴ in 2008, assessments under the SEA and EIA lay down the essential procedural requirements and do not establish obligatory environmental standards. They are designed to make the planning authorities fully aware of the environmental implications of the proposed plan or project so that these are taken into account in their final decision.

IV. The role of civil society organizations in SEAs and EIAs

1. Consultation of civil society

Civil society organizations should be consulted during the elaboration of EIAs and SEAs through:

- interviews of key stakeholders;
- informative public meetings.

Civil society organizations should ensure that the information presented in the EIA or SEA is exhaustive, relevant, and that they have been consulted. The EIA and SEA procedures are democratic decision-making tools that CSOs can use to defend their interests and the environment. In order to be able to correctly use these tools, it is necessary for the citizens to be well informed and to broadcast their knowledge to other citizens.

The SEA Directive clearly states that the public should be consulted and be given sufficient time to study the projects and plans and the available data. Article 3(7) and Article 6(1) stipulate that the decisions of the legal authority concerning the SEA should be accessible to the public. Article 6(1) and (2) refer to public consultations and explain that the general public should be given sufficient time to express its opinions on the plan or programme and on the SEA study.

Article 2 of the EIA Directive states that if the EU Member States decide to exempt a project from an EIA, it has to decide whether:

- to make the collected data available to the public, or
- to explain to the “concerned” public why there is no need for an EIA.

Articles 7 and 8 also insist on public consultation.

⁴ European Commission. 'Wind energy development and Natura 2000'. EU Guidance on wind energy development in accordance with the EU nature legislation [online publication], (2008). http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf
Accessed 13 October 2011

2. The limitations of public consultation in the SEA and EIA Directives

EU Member States are required to implement public participation events and, pursuant to Article 6(4) of the SEA, are responsible for defining who the “general public” is and who the stakeholders impacted by the plan or programme including environmental CSOs are. The Member States are required to define the process for public consultation as stated in Article 6(5).

Article 6(2) of the EIA Directive stipulates that Member States shall ensure that the public knows when a project developer is applying for an EIA procedure and that it has access to the information presented in the EIA. It also states that the public should be: “*given the opportunity to express an opinion before the project is initiated*”. However, paragraph 6(3) allows Member States to define who the “concerned public” is and to design the process for communication and consultation.

EU Member State experiences have shown that Natura 2000 legislation works better and is more effective than SEA legislation in the case of nature conservation issues. It is a stronger instrument for nature protection and sustainable development.

Watch out!

The SEA statement on a plan should be taken into account in an EIA of a subordinate project. However, some new Member States have called the administrative act a “Statement”, thereby presented this act as part of the plans under adoption, making it impossible to challenge.

Screening phase: Development projects requiring a full EIA assessment could be presented as small spatial plans (salami slicing) instead of individual projects that are screened out under the SEA procedure (small plans have no “strategic” impact)! In this case no cumulative effect is taken into account.

At the national level, threshold levels should be strict enough to ensure that projects with a potentially negative impact are not screened out.

Assessment phase: the SEA report should be published by the investor, though in cases of private investors, the SEA report could be hardly accessible – you have to use your right to receive a copy of the report! The experts conducting the assessment are hired by the investor, which might lead to manipulated SEA reports.

The national law should contain strict requirements to publish EIA decisions on the internet, otherwise it makes it very hard to challenge decisions.

Example: Public participation and EIA in Serbia

The Serbian EIA Act (Official Gazette RS 135/04, 36/09) states in Article 14 that when a company requests the legal authority to define the scope of an EIA study for its project, the institution should organize public consultation that should last for 16 days. Article 20 states that within 7 days of receipt of the EIA study, the competent authority shall organize public hearings and give its final decision 20 days after the end of the public hearings.

V. Practical exercises

Activity 1: Role playing on EIAs: wind farm project

Separate the trainees into three groups:

- project developer
- legal authority
- civil organizations

Ask the trainees to play out the EIA procedure of a wind farm development project, taking into account that the one-year bird and bat monitoring study does not present all the existing ecological information and that the NGOs that have this information have not been consulted by the project developer to share their data.

Activity 2: Role playing on SEAs: ski centre

Separate the trainees into three groups:

- legal authority
- civil organizations in favour of the plan
- civil organizations opposed to the plan
- Ask the trainees to play the SEA procedure taking into account that: one civil organization disagrees with the strategic plan that is being developed because it favours the development of ski centres in a very important natural protected area of the territory, without bringing relevant economic income to local communities,
- the second civil organization is in favour of the project because of the possibility of attracting tourists, based on sports and ecotourism, to the area and boosting the local economy.

Organisation:

1. The trainers explain the activity (15 minutes)
2. Each working group develops its arguments and its acting for the play (15 minutes)
3. The play: each working group has 5 minutes to outline its arguments to the others, followed by a 15 minute debate of all parties (30 minutes)
4. Retrospective: trainees and trainers analyse the role playing and the arguments of each group (15–20 minutes). The focus is on the process of organizing the dialogues and the meetings.

VI. References

EIA, SEA legal documents:

Directive on the assessment of the effects of certain public and private projects on the environment

'Council Directive 85/337/EEC' on the assessment of the effects of certain public and private projects on the environment [website], (27 June 1985).

<http://ec.europa.eu/environment/eia/full-legal-text/85337.htm>

Council Directive 97/11/EC', [website] (3 March 1997)

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0011:EN:HTML>

'Directive 2001/42/EC' on the assessment of the effects of certain plans and programmes on the environment, [website].

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0042:EN:NOT>

Directive on public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participate

This Directive 2003/35/EC allowed major improvements:

- access to information for the general public
- public participation
- possibility to have environmental cases judged by a court

'Directive 2003/35/EC' [online document].

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:156:0017:0024:EN:PDF>

Guidelines:

Government of Ireland. 'Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities' [online publication], (November 2004).

<http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,1616,en.pdf>
Accessed on 26 September 2011.

Mehdi, S., Atallah-Augé, M., and ElKhoury, J. 'Biodiversity Manual, A Tool for Biodiversity Integration in EIA and SEA'. Final Draft, Society for the Protection of Nature in Lebanon [online publication], (July 2005).

<http://people.exeter.ac.uk/rwfm201/cbbia/downloads/sea/AtoolforbiodiversityintegrationinEIAandSEA.pdf>
Accessed on 4 October 2011.

Web sites:

European Commission: page on EIAs, [website].

<http://ec.europa.eu/environment/eia/home.htm>.

United Nations Economic Commission for Europe: page on EIAs, [website]. <http://live.unece.org/env/eia/eia.html>

Public participation guidelines:

Cormick, G.W. *et al.* 'Building Consensus for a Sustainable Future: Guiding Principle: an initiative undertaken by Canadian round tables' [online publication], (August, 1993).

<http://nrtee-trnee.ca/wp-content/uploads/2011/08/NRTEE-consensus-guiding-principles.pdf>

Accessed on 3 October 2011.

Cornu-Thenard, E. and Ozinga, O. 'The EU's impact on forests, A practical guide to campaigning'. Macula, Boskoop, Netherlands [online publication], (2004),

<http://www.fern.org/sites/fern.org/files/pubs/reports/EU-guide.pdf>

Accessed on 11 October 2011.

Dewey, J. 'Enhanced Group Facilitation: Techniques & Process', AEA/CDC 2006 Summer Evaluation Institute, Atlanta, Georgia [online document], (12 June 2006).

<http://www.eval.org/summerinstitute/06SIHandouts/SI06.Dewey.TR1.pdf>

Accessed on 14 October 2011.

Rientjes, S. 'Communicating nature conservation, A manual on using communication in support of nature conservation policy and action'. ECNC-European Centre for Nature Conservation [online publication], (2000).

<http://www.ecnc.org/publications/technicalreports/communicating-nature-conservation>

Accessed on 3 October 2011.

Metaplan. 'How to Moderate Group Discussions Using the Metaplan Technique'.

http://www.esf-agentschap.be/uploadedFiles/Voor_ESF_promotoren/Zelfevaluatie_ESF-project/metaplan%20primer%20en%20.pdf

Accessed on 14 October 2011.

Part C:

Ecological connectivity

Delphine Morin and Danielle Boivin, Biotope



I. Ecological connectivity: a solution to prevent biodiversity loss

1. Brief introduction to the concept of ecological connectivity

Ecological connectivity in a territory means that the habitats of a territory are well connected to allow species to move from one habitat to another in order to feed or exchange genes, enabling them to disperse and (re) colonize territories. Ecological connections can be supported by linear structures, such as hedges and rivers, along which species can easily move, or stepping stones of habitats that are within the dispersal distance of the species. Ecological connectivity can be studied at the ecosystem scale, landscape scale or at the national or continental scale.

However, due to natural hazards or, more often, human activities, the landscape can be fragmented by elements that separate a natural area into different pieces. There are two types of fragmenting elements:

- physical fragmenting elements - natural (large rivers, mountains ranges, cliffs), but in most cases they are due to human activities: urbanized areas, roads, railways, waterways with artificial banks, electric power lines, dams and river locks, intensive agriculture and forestry;
- immaterial fragmenting elements - human frequentation, chemical pollution, noise pollution or light pollution.

Habitat loss and fragmentation may lead to immediate extinction of some species, though the majority of extinctions occur with a certain time lag. The term “extinction debt” refers to species that are predicted to go extinct as a result of past environmental changes, but that have not yet done so (Hanski & Walsh, 2004)⁵.

Landscape fragmentation is known to be a major cause of biodiversity loss.

2. The promotion of ecological connectivity in the international regulatory framework

Ecological connectivity is endorsed by the Convention on Biological Diversity (CBD) that offers the main framework for conserving the world’s biodiversity. The CBD Programme of Work on Protected Areas, adopted in 2004, specifically emphasizes the need for ecological connectivity. A number of treaties and agreements from the “biodiversity-related cluster” also support activities providing for habitat connectivity.



Figure 1. Intensive forestry leads to low-quality habitats and landscape impermeability for some species © Veronika Ferdinandova

⁵ Hanski, I., Walsh, M. How much how to, 2004.
http://www.birdlife.org/action/change/europe/forest_task_force/forest_conservation.pdf
Accessed 15 October 2011.

The European Union is also promoting the need to trigger ecological connectivity in order to address the issue of biodiversity loss in Member State territories.

In 2006, the EU recognized the value of ecosystem services, and their protection became a cornerstone of the EU biodiversity policy (COM 216/2006)⁶. EU Communication on halting the loss of biodiversity by 2010 identifies objectives concerning the need ‘to conserve and restore biodiversity and ecosystem services in the broader EU countryside and EU marine environment’. SEA and EIA Directives give the possibility for integration of biodiversity protection in the process of development of a territory. In April 2009, the EC presented a policy paper known as the White Paper on adaptation to climate change, which calls for establishment of a permeable landscape to enhance the interconnectivity of natural areas.

The Council of Ministers’ endorsement of the EU Biodiversity strategy includes six targets towards reversing the decline of biodiversity and ecosystems by 2020, with each target accompanied by a package of actions. These range from properly managing the EU’s NATURA 2000 network of protected areas to more use of green infrastructure and more sustainable agriculture and forestry.

Both the Birds Directive and the Habitats Directive stipulate that Member States are obliged to promote ecological connectivity in their territory to protect species.

With the Habitat Directive, the EU recognized the need to adopt an ecosystem management approach rather than a “species approach”.

Article 10 of the Habitats Directive

“Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.”

Article 3 of the Birds Directive

“...Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1.

2. The preservation, maintenance and re-establishment of biotopes and habitats shall include [...] (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones...”

Other major EU directives, such as the Water Framework Directive (2000/60/EC), include measures such as the development of river basin management plans that should facilitate the maintenance and restoration of connectivity in the broader environment.

In 2004, during the Millennium Ecosystem Assessment, the United Nations popularized the concept of “ecosystem services”,⁷ i.e. all the material and immaterial resources produced by ecosystems (wood, water storage, carbon capture, potential for ecotourism, etc). It was proven that if the ecosystems were losing their capacity to provide services, this could result in socio-economic impacts. This evolution encourages decision makers to see ecosystems as “services providers” that should be managed so they can conserve their functions, and that each species has a role to enable the ecosystem to produce services.

6 Kettunen, M., Terry, A., Tucker, G. and Jones A. (2007). Guidance on the maintenance of landscape features of major importance for wild flora and fauna. *Guidance on the implementation of Article 3 of the Birds Directive (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC)*. Institute for European Environmental Policy (IEEP), Brussels, pp. 114.& annexes.

7 See definitions in Annexes

II. Methodology for assessing ecological continuity on a territory

1. Assessing landscape fragmentation

a. First step: gather data

In order to assess landscape fragmentation, it is necessary to gather extensive data about the studied area:

- ecological data (results of inventories, scientific papers) and maps on fauna, flora species population and natural habitats;
- information about the level of protection and the management strategy for the different species;
- land cover map or natural habitat map covering the studied territory and the neighbouring regions;
- topographic maps and if possible geo-referenced orthophotographs;
- fragmenting infrastructures map:
 - transportation routes (roads, railways, waterways, electric lines, etc.),
 - information on traffic intensity and specifications of transportation routes,
 - fences, bank types along waterways;
- location of reconnecting elements, such as wildlife crossings.

Once this data is gathered, it is important to assess the information gaps and if necessary, to organize biodiversity inventories and ecological functionalities assessments to fill in the gaps.



Bird inventories ©Biotope



Insect inventories ©Biotope



Water analysis ©Biotope

Figure 2. Pictures of ecological inventories

b. Second step: identify the main fragmenting elements

The main fragmenting elements should be organised into a hierarchy according to their species permeability:

- identify several levels of fragmenting elements;
- identify several levels of reconnecting elements.

Once this initial analysis has been completed, it is necessary to undertake a more complex analysis of:

- fragmenting effects of intensive agriculture/forestry;
- immaterial fragmentation.

2. Identification of ecological connectivity

Identify the main natural spatial types within the study area that provide habitats for specific ecological communities. The following can be used: different types using protected areas (Natura 2000 sites, Ramsar sites, etc.), or other known important natural areas that are not yet protected (IPAs, IBAs, etc.):

- assess the ecological functionality of these core areas for the conservation of fauna and flora species and for human security: soil erosion, catchments of underground water areas protection, for human leisure - recreational activities, etc.;
- rank the environmental importance of these core areas according to their capacity to be shelter for biodiversity or to provide ecosystem services;
- design buffer zones around the core areas;
- identify the connecting elements to conserve, restore or build between the areas;
- build the ecological corridor by connecting core areas, buffer zones and connecting elements.

Reconnecting protected areas on a territory can be useful for improving the ecological connectivity of a territory, though it is necessary to examine the big picture, i.e. the regional, national or EU scales (Natura 2000), and to study the natural characteristics of the whole territory. The goal is to identify and restore an optimal network made of core areas and ecological corridors in order to reinforce the global functionality of the studied territory as a whole.

Once the ecological connectivity of a territory has been studied, identified and mapped, it is necessary to secure it in order to conserve its functionality.

The relevant legal authorities should:

- elaborate strategies to protect ecological connectivity;
- educate stakeholders: lectures, brochures, workshops;
- create decision making tools for land use planners and other stakeholders, define an adapted legal framework for the SEA and offer mitigation measures for EIAs.

The role of civil society organizations in assessing and building ecological connectivity is to ensure that the data it has is taken into consideration and to communicate with the environmental technicians who are studying the ecological connectivity so that all the elements of the territory are taken into consideration.

III. Practical exercises

Activity 1: Separate the trainees according to their geographical origin and tell them that they are a team of ecological engineers that have to study and map the ecological connectivity of the region they are from.

Ask them to:

- describe their methodology step by step,
- clarify what data they believe to be missing,
- find solutions for these data gaps.

Activity 2: Based on the techniques described in “Environmental dilemmas: Critical Decisions for Society (Lozzi, 1980)” Finding consensus: Design ecological connectivity in a territory.

Separate the trainees into four groups:

- Each group receives a map with information about the land cover (natural habitat, infrastructures, urban zones, industrial areas...). The trainer explains the activity and gives the instruction (15 minutes).
- Each group has to select and draw core areas and corridors (30 minutes).
- To select the area they will have to remember the steps and criteria for their ecological connectivity creation (15 minutes).
- One person in each group presents the site and explains their choices (20–30 minutes).

IV. References

Guidelines:

Jones-Walters, L., Snethlage, M., Civic, K., Çil, A. and Smit, I. 'Making the connection!'. *Guidelines for involving stakeholders in the implementation of ecological networks*. ECNC, Tilburg, the Netherlands [online publication], (2009).

<http://www.ecnc.org/publications/technicalreports/making-the-connection>

Accessed on 3 October 2011.

Kettunen, M., Terry, A., Tucker, G. and Jones A. 'Guidance on the maintenance of landscape features of major importance for wild flora and fauna'. *Guidance on the implementation of Article 3 of the Birds Directive (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC)*. Institute for European Environmental Policy (IEEP), Brussels [online publication], (2007). 114 pp. & annexes.

http://ec.europa.eu/environment/nature/ecosystems/docs/adaptation_fragmentation_guidelines.pdf

Accessed on 4 October 2011.

Legal reference:

The Water Framework Directive (WFD) or Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy' [website].

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0060:EN:HTML>

Papers:

Bennett, F. A. 'Linkages in the landscape. The Role of Corridors and Connectivity in Wildlife Conservation.'

In, *The World Conservation Union (ed.): IUCN Forest Conservation Programme, Conserving Forest Ecosystems Series No. 1*. IUCN, Australia [online publication], (2003).

<http://app.iucn.org/dbtw-wpd/edocs/FR-021.pdf>

Accessed on 3 October 2011.

Brajanoska R., Čivić, K., Hristovski, S., Jones-Walters, L., Levkov, Z., Melovski, Lj., Melovski, D., and Veleviski, M. 'Background document on Ecological Networks-project: Development of the National Ecological Network in FYR Macedonia (MAK-NEN)'. MES, Skopje, Republic of Macedonia; ECNC, Tilburg, the Netherlands [online publication], (2009).

<http://www.ecnc.org/publications/technicalreports/background-document-on-ecological-networks>

Accessed on 3 October 2011.

Part D:

Natura 2000

Delphine Morin and Danielle Boivin, Biotope





I. Natura 2000: the ecological network of the European Union

In order to address the need for ecological connectivity in a territory, one possibility is to implement ecological networks. According to Bennett & Mulongoy (2006)⁸, an ecological network “*connects ecosystems and populations of species that are threatened by fragmented habitats, facilitating genetic exchange between different populations and thus increasing the chances of survival of threatened species.*”

The first ecological network that was implemented in Europe was the Emerald Network of Areas of Special Conservation Interest (ASCIs). This initiative was adopted in 1979 by the Council of Europe in order to conserve wild flora and fauna and their natural habitats in the countries that are party to the Convention, including Serbia, Montenegro and Macedonia.

The Directive on the conservation of natural habitats and of wild fauna and flora adopted in 1992 - the Habitat Directive (92/43/EEC) establishes the framework for the EU strategies and actions for the protection of fauna and flora wildlife species and their habitats. It lists more than 200 types of natural habitats, 200 fauna species and 500 flora species that are of European Community interest and require protection. Natura 2000 is the ecological network that has been developed by the EU since 1992, as required in Article 3 of the Habitats Directive.⁹

The Natura 2000 network is composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive, and the species of birds listed in Annex I of the Birds Directive. It is comprised of core areas that can be Special Protection Areas (SPAs), as required under the Birds Directive, or designated as Special Area of Conservation (SAC), as required under the Habitats Directive.

This network shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. The natural and semi-natural habitats listed in Annex I, species listed in Annex II of the Habitats Directive, and the bird species listed in Annex I of the Birds Directive are said to be of “*Community interest*”.

“Habitats of community interest” refers to natural habitats that:

- are in danger of disappearance in their natural range, or
- have a small natural range following their regression or by reason of their intrinsically restricted area, or
- represent outstanding examples of typical characteristics of one or more of the six following biogeographical regions: Alpine, Atlantic, Boreal, Continental, Macronesian and Mediterranean.

Priority natural habitat means that the Community has particular responsibility for a natural habitat in danger of disappearance, which is present on the territory in view of the proportion of its natural range within the territory (these priority natural habitat types are indicated by an asterisk (*) in Annex I).

Species of Community interest means species which are:

- endangered, except those species whose natural range is marginal in that territory and which are not endangered or vulnerable in the western Palearctic region, or
- vulnerable, i.e. believed likely to move into the endangered category in the near future if the causal factors continue operating, or
- rare, i.e. with small populations that are not at present endangered or vulnerable, but are at risk. The species are located within restricted geographical areas or are thinly scattered over a more extensive range, or
- endemic and requiring particular attention by reason of the specific nature of their habitat and/or the potential impact of their exploitation on their habitat and/or the potential impact of their exploitation on their conservation status.

⁸ Graham Bennett and Kalemani Jo Mulongoy (2006). *Review of experience with ecological networks, corridors and buffer zones*. Secretariat of the Convention on Biological Diversity, Montreal, Technical Series No. 23, pp. 100.

⁹ European Commission (1992). *A coherent ecological network of special areas of conservation shall be set under the title Natura 2000 Habitats Directive 92/43/EEC, article 3.*



Figure 1. *Rhinolophus euryale*, a bat species of Community Interest, listed in Annex II of the Habitats Directive © Biotope

N.B: Not all endemic species are listed in Annexes II, IV and V of the Habitats Directive.

Priority species are species for whose conservation the Community has particular responsibility, in view of the proportion of their natural range. These priority species are indicated by an asterisk (*) in Annex II of the Habitats Directive.

The main aim of Habitats Directive is to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. As such, this Directive makes an important contribution to the general objective of sustainable development.

Some figures about Natura 2000

On January 2011, the Natura 2000 European network consisted of 26,106 sites covering 949,910 km², among which 751,150 km² terrestrial sites representing 17.5% of the terrestrial territory of the EU Member States (and 198,760 km² marine sites). The number of sites and their total area is still increasing:

SCI/SAC (Habitats Directive): 22,594 sites (among which 1247 marine sites) covering 583,888 km²

SPA (Birds Directive): 5347 sites (among which 566 marine sites) covering 517,340 km².

II. Benefits and limits of the Natura 2000 network

As the main EU initiative to protect biodiversity, Natura 2000 has been intensively studied, praised and criticized.

1. Benefits

Natura 2000 gives local stakeholders the opportunity to experience the principle of sustainable development at a local scale: managing the natural area to maintain natural habitats and species, while also maintaining ecosystem services that provide benefits for the human population. It is a local experiment of sustainable development.

As such, it presents a new technique of local governance. Natura 2000 is implemented through procedures that empower local populations responsible, giving them the opportunity to work for the conservation of its healthy environmental conditions.



Figure 2. Special Areas of Conservation (SACs) of the Habitats Directive and the Special Protection Areas (SPAs) of the Birds Directive

2. Limits

The Natura 2000 network as currently implemented lacks ecological connectivity. It is not actually a network but more a group or a set of wildlife conservation areas (generally assembling areas of great biodiversity) that are not sufficiently connected.

Another assumption made by some conservationists is that Natura 2000 could be a less static approach and allow the natural transformation of ecosystems. Currently it preserves ecosystems as they are as of the date of designation of the site. For example, if pastoralism can not be maintain at a site due to a lack of motivation of farmers resulting from economic problems, the expansion of forest ecosystems could be justified and accepted, as long as these ecosystems are also of Community interest.

III. Designating a Natura 2000 site

1. The three steps leading to the selection of Special Areas of Conservation (SACs)

a. *Proposed Sites of Community Importance (pSCI)*

According to Article 4 of the Habitats Directive, each Member State shall propose a list of sites indicating the natural habitat types in Annex I and species in Annex II that are native to its territory, the sites hosts.

- For animal species ranging over wide areas, these sites shall correspond to places within the natural range of such species that represent the physical or biological factors essential to their life and reproduction.
- For aquatic species ranging over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction.

The selection of sites is purely a scientific process, based on standard selection criteria specified in the Directive. In order to characterize the natural habitats of community interest and priority habitats, experts are required to use the “Interpretation Manual of the European Union, EUR 27”. Site specific data are communicated to the Commission by using **Standard Data Forms**.

b. *Sites of Community Importance (SCI)*

Pursuant to the proposed national lists, the Commission, in agreement with the Member States, must adopt the lists of “Sites of Community Importance”. Scientific seminars are convened by the Commission for each biogeographical region in order to analyse the Member States’ proposals in a transparent way. They are open to the Member States concerned and to experts representing relevant stakeholder interests, including owners, users, and **environmental NGOs**. These seminars are supported by the European Environment Agency, assisted by the European Topic Centre on Biological Diversity.

These expert seminars aim to establish if sufficient high-quality sites have been proposed by each Member State to ensure the favourable conservation status of each habitat type and species throughout their range in the EU. The objective is to establish a list of “Sites of Community Importance” for each of the regions determined by the Habitats Directive, applying a consistent approach across the Member States.

c. *Special Areas of Conservation (SAC)*

Once the lists of “Sites of Community Importance” have been adopted, it is up to the Member States to designate these sites as “Special Areas of Conservation”, as required by the Habitats Directive, as soon as possible and within six years at the most. They should give priority to those sites that are most threatened and/or that are of most importance in conservation terms. During this period, Member States must take the necessary management or restoration measures to ensure the favourable conservation status of those sites.

Biogeographic seminars have an important role to play in the selection of SCIs. The formal requirement of the seminars is to select SCIs from a larger list of pSCIs, while in reality, biogeographical seminars usually assess the insufficiencies in the official Member State proposals and identify places for upgrading with new sites to achieve coherence. There have been no cases in the EU Member States where NGOs have been satisfied with the government proposal. Thus the shadow list is their demand for enlarging the network.

How to prepare for biogeographic seminars?

- ensure good cooperation between scientists and NGOs (scientists are not always in a position to speak freely, but NGOs could be);
- establish good communication with the EC and ETC/BD on the topic as soon as possible;
- through consensus, appoint 1–3 representatives for the seminar as soon as possible; they should be both knowledgeable and trustworthy;
- lobby through European Habitats Forum members (WWF-European Policy Office, CEEWEB, BirdLife) and directly through the Commission to receive invitation for these persons;
- prepare alternative NGO assessments, shadow lists and reports and distribute them as early as possible;
- conduct a critical analysis of the government proposal;
- revise reference lists for the biogeographical region for missing species/habitats.

2. How to chose Sites of Community Importance

Annex III of the Habitats Directive outlines the criteria for selecting sites of community importance and designation as Special Areas of Conservation (SAC).

When habitat types listed in Annex I or species listed in Annex II of the Habitats Directive can be found at a site, Member States should implement the process described in stage 1 (see below). After the Member State has designated the sites, they should be ranked and presented on a list that will be submitted to the European Commission.

When the site is already protected at the national level (national park, special nature reserve), the Member States should answer the five questions described in stage 2 (see below).

Habitats Directive, Annex III, Stage 1

Assessment at the national level of the relative importance of sites for each natural habitat type in Annex I and each species in Annex II

A. Site assessment criteria for a given natural habitat type in Annex I

- a. Degree of representativity of the natural habitat type on the site.
- b. Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory.
- c. Degree of conservation of the structure and functions of the natural habitat type concerned and restoration possibilities.
- d. Global assessment of the value of the site for conservation of the natural habitat type concerned.

B. Site assessment criteria for a given species in Annex II

- a. Size and density of the population of the species present on the site in relation to the populations present within the national territory.
- b. Degree of conservation of the features of the habitat which are important for the species concerned and restoration possibilities.
- c. Degree of isolation of the population present at the site in relation to the natural range of the species.
- d. Global assessment of the value of the site for conservation of the species concerned.

C. On the basis of these criteria, Member States will classify the sites which they propose on the national list as sites eligible for identification as sites of Community importance according to their relative value for the conservation of each natural habitat type in Annex I or each species in Annex II.

D. That list will show the sites containing the priority natural habitat types and priority species selected by the Member States on the basis of the criteria in A and B above.

Habitats Directive, Annex III, Stage 2

Assessment of the Community importance of the sites included on the national lists

1. All the sites identified by the Member States in Stage 1 which contain priority natural habitat types and/or species will be considered as sites of Community importance.
2. The assessment of the Community importance of other sites on Member States' lists, i.e. their contribution to maintaining or re-establishing, at a favourable conservation status, a natural habitat in Annex I or a species in Annex II and/or to the coherence of Natura 2000 will take account of the following criteria:
 - a. relative value of the site at national level;
 - b. geographical situation of the site in relation to migration routes of species in Annex II and whether it belongs to a continuous ecosystem situated on both sides of one or more internal Community frontiers;
 - c. total area of the site;
 - d. number of natural habitat types in Annex I and species in Annex II present on the site;
 - e. global ecological value of the site for the biogeographical regions concerned and/or for the whole of the territory referred to in Article 2, as regards both the characteristic of unique aspect of its features and the way they are combined.

N.B. In order to be able to properly designate a SIC, Member States should undertake exhaustive fauna, flora and natural habitat inventories.

The "20%–60%" rule

In order to make the process less difficult and to save time, a rule called the "20%–60% rule" can be applied¹⁰. The "20%–60%" rule makes it easier to make a decision as to what percentage of habitat types/species occurrence on a biogeographical region should be protected¹¹. This rule can be subject to further discussion if it does not appear relevant to the situation.

"20%–60%" rule

- the habitat types and species which **occurrence** is covered to an extent **higher than 60%** are considered, in principle, as **sufficiently represented**
 - the habitat types and species which **occurrence** is covered to an extent **lower than 20%** are considered, in principle, as **insufficiently represented**
 - the habitat types and species which **occurrence** is covered to an extent **between 20% and 60%** **are the subject of a case-by-case analysis**
- More than 60% of the habitat/species coverage in a biogeographical region should be protected if the habitat types or species are:
 - occurring in a restricted area,
 - suffering from recent decline,
 - considered as priority ones in the Habitats Directive,
 - It is insufficient to protect only 20% of the habitat/species coverage when they are species showing limited ecological and genetic variation.
 - For priority, rare, endangered species and habitats lowest required threshold for coverage in the region is 60%!

¹⁰ Papp, D. and Tóth, C. . . *Natura 2000 Site Designation Process with a special focus on the Biogeographic seminars*, [online publication], CEEWEB Office (2007)
http://www.ceeweb.org/publications/english/bigeo_booklet_2007.pdf
Accessed on 17 October 2011

¹¹ EIONET. 'Criteria for Assessing National Lists of pSCI at Biogeographical Level, Hab. 97/2 rev. 4 18/11/97' (1997).
http://bd.eionet.europa.eu/activities/Natura_2000/pdfs/crit
Accessed 27 October 2011.

3. From IBAs to SPAs

As early as in 1979, the EU showed its commitment to addressing biodiversity loss by adopting the first directive to offer a regulatory framework for the protection of wild birds: the Birds Directive.

Council Directive 79/409/EEC on the conservation of wild birds (the Birds Directive) was adopted on 2 April 1979 by the European Economic Community (EEC) and set up long-term goals for the conservation of wild bird species. The text focuses on 181 endangered species and subspecies that require special protection measures. It was updated in 2008 (2008/102/CE) and in 2009 (2009/147/EC).

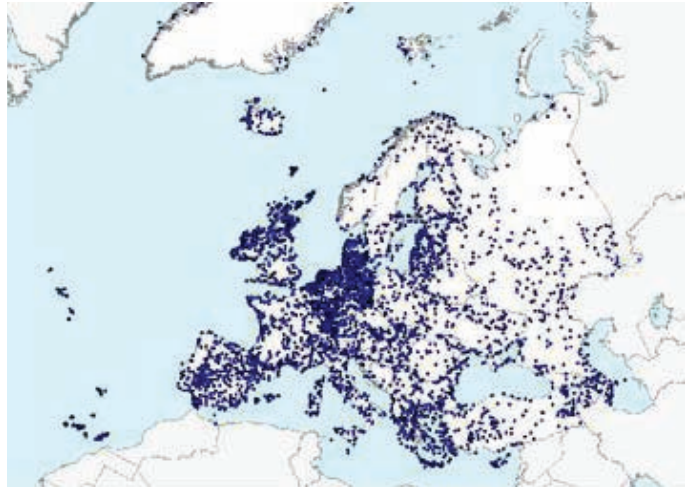


Figure 3. IBAs in Europe. ©Bird Life International

The three main elements of the Birds Directive are:

- the creation of sites aiming at protecting all species of naturally occurring birds in the wild state in Europe (Article 3)¹²;
- the obligation for Member States to take special conservation measures in order to protect the habitats necessary for the birds listed in Annex I but also for migratory species Article 4¹³. These important habitats should be classified and protected as Special Protection Areas and a detailed list of these SPAs should be sent to the European Commission in Brussels;
- is the legal protection of targeted bird species through the obligation for the Member States to adopt the conservation measures described in Article 5¹⁴.



Figure 4. European honey buzzard (*Pernis aprivorus*) ©Biotope

12 "Member States shall take the requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1" Birds Directive 79/409/EEC, Article 3

13 "The species mentioned in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution", Birds Directive 79/409/EEC, Article 4

14 "Member States shall take the requisite measures to establish a general system of protection for all species of birds referred to in Article 1" Birds Directive 79/409/EEC, Article 5

Some areas in Europe are particularly important for birds such as:

- sites for globally threatened species and other species of European conservation concern and of European Union concern;
- sites for migratory species that congregate in large numbers;
- sites for species unique to a small region;
- sites that support a species assemblage that is highly representative of a distinct biome.

BirdLife International classifies such sites as IBAs, where a significant part of these species populations can be found on a regular basis.

The function of the Important Bird Areas (IBA) Programme is to identify, protect and manage a network of sites that are important for the long-term viability of naturally occurring bird populations, across the geographical range of those bird species for which a site-based approach is appropriate. The continued ecological integrity of these sites is decisive in maintaining and conserving such birds. In the historical context, the concept of the Important Bird Areas emerged in 1981 with the publication of the book "Important Bird Areas in the European Union". This book was completed by the then International Council for Bird Preservation (now called BirdLife International) as a task assigned by the European Commission as a preliminary set of territories that should become protected areas according to Article 4 of the Birds Directive.

IBA criteria have been developed to ensure that, by applying different numerical thresholds, the international importance of a site for a species may be categorised at three distinct geographical levels:

- Global ("A" criteria),
- European ("B" criteria),
- European Union ("C" criteria).

As the Birds and Habitats Directives are the most important international legal instruments for site protection in the European Union, BirdLife has developed the IBA C criteria to fulfil the legal requirements of these Directives in terms of designating Special Protection Areas for birds. Article 4 states "*The species mentioned in Annex I shall be subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.*"

The criteria take into account the conservation requirements of species within the EU territory, with the geographical spread of sites representing the full extent of each species' range in the EU (irrespective of the pattern of regional abundance), as well as sites selected on the basis of relative abundance. Seven categories of criteria have been applied (C1–C7), several of which emulate the higher categories under the global (A) and European (B) level criteria. It should be noted that Annex I of the EC Birds Directive lists a number of subspecies that should be treated independently of their "mother" species when applying C criteria.

Criteria C1, C2, C5 and C6 refer to the following text of Article 4 from the Directive, "*Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this Directive applies.*"

Criteria C3, C4 and C5 refer to the following text of Article 4 from the Directive, "*Member States shall take similar measures for regularly occurring migratory species not listed in Annex I, bearing in mind their need for protection in the geographical sea and land area where this Directive applies, as regards their breeding, moulting and wintering areas and staging posts along their migration routes.*"

Keeping the aim of SPA designation in mind, the selection of IBAs serves a practical conservation purpose, while also helping to keep the process within sensible bounds. All potential Special Protection Areas (SPAs) should meet at least one of the IBA "C" criteria.

N.B. Legal grounds for complaints for the designation of SPAs of reduced size: Art. 4(1) of the Habitats Directive.

IV. Managing a Natura 2000 site

In order to sustainably manage a Natura 2000 site, there are two main procedures to follow:

- elaborating a good management plan, and
- elaborating a good management evaluation and reporting system.

1. Elaborating Natura 2000 Management Plans

Article 6 of the Habitat Directive is the legal basis for the Natura 2000 management plans:

(1) “For **special areas of conservation**, Member States shall establish the necessary conservation measures **involving, if need be, appropriate management plans** specifically designed for the sites or integrated into other development plans”.

The main steps of a management plan elaboration are:

- identify the main stakeholders (CSOs, land owners, decision makers, farmers, etc.), examine their practices and use of the natural areas of the site, learn about their interests and the conflicts that may be existing between them and that may imply impacts on the natural habitats and species of community interest;
- gather sufficient information about the ecological value of the area and about the cadastre or the zoning;
- organize workshops with local stakeholders to identify the main conservation goals and the management measures that should be realized to maintain or restore the natural habitats and species of community interest and also human benefits (services);
- establish an action plan stating a list of priority actions with a budget, time frame and indicators to assess the results of the management strategy;
- encourage local stakeholders commitment in the sustainable management of the site.

2. Reporting for the Habitats Directive

Once the management plan is implemented, it is necessary to undertake ongoing evaluation of the management strategy. It is also compulsory to submit reports to the EU Commission describing the state of conservation of the species that are of interest according to the EU Directives.

Pursuant to Article 17 of the Habitats Directive, every six years, the Member States shall draw up a report on the implementation of the measures taken under the Habitat Directive. This process has been implemented more or less strictly in the Member States. In Belgium, it is implemented quite well, with a very field result-based methodology, while in France, the process has just started.

N.B. Legal grounds for complaints when a site is threatened by development projects could be Art. 4(4) of the Birds Directive and Art. 6(2) of the Habitats Directive.

Legal grounds for complaints concerning the approval of a manipulated SEA of a General Spatial Plan: Art. 6(3) of the Habitats Directive.

Legal grounds for complaints concerning the authorization of construction projects without

EIA/AA decisions: Art. 6(3) of the Habitats Directive.

Legal grounds for a horizontal complaint concerning the authorization of numerous projects in all SPAs without taking into account of the cumulative impact: Art. 6(3) of the Habitats Directive.

V. Appropriate assessment of plans and projects significantly affecting Natura 2000 sites

Legal context: Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora)

Main goal: Integrating biodiversity issues in Natura 2000 sites in decision-making concerning projects and plans – no worsening of the Favourable Conservation Status of protected Natura 2000 habitats and species is tolerated.

Subject to AA (within and outside Natura 2000):

- plans and development projects under Annexes I and II of the EIA Directive – *the AA procedure/ decision is part of the SEA/EIA procedure/decision;*
- any other activities (e.g. ploughing of a pasture) which could affect the habitats and species in a Natura 2000 site – subject to individual AA procedure and act.

Administrative act: Decision on the AA report *should be published on the website of the competent authority!*

According to Article 6 of the Habitats Directive, the EU members have to assess the impacts of the plans and projects that are to be implemented “into” or “near” Natura 2000 sites. The assessment is to be elaborated when plans and projects may significantly affect natural habitats and the wild flora, fauna of Community interest. If the assessment reveals an important impact on natural habitats, wild flora or fauna of Community interest, if it destroys the function of the Natura 2000 site to protect the species and habitats that are quoted in the Birds and Habitats Directives, the project or plan should be prohibited or modified.

It is mandatory for all plans and projects that can have an impact on Natura 2000 sites

*(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, **shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.***

Before accepting a plan or a project, the national authority should make sure that it will not adversely affect the Natura 2000 site and undertake public consultation

*In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned **and, if appropriate, after having obtained the opinion of the general public.***

However the project could be still accepted for important socioeconomic reasons of public interest and the negative impact should be compensated

*(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. **It shall inform the Commission of the compensatory measures adopted.***

If the sites hosts a priority natural habitat type and/or a priority species, the conditions of acceptance are even stricter

*Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised **are those relating to human health or public safety**, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.*

The assessment guidelines of plans and projects significantly affecting NATURA 2000 sites developed by the EU Commission in 2011¹⁵ explain:

¹⁵ European Commission, Environment DG. 'Assessment of plans and projects significantly affecting Natura 2000 sites'. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC [online publication], (2001). http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf Accessed 3 October 2011.

- the steps to be taken in the impact assessment of plans and projects on Natura 2000 sites,
- how the field survey should be undertaken.

The project proponent should hire a consultant qualified to undertake this impact assessment and to deliver it to the relevant national authority. This authority will then judge if the impact assessment of plans and projects on Natura 2000 sites has been correctly undertaken. If the procedure is correct, the legal authority will decide if the project should be implemented or not.

There are five steps for assessing the impact of a plan or project on Natura 2000 sites, as described below.

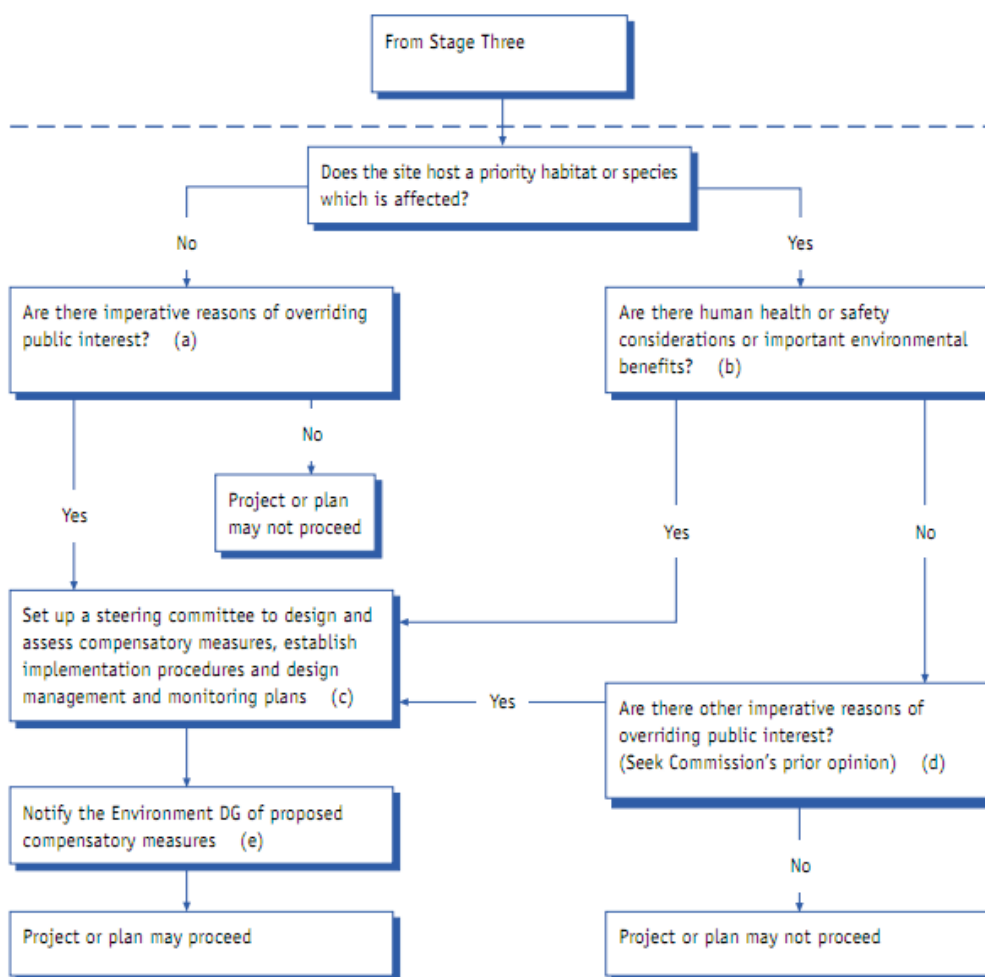


Figure 5. Assessment where no alternative solutions exist and where adverse impacts remain

Source: European Commission, Environment DG (2001), Assessment of plans and projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, page 4.

Screening

The screening process is intended to answer the question: “Can it be objectively concluded that the effect of a project on a Natura 2000 site will not be significant?” The goal is to avoid going through the entire process of “Appropriate Assessment” for projects that are obviously not detrimental for the Natura 2000 site.

Appropriate assessment (AA)

If the project is likely to have an impact on the Natura 2000 site, a more detail assessment called “Appropriate Assessment” is undertaken. The impacts are studied with respect to the conservation objectives of the site and to its structure and function. For this assessment, detailed technical information about the project and extensive ecological data should be presented.

Assessment of alternatives

A list of alternative solutions should be outlined and then assessed. The process should examine alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

Projects of overriding public interest

Assessment where no alternative solutions exist and where adverse impacts remain, i.e. an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

Overall summary of the remaining conservation status of the site(s)

This summary should show that the assessments required by the habitats directive have been completed.

According to the European Commission¹⁶ in 2008, the Appropriate Assessment described in the HD is rather strict, i.e. *“it lays down obligations of substance, mainly because it introduces an environmental standard, i.e. the conservation objectives of a Natura 2000 site and the need to preserve its integrity. In other words, if the Appropriate Assessment determines that the plan or project will adversely affect the integrity of a Natura 2000 site, the authority cannot agree to the plan or project as it stands unless, in exceptional cases, they invoke special procedures for projects which are deemed to be of overriding public interest.”*

VI. The role of the civil society in the development of Natura 2000: a new governance experience to be maintained

The participation of the general public in the implementation of Natura 2000 is not clearly defined in the Habitats Directive.

1. Public participation in the designation of Natura 2000 sites

CSOs can play an important role in the designation of Natura 2000 sites by sharing their knowledge about the sites. They can complete the shadow list and participate in biogeographical seminars.

A **“Shadow List”** is a list of sites eligible for Natura 2000 proposed by the NGOs of a country.

Biogeographic seminars are international seminars designed by the EU to accompany the operational implementation and management of the Natura 2000 network by Member States. The aim is to facilitate discussion between Member States, experts, stakeholders, and the Commission about the measures needed to ensure the favourable conservation status of targeted species and habitats, with a specific focus on the contribution of the Natura 2000 network. The EU considers that the Member States are those responsible for implementing and managing the Natura 2000 network, though the CSOs also express their opinions during these seminars. They can present data from their countries and highlight what should be improved in order to achieve the objectives of the HD.

2. Public participation and Natura 2000 Management Plans

The Habitats Directive does not specify that CSOs and local stakeholders should participate in the elaboration of Natura 2000 Management Plans. However, in some Member States, the development of management plans for the Natura 2000 network is one of the most important steps in the implementation of the Natura 2000 network, and public participation is considered an essential part of the process.

In France, for example, the implementation of the Natura 2000 network has raised many problems because the designation of the SPAs was often in conflict with the interests of local stakeholders: farmers and private

¹⁶ European Commission. *“Wind energy development and Natura 2000”. EU Guidance on wind energy development in accordance with the EU nature legislation [online publication], (2008).*
http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf
Accessed 13 October 2011

owners who wanted to develop their land, or municipalities willing to develop infrastructure. In order for the management plans to be accepted, public participation processes have been offered to local stakeholders who were encouraged to get involved in the protection of the Natura2000 site.

The Guidelines on Best Management Practice published by international institutions (IUCN, WorldBank, UNDP, etc.) encourage participation in the development of management plans. Even if the Habitats Directive does not require public participation, it can be considered a Best Management Practice.

The role of civil society organizations in the development of Natura 2000 is very important. They need to help local stakeholders accept and support the idea of managing a natural area according to the nature conservation principles of the EU Directives. In fact, the success of Natura 2000 relies on participation of the local population. Local stakeholders should choose and develop measures of “*conservation*”¹⁷ for managing the area and implementing the actions needed to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status. Civil organizations should actively participate in the development of the management plan of a Natura 2000 site.

3. Public participation and Appropriate Assessments for Natura 2000 sites

Article 6(3) of the Habitats Directive states:

“the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

In the Directive, the participation of the general public is not presented as a priority though it is mentioned, and CSOs can claim their right to express their opinion and be consulted based on this Article.

Furthermore, the European Commission guidelines¹⁸ published in 2001 on the assessment of plans and projects significantly affecting Natura 2000 sites states that:

“the assessment process will include the gathering and consideration of information from many stakeholders, including the project or plan proponents, national, regional and local nature conservation authorities and relevant NGOs”.

The guidelines advise the relevant authority carrying out the Appropriate Assessment:

- to obtain data from the project or plan proponent,
- on the basis on this data to consult internal and external experts and other stakeholders.

Watch out!

Screening and assessment phases: The cumulative effect is often not taken in account. The reference criterion for approving a project is the fact that the project/plan/activity would damage not more than 1%¹⁹ of a Natura 2000 habitat or species population. In order to make such an assessment, the competent authorities and the experts need a public register with all EIA/SEA/AA decisions!

Article 6(3) of the Habitats Directive is fully obligatory only after pSCIs become SCIs but you should lobby your government to apply it from the date of accession.

¹⁷ In the Habitats directive, conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favorable status.

¹⁸ European Commission, Environment DG. ‘Assessment of plans and projects significantly affecting Natura 2000 sites’. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC [online publication], (2001) http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf
Accessed on 3 October 2011.

¹⁹ Reference criteria vary among Member States

VII. Practical exercises

Activity 1: Raise awareness about Natura 2000 and biodiversity protection - pointing out the links between people and nature

The main goal of this activity is to understand the links between humans and nature (nature = natural habitats, semi natural habitats, urban nature). The metaplan technique is used.

- Each trainee receives a post-it upon which he/she is invited to write (5-10 minutes):
 - a brief description of its activity,
 - the type of relationship with “nature”: economic, social, sport, educational.
- Form four groups with the trainees, each group receives six post-its upon which they indicate six activities: farming, foresting, industries, hunting, fishing... and the kind of relationship with nature (15 minutes).
- Each group receives a paper sheet and traces two columns, one for activities that have a positive influence on nature, the other for activities with a negative impact on nature). They have to place their post-it in the appropriate column (15 minutes).
- Once all the post-its are placed, the trainer asks the trainees to identify the duality and complementary relationships (15 minutes).
- In a plenary session, each group presents their conclusion on duality and complementary relationships between humans and “nature”.

Activity 2: Identify a suitable area to designate a Natura 2000 site based on the technique of “Environmental dilemmas: Critical Decisions for Society (Iozzi, 1980)” Finding consensus: Choosing the area to create a Natura 2000 site and dress its borders

Separate the trainees into four groups:

- Each group receives a map with information about the land cover (natural habitat, infrastructures, urban zones, industrial areas...). The trainer explains the activity and gives the instructions.
- Each group is asked to select an area where they are going to create one or more Natura 2000 sites from the Habitats Directive (SCI). To select the area, they will have to remember the steps and criteria for the designation of a site (15 minutes).
- Once the area is found, the trainees have to trace the borders of the SCI and explain the chosen criteria followed through this exercise (integration or not of urban and industrial areas and of linear infrastructures or obstacles...) (30 minutes).
- One person in each group presents the site and explains their choice (20–30 minutes).
- Critical analyses of the results between the trainees and the trainers (15 minutes). They have to identify the benefits and limits of the site they designed for different stakeholders: local communities, industry sector, agriculture sector, government. The trainees then discuss the need to integrate the different stakeholders into the management of the site and the need to assess future projects that may significantly affect the Natura 2000 site.

Activity 3: Informal debate

The main goal of this activity is to rapidly find and organize our ideas.

- The trainer presents the debate statement, for example:
 - “There is no place for industrial activities in or near a Natura 2000 site”, **or**
 - “Protected areas, like wildlife reserves and parks, are the areas to settle a Natura 2000 site”.
- Trainees are split in two groups: one in favour of the statement, the other against.
- The groups are seating in front of each other.

- With no time for preparation and in alternating order of groups, one in favour and one against, each trainee has one minute to expose his arguments in favour or against the statement.
- When all the trainees have exposed their arguments, all the trainees work together on pointing out the main subjects discussed and the best arguments presented by each group.

Activity 4: Design a management strategy for a Natura 2000 site

Simulate the development of a Natura 2000 site management plan. Separate the trainees into three groups:

- park managers who are also foresters and who want to generate revenues from wood production,
 - environmental NGOs that want to protect species and habitats,
 - local stakeholders such as NGOs or municipalities that want to develop recreational activities in the reserve to generate revenues.
- a. Have the trainees describe the interest of each stakeholder group.
 - b. Have the trainees offer participating techniques activities to have the three groups of stakeholders agree on a global vision for the protected area, design a strategy to implement activities, develop a monitoring and evaluation methodology.
 - c. Have the trainees discuss the challenges of this participatory event.

Activity 5: Metaplan: identify and rank the main management goals of a Natura 2000 site

- Separate participants into small groups.
- Give each participant five post-its.
- Ask them to write one main goal (per post-it) that the Natura 2000 site management strategy should try to achieve (10 minutes). This is the brainstorming stage when it is important that ideas are not judged.
- Then ask them to order their post-its from more important to less important (2–5 minutes).
- Give them 2–3 minutes to revise the order.
- In each group, the participants have to present their ideas, form one list for all groups that is ordered into a hierarchy according to their importance (15-20 minutes).
- Each group presents and explains the assemblage and the order of their ideas (15–20 minutes).

Activity 6: Force field analysis: Assess the current situation for a natural protected area, build a vision and identify driving forces and restraining forces for change

Discuss the situation in a natural protected area and identify the ideal situation or vision and the current situation. Try to see what the driving forces and weakening restraining forces are for change.

1. Identify the issues:
 - group members envision and list the components of their ideal situation,
 - participants share ideas and write them down on paper,
 - group members envision and list components of the present situation,
 - participants share ideas and write them down on paper;
2. Brainstorm and record lists of:
 - driving forces that encourage change from the present to ideal situation,
 - restraining forces that prevent change from the present to ideal situation;
3. Clarify items;
4. Identify critical forces by:

- using a focusing technique to prioritize both lists,
 - record top forces on a new flipchart sheet,
 - each participant evaluates each item on a scale of 1 (low) to 5 (high) on post-its,
 - calculate values assigned to driving and restraining forces;
5. Develop action strategies for change.

Activity 7: Rank the management goals using the “Forced Distribution” technique:

The participants rank ideas/goals according to importance by sorting each item into one of four categories: less important, somewhat important, important or most important.

- Participants write down their ideas and goals on paper.
- Count them and determine the number of items to be placed in each category. You have to limit the number of items that can be placed in each category. A “normal distribution” should be followed, with most of the items placed in the middle categories and very few in the extremes. A general rule should be to have two-thirds of items in the middle categories; split the other third into the outer categories.
- Individually, participants rate five items as “less important”, ten items as “somewhat important”, etc. based on a question such as, “What are the primary goals of this project?”, “What should be our team’s priorities?”, etc.
- Write each item on newsprint, and assign a letter to each item (use double, then triple letters if there are more than 26 ideas).
- As a group, participants indicate their ratings of each idea.
- The facilitator totals ratings, and places each item in the “less important” to “most important” categories.
- Repeat the rating process as required, using another question such as, “What are our individual priorities?”, “What are the secondary goals of this project?”, etc.

Activity 8: Rank your ideas and reduce the numbers of ideas using the “N/3” technique

This activity aims to narrow a list of brainstormed ideas to the most important items

- Assign a letter to each brainstormed idea (use double, then triple letters if there are more than 26 ideas).
- Divide the total number of ideas by 3 to determine the number of votes each member receives.
- Participants vote for ideas with each vote going to a separate idea (cannot vote for one idea twice).

Create a second newsprint with top ideas (based on number of votes) to reduce distraction and determine if a second round of voting is needed.

Activity 9: Build consensus using the “Percentage Poll” technique

In order to design an action plan, the different stakeholders have to reach a consensus. Use to assess how quickly participants are prepared to reach an agreement when you are working on consensus. This is often used in creating goals and objectives or mission and vision statements.

- Ask participants to review the statement on the paper sheets. Begin by asking if 70% of the group agrees.
- If the majority of participants do not raise their hands, move down to 60 percent, then if needed, 50 percent.
- If the majority of participants raise their hands, move up to 80 percent, 85 percent, etc.
- At the point where agreement level drops off, focus discussion on areas where further discussion is needed:

- What will it take to obtain a higher level of agreement?
- What are key ideas that should be developed further?
- What are the superfluous ideas that could be dropped?

Activity 10: Help participants design an Action Plan by filling in an Action Plan Chart

- Complete the chart below (or one similar to it), being as specific as possible.
- Identify facilitators and barriers to each action, using this information to prioritize or further develop actions.

Action Plan Chart				
Action	Responsible Party	Due date	Needed Resources	Milestones / Performance Measures / Goals
1				
2				
3				
4				

VIII. References

Legal Framework:

Council Directive 2009/147/EC on the conservation of wild birds was adopted in 2009. It replaces Council Directive 2008/102/CE and Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds.

The directive sets up long-term goals for the conservation of wild bird species and focuses on 181 endangered species and subspecies that require special protection measures.

‘Council Directive 2009/147/EC’ [online document].

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:en:PDF>

Habitats Directive:

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) was adopted in 1992 as an EU response to the Berne Convention.

The Habitats Directive establishes the framework for the EU strategies and actions for the protection of the fauna and flora wildlife species and their habitats. It specifies more than 200 types of natural habitat, 200 fauna species and 500 flora species that are of European Community interest and require protection.

‘The Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora)’ [website].

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:html>

Berne Convention

The Bern Convention was adopted in 1979 by the Council of Europe in order to conserve wild flora and fauna and their natural habitats and led in 1998 to the creation of the Emerald network of Areas of Special Conservation Interest (ASCIs) in countries territory parties to the convention

Council of Europe. ‘The Bern Convention’ [website], (1979).

http://www.coe.int/t/dg4/cultureheritage/nature/berne/default_en.asp

Guidelines:

Appleton, M.R. and Hotham, P.A.E. (2007). *Protected area management planning in Croatia: A manual and toolkit*. Fauna & Flora International, Cambridge, UK.

Danev, G., Gulič, J., Štruc, S., ed. Introductory Handbook, Joint strategy for integrated management of protected areas in the Southeastern European Region, Project NATREG. Ljubljana, Institute of the Republic of Slovenia for Nature Conservation [online book], (2011).

http://www.natreg.eu/uploads/JSIMPA_Introductory%20Handbook.pdf

Accessed on 4 October 2011.

EIONET. 'Criteria for Assessing National Lists of pSCI at Biogeographical Level' *Hab. 97/2 rev. 4 18/11/97* [online document], (1997).

http://bd.eionet.europa.eu/activities/Natura_2000/pdfs/crit

Accessed on 27 October 2011.

European Commission. 'Wind energy development and Natura 2000'. *EU Guidance on wind energy development in accordance with the EU nature legislation* [online publication], (2008).

http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf

Accessed on 13 October 2011.

European Commission, Environment DG. 'Assessment of plans and projects significantly affecting Natura 2000 sites'. *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* [online publication], (2001).

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

Accessed on 3 October 2011.

Gilbert, K., Hulst, N., Rientjes, S. 'SoBio, Social Science and Biodiversity. Why is it important?' *A guide for policymakers*, ENC, Tilburg, the Netherlands [online publication], (2006).

<http://www.ecnc.org/publications/technicalreports/background-document-on-ecological-networks>>

Accessed on 3 October 2011.

Papp, D. and Tóth, C. 'Natura 2000 Site Designation Process with a special focus on the Biogeographic seminars' CEEWEB Office [online publication], (2007).

http://www.ceeweb.org/publications/english/biogeo_booklet_2007.pdf

Accessed on 17 October 2011.

Suske, W. and Venn, O. 'Management Planning in Croatia' Guideline *PHARE NATURA 2000 in Croatia* [online publication].

www.natura2000.hr/UtilPages/GetDBDocument.aspx?id=166

Accessed on 3 October 2011.

Thomas, L. and Middleton, J. 'Guidelines for Management Planning of Protected Areas' *Adrian Phillips Series Editor, World Commission on Protected Areas (WCPA), Best Practice Protected Area Guidelines Series No. 10*, IUCN [online publication], (2003).

<http://data.iucn.org/dbtw-wpd/edocs/PAG-010.pdf>

Accessed on 4 October 2011.

Papers:

Bennett G. and Mulongoy, K. J. 'Review of Experience with Ecological Networks, Corridors and Buffer Zones'. Secretariat of the Convention on Biological Diversity, Montreal, Technical Series No. 23 [online publication], (2006).

<http://www.cbd.int/doc/publications/cbd-ts-23.pdf>

Accessed on 4 October 2011.

Presentations:

Richard, D. 'Natura 2000 Seminars, A new process for working together to achieve favourable conservation status'. European Topic Centre on Biological Diversity.

<http://www.coe.int/t/dg4/cultureheritage/nature/EcoNetworks/Documents/2011/ppt/New%20biogeographic%20process%20Natura%202000.pdf>

Accessed on 14 October 2011.

Richard, D. 'Purpose of biogeographic seminars, Application to the West Balkans'. European Topic Centre on Biological Diversity [online publication]
<http://www.coe.int/t/dg4/cultureheritage/nature/EcoNetworks/Documents/2011/ppt/Biogeographic%20seminar%20in%20West%20Balkans.pdf>
Accessed on 14 October 2011.

Websites:

European Commission Page for Nature and Biodiversity [website].
http://ec.europa.eu/environment/nature/index_en.htm

European Commission Page for SEA [website].
<http://ec.europa.eu/environment/eia/sea-legalcontext.htm>

European Commission Page for the national Natura 2000 websites [website].
http://ec.europa.eu/environment/nature/natura2000/db_gis/index_en.htm#sites

European Environment Agency [website].
<http://www.eea.europa.eu/>

European Environment Information and Observation Network (EIONET) [website].
<http://www.eionet.europa.eu/about>

European Topic Centre on Biological Diversity [website]
<http://bd.eionet.europa.eu/>

Natura 2000 maps / GIS information database [website].
<http://natura2000.eea.europa.eu/#>

Part E: EU Rural Development Policy and Nature Conservation—Concept and Implementation Measures

Mark Redman, ENRD



I. EU Rural Development Policy

1. Background

There are 13.7 million farmers in the 27 Member States of the European Union (EU-27) occupying 40% of the total land area and contributing around 10% to the EU-27 Gross Domestic Product (GDP).

A major influence on the development of agriculture in western and northern Europe during the past 50 years has been the Common Agricultural Policy (CAP) of the European Union (EU).

The CAP was first established in 1962 when there were still only six original members of the EU: Belgium, France, Germany, Italy, Luxembourg and The Netherlands. The main objective of the CAP at that time was to increase agricultural production in order to: a) guarantee the supply of food for all citizens, and b) provide a reasonable standard of living for farmers. The original policy mechanism used to achieve this was ‘price support’ whereby farmers were guaranteed a minimum price for everything they produced. This was a very successful approach and by 1970, the original six EU Member States were self-sufficient in all main food commodities.

However, as the number of EU Member States started to increase (e.g. Great Britain, Denmark and Ireland joined the EU in 1973, followed by Greece in 1981), the real impact of the CAP started to become apparent. The problem was that the CAP was too successful. The combination of guaranteed prices for agricultural products, plus the introduction of new agricultural technologies and an increasing number of farmers led to agricultural over-production and the creation of huge surpluses of food, much of which was “dumped” on the world food market, thereby lowering global prices and impacting negatively upon farmers in other countries outside of the EU!

This was a very bad and wasteful situation—and also very expensive. For example, in the early 1980s over 70% of the total budget of the EU was being spent on supporting farmers with the CAP—all of which was paid for by the EU taxpayers!

Plus there was the “cost” to the environment due to:

- **expansion** of production, i.e. the cultivation of more land for production;
- **specialisation** of production, i.e. larger and more specialist farms, particularly intensive animal production (“factory farms”) and specialist arable production leading to larger fields, monocultures and loss of landscape mosaic;
- **intensification** of production, i.e. increased use of agro-chemical inputs (pesticides and fertilisers).

These environmental “costs” include:

- damage to natural and semi-natural ecosystems and the loss of biodiversity;
- pollution of water resources;
- degradation and erosion of soil resources;
- destruction of traditional landscape features;
- loss of genetic diversity in agriculture, notably due to a decline in the use of traditional livestock breeds and crop varieties.

By the early 1980s (20 years after establishment of the CAP), it was clear that a process of “CAP reform” had to start. However, this was a slow process with much resistance from farmers and the “agricultural industry”. By 1997, various modifications had been made to the CAP and its annual cost was reduced to **50%** of the total EU budget. But the CAP was still too expensive (e.g. the average cost to the EU taxpayer was EUR 100/ year) and the whole concept of continuing to support farmers was coming under increasing public scrutiny and political pressure.

A radical reform package was therefore proposed in 1999. For the first time in the 35+ years since the CAP was established, this directly targeted a proportion²⁰ of the CAP budget at supporting rural development, including the promotion of more environmentally-friendly and sustainable agriculture as a clear EU policy priority.

²⁰ Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) – can be downloaded in English from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1999:160:0080:0080:EN:PDF>

2. Current (2007–2013) EU Support for Rural Development

Support for rural development continues to be a fundamentally important part of the CAP. During the period 2007–2013, the total budget of the CAP is **EUR 375 billion**. This budget is divided into two ‘pillars’:

- **Pillar 1:** Income Support for EU farmers - **EUR 282 billion (80%)**;
- **Pillar 2:** European Agricultural Fund for Rural Development (EAFRD) - **EUR 93 billion (20%)**.

The funds available under Pillar 2 are distributed according to a National Strategy Plan and seven-year Rural Development Programmes (RDPs). These are elaborated and implemented at the national/regional level by the EU Member States in accordance with various EU regulations²¹ and guidelines²² that define the EAFRD.

The EAFRD for 2007–2013 includes a total of 44 measures (Table 1) that Member States and regions can use for supporting rural development²³. These are organised according to three main themes known as ‘priority axes’:

- **Priority Axis 1:** Competitiveness of Agriculture and Forestry (approx. 34% of total EAFRD allocation);
- **Priority Axis 2:** Improving the Environment and Countryside (approx. 44% of total EAFRD allocation);
- **Priority Axis 3:** Rural Diversification and Quality of Life (approx. 13% of total EAFRD allocation).

Member States and regions are required to spread their rural development funding among all three priority axes, and to support the well established LEADER approach²⁴ (approx. 6% of total EAFRD allocation) that encourages a bottom-up approach to the development of rural areas.

According to the guiding principles of CAP reform since 1999: “...strong economic performance must go hand in hand with the sustainable use of natural resources and levels of waste, maintaining biodiversity, preserving ecosystems and avoiding desertification. To meet these challenges, the CAP and its future development should, among its objectives, contribute to achieving sustainable development by increasing its emphasis on encouraging healthy, high-quality products, environmentally sustainable production methods, including organic production, renewable raw materials and the protection of biodiversity”.²⁵

There are 12 measures available to Member States during 2007–2013 for implementing Priority Axis 2 - Improving the Environment and Countryside (see Table 1). This includes five measures to encourage the sustainable management of agricultural land and seven measures to encourage the sustainable management of forests. Some of the most interesting measures for biodiversity conservation are outlined below.

3. Natura 2000 Payments (EAFRD measures 213 + 224)

The Natura 2000 “payment” is a very specific and targeted form of rural development measure that was first introduced with the introduction of the EAFRD in 2007.

The purpose of EAFRD measures 213 and 224 is to provide support for successful implementation of the Nature Directives on agricultural and forest land. EU Member States have the option to compensate private agricultural or forest land owners or managers for the costs incurred and income lost resulting from the restrictions upon land management in designated Natura 2000 sites.

For the period of 2007–2013, compensatory payments for Natura 2000 restrictions on agricultural land (measure 213) may be paid up to EUR 500/ha/year for the first five years, followed by up to EUR 200/ha/year in the following years. On forestry land, compensatory payments (measure 224) may be paid at the rate of EUR 40–200/ha/year.

Although potentially very useful for land owners and managers confined by the restrictions of the Natura 2000

21 Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) – can be downloaded in various languages from:
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32005R1698:EN:NOT>

22 Council Decision of 20 February 2006 on Community strategic guidelines for rural development (programming period 2007 to 2013) – can be downloaded in various languages from:
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006D0144:EN:NOT>

23 For more information on the implementation and uptake of these measures in the EU-27, see:
http://enrd.ec.europa.eu/rural-development-policy/country-information/rural-development-policy-fiches/en/rural-development-policy-fiches_home_en.cfm and
http://enrd.ec.europa.eu/rural-development-policy/programme-implementation/monitoring/en/rural-development-policy-figures_en.cfm

24 For more information on the principles and practice of LEADER approach, see:
http://enrd.ec.europa.eu/rural-development-policy/leader/en/leader_en.cfm

25 Council Decision of 20 February 2006 on Community strategic guidelines for rural development (programming period 2007 to 2013) – can be downloaded in various languages from:
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006D0144:EN:NOT>

Table 1. EAFRD Rural Development Measures 2007–2013 by Priority Axis, Theme and Measure Code

AXIS 1 - Improving the competitiveness of the agricultural and forestry sector	<i>Promoting knowledge and improving human potential</i>	111	<i>Vocational training and information actions</i>
		112	<i>Setting-up of young farmers</i>
		113	<i>Early retirement</i>
		114	<i>Use of advisory services</i>
		115	<i>Setting up of management, relief and advisory services</i>
	<i>Restructuring and developing physical potential and promoting innovation</i>	121	<i>Modernisation of agricultural holdings</i>
		122	<i>Improvement of the economic value of forests</i>
		123	<i>Adding value to agricultural and forestry products</i>
		124	<i>Cooperation for development of new products, processes and technologies in the agriculture, food and forestry sector</i>
		125	<i>Infrastructure related to the development and adaptation of agriculture and forestry</i>
		126	<i>Restoring agricultural production potential</i>
	<i>Quality of agricultural production and products</i>	131	<i>Meeting standards based on EU legislation</i>
		132	<i>Participation of farmers in food quality schemes</i>
		133	<i>Information and promotion activities</i>
	<i>Transitional measures</i>	141	<i>Semi-subsistence farming</i>
142		<i>Producer groups</i>	
143		<i>Providing farm advisory and extension services</i>	
AXIS 2 - Improving the environment and the countryside	<i>Sustainable use of agricultural land</i>	211	<i>Natural handicap payments to farmers in mountain areas</i>
		212	<i>Payments to farmers in areas with handicaps, other than mountain areas</i>
		213	<i>Natura 2000 payments and payments linked to Directive 2000/60/EC</i>
		214	<i>Agri-environment payments</i>
		215	<i>Animal welfare payments</i>
		216	<i>Non-productive investments</i>
	<i>Sustainable use of forestry land</i>	221	<i>First afforestation of agricultural land</i>
		222	<i>First establishment of agroforestry systems on agricultural land</i>
		223	<i>First afforestation of non-agricultural land</i>
		224	<i>Natura 2000 payments</i>
		225	<i>Forest-environment payments</i>
		226	<i>Restoring forestry potential and introducing prevention actions</i>
		227	<i>Non-productive investments</i>
	AXIS 3 - Quality of life in rural areas and diversification of the rural economy	<i>Diversify the rural economy</i>	311
312			<i>Support for business creation and development</i>
313			<i>Encouragement of tourism activities</i>
<i>Improve the quality of life in rural areas</i>		321	<i>Basic services for the economy and rural population</i>
		322	<i>Village renewal and development</i>
		323	<i>Conservation and upgrading of the rural heritage</i>
		331	<i>Training and information</i>
		341	<i>Skills-acquisition and animation measures with a view to preparing and implementing a local development strategy</i>
LEADER	<i>Implementing local development strategies</i>	411	<i>Competitiveness</i>
		412	<i>Environment/land management</i>
		413	<i>Quality of life/diversification</i>
		421	<i>Implementing cooperation projects</i>
		431	<i>Running the local action group, skills acquisition, animation</i>

designation, Natura 2000 payments have not been adopted and implemented by many Member States. As of July 2011:

- only eight Member States (Belgium, Czech Republic, Germany, Estonia, Spain, Hungary, Latvia, Slovakia) had implemented Measure 213 on a total of 313,761 ha of agricultural land;
- only six Member States (Czech Republic, Germany, Estonia, Latvia, Lithuania, Slovakia) had implemented measure 224 on a total of 17,187 ha of forest land.

An example of potential negative impacts resulting from a lack of harmonization between different legislative documents at the national level²⁶

In Bulgaria, according to the Regulation for implementation of Measure 213, every candidate is obliged to maintain the land in Good Agricultural and Environmental Conditions (GAEC). GAEC are adopted by the national regulation for Agricultural Producers Assistance Act and include leaving not more than 50 trees and/or bushes on productive and 75 on low-productive pastures.

On the other hand, in the National Standards prescribed by the Ministry of Agriculture and Foods, it is permitted to keep single trees or group of trees on up to 25% of the area if the grassland is of HNV or if it falls in Natura 2000 sites or a protected area. However, since the national standard is not harmonized with the special conditions for farmer support eligibility, farmers end up cutting significant number of trees and bushes on their land, destroying habitats and species subject to protection in the respective Natura 2000 sites.

4. Agri-Environment Payments (EAFRD measure 214)

Agri-environment payments are a special form of rural development measures designed to encourage farmers to protect and enhance the natural environment on the land they manage. This includes the protection and conservation of soil, ground and surface water, wildlife habitats and species, traditional agricultural landscapes and air.

Farmers are offered agri-environment payments in return for providing an “environmental management service” by maintaining or modifying their day-to-day management practices in order to produce specific environmental benefits. Agri-environment payments either focus on preventing negative impacts on the environment by discouraging BAD farming practices, or maintaining or increasing positive impacts on the environment by encouraging GOOD farming practices.

For example, some agricultural management practices that create environmental benefits and are commonly encouraged with agri-environment payments include:

MANAGEMENT PRACTICE	ENVIRONMENTAL BENEFIT
Introduce certified organic farming methods	Increased biodiversity and reduced agricultural pollution
Substantially reduce the use of fertilisers and/or pesticides	Reduced agricultural pollution and increased biodiversity
Convert intensively-managed arable land into permanent grassland	Reduced soil erosion and agricultural pollution, plus increased biodiversity
Keep and breed local breeds of farm animals in danger of extinction	Conservation of genetic diversity
Reduce the volume of irrigation water consumed	More sustainable water usage and reduced risk of salinisation

Agri-environment payments first became a part of the Common Agricultural Policy (CAP) in 1985, but remained optional for EU Member States to adopt. In 1992, it became compulsory for all EU Member States to develop agri-environment schemes and to offer agri-environment payments to farmers—although the participation of farmers was voluntary.

26 *Ineffective implementation of Measure 213 leading to non-compliance with the Habitats and Birds Directives (BirdLife Bulgaria statement)*
http://bspb.org/article_files/130942825534.pdf

Table 2. Some of the main activities eligible for support under EAFRD Measure 214

Conversion to and Continuation of Organic Farming	All EU-27 Member States
Conservation of Traditional and Local Breeds of Farm Animals	e.g. Austria, Estonia, Lithuania, Germany and Sweden
Conservation of Traditional Crop Varieties	e.g. England
Restoration and Maintenance of Semi-natural Grasslands and other Vegetation	e.g. Austria, Sweden and Romania
Restoration and Maintenance of Traditional Landscape Features	e.g. England, Wales, Ireland and Malta
Control of Soil Erosion	e.g. Germany and Greece
Reduction of Pesticide Use	e.g. Estonia and Finland
Creation and Maintenance of Habitats for Endangered Species	e.g. Netherlands
Maintenance of Feeding Areas for Birds	e.g. England and Netherlands

Since 1999, agri-environment payments have been incorporated into EU rural development policy and have become **obligatory** for all Member States to implement—although the participation of farmers is **voluntary**.

Examples of Agri-environment Payments

Maintenance of High Nature Value Grassland in Romania: up to EUR 182/ha/year

- Maintain extensive grassland management (no fertiliser application; mowing after 1 July; maximum grazing density of 1 livestock unit*/ha; no ploughing): **EUR 124/ha/year**
- No mechanical hay-making: **EUR 58/ha/year**

Soil Erosion Control in Bulgaria: Up to EUR 207/hectare/year

- Run-off holding furrows: **EUR 26/ha/year**
- Grass strips across slope: **EUR 32/ha/year**
- Conversion of arable land to pasture: **EUR 207/ha/year**

Some typical 'baseline requirements' in Bulgaria and Romania for agri-environment payments are:

- Permanent grassland must be maintained by ensuring either a minimum level of grazing, or mowing at least once a year.
- Cutting down solitary and/or groups of trees that are growing on agricultural land is not permitted.
- It is only permitted to use pesticides that have been approved for sale, and then only in strict accordance with the instructions for use.
- Farmers must comply with the periods when the application of chemical fertilizer and animal manure to land is prohibited.
- No chemical fertilisers or animal manure can be applied to frozen, snow-covered or water-logged land.
- No chemical fertilisers or animal manure can be applied within 100 metres of a source of drinking water.

* *Approximately equivalent to one cow grazing one hectare for one year*

Agri-environment payments are currently financed by EAFRD Measure 214 under Priority Axis 2 of Regulation (EC) No 1698/2005. The total amount of public money spent on agri-environment schemes in the EU has increased rapidly since the early 1990s and almost 25% (38.5 million hectares) of all farmland in the EU-27 is now included in an agri-environment scheme, although this figure varies greatly between Member States. The target for 2013 is a total of **50.6 million hectares**—approximately 33% of all farmland in the EU-27.

Agri-environment payments are not a typical subsidy or form of income support payment. Farmers must **work** to produce an environmental benefit and are then **compensated** for the **extra costs** incurred, including any **loss of income** due to loss of production.

Farmers applying for agri-environment payments make a **voluntary commitment** to comply with clearly defined **management requirements** for a minimum period of **five years**. In some EU Member States, this period may be longer, even up to ten years if much longer periods of time are required in order for the changes in farm management practice to produce specific environmental outputs (for example, the creation and maintenance of specific habitat types for an endangered species).

Payments are only made for farm management activities that go beyond the **minimum (baseline) requirements**. These baseline requirements are typically the mandatory/legal obligations that farmers are required to follow at both the EU and national level.

4.1 How do agri-environment payments work?

Agri-environment payments are usually offered to farmers as part of a **scheme** or **programme**. In order to receive the agri-environment payment, farmers must sign some form of **agreement** or **contract** with the government authority responsible for administration of the agri-environment payments. This agreement will usually specify:

- the **management requirements** that must be followed by the farmer;
- the **specific areas of land** that the management requirements must be applied to. All applications for agri-environment payments must therefore include some form of map clearly showing the location of relevant **land parcels**;
- the **period of time** that the management requirements must be followed for (i.e. the duration of the contract);
- the **payment** that will be made to the farmer in return for following the management requirements. Farmer usually make an **annual claim for payment** - per hectare or per head of animal (for endangered breeds), and
- the **penalties and sanctions** that will be applied if the management requirements are not followed.

4.2. IPARD Preparatory Actions for the Implementation of Agri-environmental Measures

IPARD is the Rural Development component (fifth component)²⁷ of the Instrument for Pre-Accession Assistance (IPA) and is a simplified version of the EAFRD. IPARD is only implemented in the EU candidate countries and has two key objectives:

- to provide assistance for building capacity for implementation of the EU Common Agricultural Policy in the candidate country, and
- to contribute to the sustainable adaptation of the agricultural sector and rural areas in the candidate country.

These objectives are achieved through the implementation of **nine different measures under three priority axes**. Priority Axis 2 of IPARD includes a provision for “preparatory actions” for the implementation of pilot agri-environmental measures in selected pilot areas.

The general objective of these pilot agri-environment measures should be “*to develop practical experience with regard to the implementation of agricultural production methods designed to protect the environment and maintain the countryside*”.

²⁷ Council Regulation (EC) No 1085/2006 of 17 July 2006 establishing an Instrument for Pre-Accession Assistance (IPA) – available in various languages from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1085:EN:NOT>

Since such “preparatory actions” are significantly more complex than the investment type measures normally financed under Priority Axis 1 (Improving Market Efficiency and Implementation of EU Standards) and Axis 3 (Development of the Rural Economy) of IPARD, they are not usually implemented immediately. Instead, it has been common during the current period (2007–2013) of IPARD implementation for pilot agri-environment measures to be postponed until the second half of the IPARD programme (e.g. 2011–2013) in order to allow sufficient capacity-building amongst policy-makers, administrative staff, etc.

Eligible participants for IPARD pilot agri-environment measures should include individual farmers, agricultural co-operatives, agricultural enterprises, NGOs and public institutions which own and/or lease land in the defined pilot areas. Participation in the pilot measures is voluntary, but once the participants have committed themselves, there should be an agri-environment contract lasting five years, similar to that under the EAFRD.

The amount of public aid offered to participants in the pilot agri-environment measures is 100%. In other words, the participants are not required to provide any co-financing.

In accordance with the guidance provided by the European Commission, the general characteristics of IPARD agri-environment pilot projects are as follows:

- **Experimental in nature**—pilot projects are a “laboratory” for testing new principles and procedures that will later be scaled-up following accession to the EU;
- **Limited in scope**—pilot projects commonly involve a limited number of pilot measures that are implemented in a small number of well-defined geographical areas;
- **Facilitate “learning-by-doing”**—pilot projects focus primarily on the development of practical experience at both the administrative and farm level. Mistakes will be made and lessons will be learnt!;
- **Relevant to environmental priorities**—pilot projects should address clearly defined agri-environmental priorities and be relevant, for example, to the implementation of EC policies (e.g. maintenance of High Nature Value farming systems, management of Natura 2000 sites, etc.);
- **Innovative**—pilot projects should not replicate measures that a candidate country already has experience with (e.g. organic farming in the case of Macedonia).

II. High Nature Value (HNV) Farming

The concept of “High Nature Value” (HNV) farming has emerged and developed over the last 10–15 years in response to the growing recognition that certain types of European agriculture are **very beneficial** for wildlife.

The HNV farming concept is not complicated, but it does challenge the common understanding that farming activities have a mainly negative impact on biodiversity and promotes instead the positive relationship between traditional low-intensity farming systems (especially those based on semi-natural grasslands) and the conservation of valuable habitats and wildlife species.

Since these low intensity farming systems are not as economically viable as conventional farming systems, it is also argued that they should receive some form of support (e.g. with rural development funds) to help sustain them because of the “public benefit” they provide in the form of biodiversity conservation, including the maintenance of many habitats and species of conservation concern.

The concept of High Nature Value (HNV) farming is attracting increasing interest from environmentalists and policy-makers in Europe because of its importance for biodiversity conservation. For example, supporting HNV farming can directly benefit the conservation of Natura 2000 farmland habitats—both within designated sites and in the wider countryside.

1. Definition of High Nature Value (HNV)

HNV farming is commonly defined (e.g. Andersen *et al.*, 2004) as “... *comprising those areas in Europe where agriculture is a major (usually the dominant) land use and where that agriculture supports or is associated with a high diversity of wildlife species and habitats, or the presence of endangered wildlife species of European conservation concern, or both*”.

Preliminary estimates from the European Environment Agency (EEA) are that approximately 27 million hectares (25%) of farmland in the EU-27 is potentially “high nature value”. However, as Figure 1 shows, this is not evenly distributed and much larger concentrations are found in the more peripheral regions of the EU, especially in southern and eastern Europe.

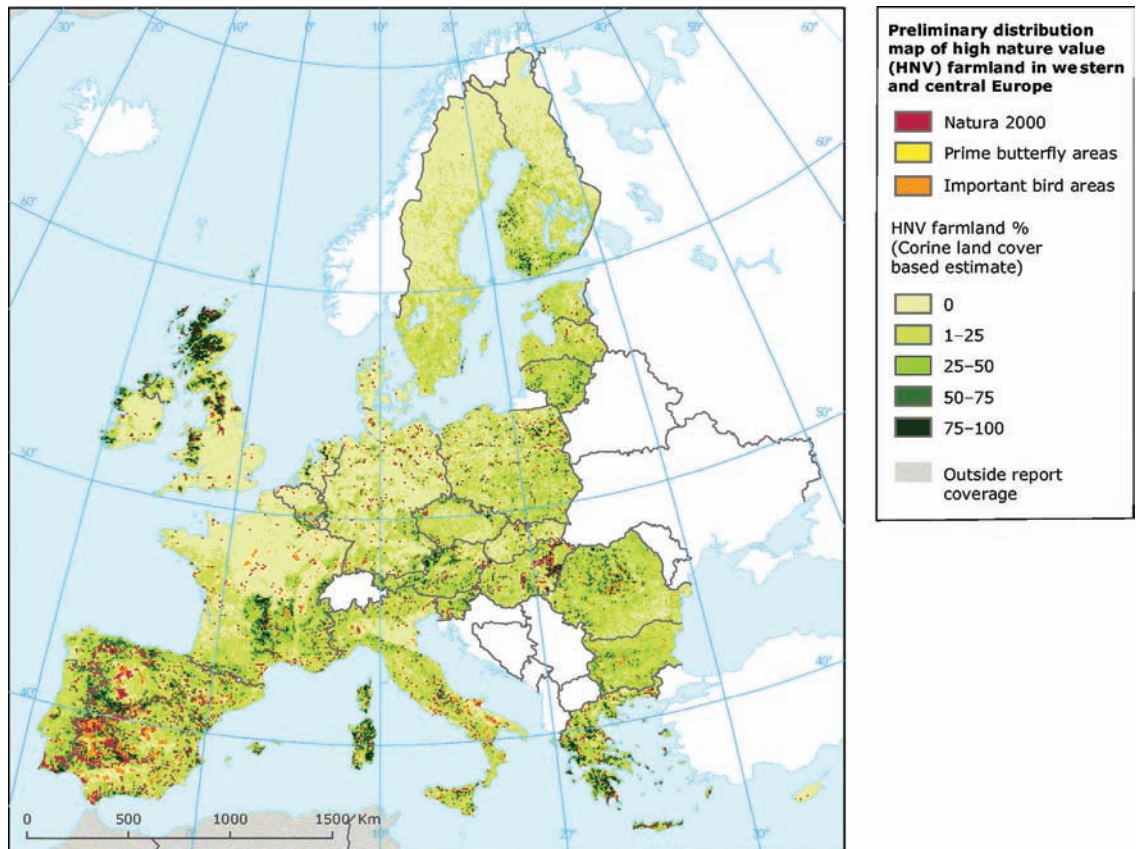


Figure 1. Preliminary distribution map of High Nature Value (HNV) farmland in western and central Europe (Source: EEA, Copenhagen, 2007; <http://www.eea.europa.eu>)

2. Key Characteristics of HNV Farming

HNV farming systems vary greatly across the EU Member States, but are typically characterized by a combination²⁸ of:

Low intensity land use—biodiversity is usually higher on farmland that is managed at a low intensity. The typical characteristics of low intensity farming systems that tend to create conditions favouring a larger range of wildlife species (compared to intensive farming systems) are:

- limitations on agricultural productivity due to altitude, slope, soils, climate, etc.;
- survival of well-established management practices, e.g. transhumance, traditional meadow management (hay-making, etc.);
- low density of grazing animals (this will vary according to local conditions);
- very limited use of fertilizers and pesticides, low degree of mechanization and high levels of labour input.

As a **general rule**, more intensive use of machinery, fertilizers and pesticides and/or the presence of high densities of grazing livestock greatly reduces the number and abundance of wildlife species on cropped and grazed land.

28 Adapted from various sources, including Beaufoy and Cooper (2008)

Note that low intensity land use is also commonly associated with small-scale, subsistence farming. There are huge numbers of small farms still persisting in the new EU Member States and they are very important for farmland biodiversity conservation!

However, since many of these farming systems are found in the more marginal areas of Europe, where agricultural productivity is least productive, it is obvious that those farmers delivering the greatest biodiversity benefit are therefore typically farming under the most difficult circumstances (social, economic and environmental) and are subject to the greatest pressures to abandon their traditional way of life. Consequently, across Europe many traditional agricultural landscapes rich in biodiversity are being lost to abandonment, intensification and changes in land use. This trend is worsening as many of the most vulnerable farmers, delivering the greatest biodiversity benefits, are too small-scale to be eligible for support payments under the CAP (see the case of HNV farming in Romania below).

High proportion of semi-natural vegetation grazed by livestock and/or mown for hay—the biodiversity value of semi-natural vegetation, such as unimproved grasslands used for grazing, is significantly higher than intensively-managed agricultural land.

Where large areas of semi-natural vegetation are used for grazing livestock, then HNV farming systems are also commonly characterised by:

- use of traditional breeds that are adapted to the local environment (e.g. poor quality forage and harsh grazing conditions), although certain non-native breeds may also be successfully used;
- use of large areas of public or communal land, notably for grazing and commonly managed with traditional “shepherd” systems.

Diversity of land cover and land use—biodiversity is significantly higher when there is a “mosaic” of land cover and land use, including uncultivated field margins, small cultivated plots with low intensity crop production, fallow land, an abundance of mature trees, shrubs, uncultivated patches, ponds and streams, rocky outcrops, and numerous other landscape features.

This diversity creates a much wider variety of habitats and food sources for wildlife and therefore supports a much more complex ecology, with many more ecological niches for wildlife, than the simplified landscapes associated with intensive agriculture.

It is not necessary for all three characteristics to be present within one farming system for it to be considered as HNV. Instead, the three characteristics can be considered to interact as illustrated in Figure 2.

This shows that the dominant characteristic of HNV farming is “low intensity land use”. The significant “presence of semi-natural vegetation” is also essential. However, in some situations, this may also be found in combination with areas of low intensity cropland to create a mosaic landscape with a greater “diversity of land cover” than simply semi-natural vegetation.

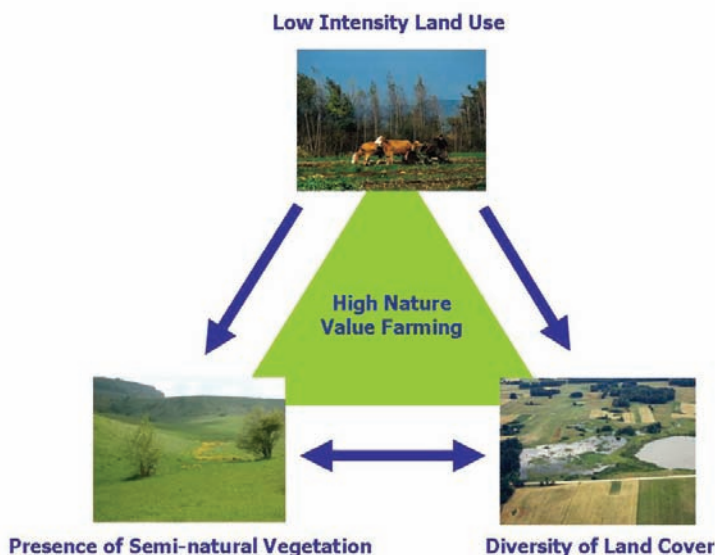


Figure 2. Conceptual relationship between the three main characteristics of High Nature Value (HNV) farming systems

3. HNV Farming in Southern Transylvania (Romania)

Southern Transylvania lies in the central part of Romania and is mainly mountainous and sub-mountainous. Land use in the region is approximately equal in the ratio of forest to agriculture, with agricultural land use dominated by grasslands, i.e. 33.4% of agricultural land is communal pastures used for grazing and private meadows used for hay-making.

The great majority of these pastures and meadows are **semi-natural**—they have very low productivity, but exceptionally high levels of floral and faunal diversity. The dominant agricultural production system on these species-rich, semi-natural grasslands is a form of **traditional pastoralism** involving two interconnected land uses:

- a. **Large numbers of small-scale mixed farms**—these are typically around 3–4 hectares, while there are also a significant number of holdings (approximately 178,000 or 42% of all agricultural holdings in southern Transylvania) with less than 1 ha and therefore do not meet the basic requirement for being registered as a ‘farm’.

These ‘small-holdings’ are characterised by a highly fragmented land ownership, commonly with a few small parcels of meadow, cultivated land, vegetable gardens and orchards close to the household, whilst other parcels are much more widely scattered. Around 80–90% of all these small-holdings are classified by the Romanian government as ‘subsistence farmers’.

- b. **Very low intensity grazing of common pastures**—most small farms and small-holdings have a few animals (cows and sheep) that are housed in barns and fed hay during the period from late autumn (November) to late spring (April). During the rest of the year (May to October), the livestock from the villages are herded by local shepherds and moved for grazing to common pastures. This releases the private grasslands around the farms for hay-making during the late summer from July to September.

The pastures used for communal grazing are usually located at high altitudes in the nearby Carpathian Mountains. Access to these pastures involves the seasonal movement of sheep and cattle from the villages in May and then back to the barns of their owners in October in preparation for the winter months.

The low intensity, traditional pastoralism practiced by farmers in southern Transylvania creates a living, dynamic agricultural landscape. There are three main **public benefits** associated with this farming system and its constituent land uses:

- conservation of biodiversity;
- maintenance of cultural landscapes;
- mitigation of climate change.

These are all by-products of the traditional pastoralism that is normally practiced in southern Transylvania, including the routine day-to-day management practices associated with extensive grazing during the summer months and running subsistence small-holdings year round.

4. Public Benefits of HNV farming

4.1 Conservation of Biodiversity

The combination of a huge number of extensively-managed small-holdings plus low intensity grazing of large areas of semi-natural grassland²⁹ that are commonly found in southern Transylvania is a typical “high nature value” (HNV) farming system characteristic of many marginal, mountainous areas where agricultural productivity is severely limited by high altitude, poor soils and steep slopes.

Whilst there is no scientific evidence to prove that the size of a farm determines its value for biodiversity, it is logical to assume that farmland managed by small-scale subsistence farmers tends to have much higher biodiversity values than that managed by larger, more commercially-orientated farms.

The main characteristics (as noted above) of traditional pastoralism in southern Transylvania, which make it particularly good for biodiversity and clearly identifiable as an HNV farming system, are:

²⁹ *The term semi-natural grassland is used to describe grasslands that are dominated by unsown native plant species and that are dependent on human activities to maintain the sward condition and prevent the encroachment of shrubs or woodland. These grasslands contain a diverse range of plant and invertebrate species which depend upon mowing/grazing management to create and maintain the grassland habitat in which they can survive.*

- **Low intensity land use**—this includes:
 - the survival of well established management practices, notably the traditional management of hay meadows and the seasonal movement of grazing livestock;
 - very limited use of fertilizers and pesticides—the most important source of nutrients for the meadows is manure;
 - very low stocking densities, and
 - a low degree of mechanization and high levels of labour input, for example, hay-making is rarely mechanised and large amounts of manual labour are used in the summer months for mowing by scythe, turning hay and making hay-ricks.
- **Presence and/or utilization of semi-natural vegetation**—the large areas of extensively managed semi-natural pastures and meadows in southern Transylvania make the region particularly rich in biodiversity, including many flora and invertebrate fauna species of national and international conservation concern.

For example, a survey of sub-alpine grasslands at 16 study sites throughout Transylvania found a total of 626 species, including 225 vascular plants, 16 gastropods, 68 butterflies and 317 moths.

Studies of the meadows associated with **just one** village in southern Transylvania identified 11 different semi-natural plant communities, including four types of plant association that are listed as being of European Community interest under the EU Habitats Directive, with 12 plant species classified as “vulnerable” or “rare” on the *Romanian Red List of Vascular Plants*. Research on the butterfly fauna of the village meadows also recorded a total of 46 butterfly species over two seasons on eight transects in an area equivalent to 1.7 hectares, of which:

- ten species are unique to the specific type of grassland,
- three are listed as “vulnerable” in the *Romanian Red List of Butterflies*, including the Mountain Alcon Blue (*Maculinea rebeli*), which is listed as having global threat status, and
- five are listed in the *Red Data Book of European Butterflies* as “near threatened”, “vulnerable” or “endangered”.

Using butterflies as a well-understood indicator of the health of grassland ecosystems, one research study³⁰ concluded that: a) the abandonment of such grassland habitats by farmers in Romania will lead to a complete loss of several butterfly taxa, whilst b) the intensification of semi-natural grassland use through fertilisation and mechanisation “*will have fatal consequences for almost all butterfly species of the habitats concerned*”.

- **Diversity of land cover and land use**—the characteristic mosaic landscapes of southern Transylvania support significantly higher levels of biodiversity than other agricultural landscapes because there is a much wider variety of habitats and food sources for wildlife and therefore a much more complex ecology. In addition to the mosaic of low intensity cropland, semi-natural grassland, fallow and abandoned land, there are also numerous landscape elements that create further diversity of land cover. These are particularly important as nesting, feeding and breeding areas for birds.

For example, according to the Romanian Ornithological Society, there are a number of endangered bird species (listed in Annex 1 of the EC Birds Directive) which benefit from the diverse land cover and land use of southern Transylvania. These include:

- the Corncrake (*Crex crex*), a globally-threatened species which is widespread on the wetter meadows;
- the Red-backed Shrike (*Lanius collurio*) that nests in scrubby patches of uncultivated land and field margins;
- the Lesser Grey Shrike (*Lanius minor*) that prefers long lines of trees (particularly in association with meadows) for nesting and hunting;

³⁰ Schmitt, T. and Rákósy, L.. (2007). *Changes of traditional agrarian landscapes and their conservation implications: a case study of butterflies in Romania, Diversity and Distributions* 13(6), 855-862.

- plus a number of rare species, including the Black-crowned Night-Heron (*Nycticorax nycticorax*), Eurasian Eagle-Owl (*Bubo bubo*) and Nightjar (*Caprimulgus europaeus*), which nest and hunt in areas of swampy and riparian woodland.

In the case of southern Transylvania, an additional characteristic of traditional pastoralism which makes it particularly good for biodiversity is the **diversity of management practice**.

For example, the management of hay meadows varies greatly between farmers with subtle differences in the mowing date, applications rates of manure and timing and intensity of early/late season grazing. This introduces additional temporal and spatial variability into the hay meadow landscape and creates variations in vegetation composition and height both between meadows and within the same meadow. Coupled also with variations in the soil, slope, altitude and aspect, this creates a very heterogeneous habitat that favours a wide range of flora and fauna with different ecological requirements. Since the extent of the meadow habitat is also large and not disrupted by fragmentation, it is also a relatively stable habitat within which metapopulations³¹ can function and ensure the overall survival of specific species.

4.2 Maintenance of Cultural Landscape

In addition to their exceptionally high value for nature conservation, the traditional agricultural landscapes of southern Transylvania are cultural landscapes and the direct legacy of a long history of pastoral management and cultural inheritance. These landscapes are widely considered to be unique in Europe and their extraordinary beauty and natural value cannot be overstated.

According to one author³², “*Their biodiversity and cultural remains are outstanding in an international comparison*” with specific regions such as the Saxon Villages Area³³ providing “*a tantalizing glimpse of genuine medieval countryside... a landscape that Europe has mostly lost, where a wealth of plants and animals thrives alongside traditional agriculture*”.

More generally, the agricultural landscapes of Romania have also been described as a “*living part of the former European agrarian history*” and “*an important component of the European cultural and natural heritage*” due to the preservation of many traditional farming methods that have disappeared in almost all other parts of Europe.

The cultural heritage associated with agricultural landscapes in Romania is largely due to the fact that the utilization of semi-natural grasslands for sheep production is linked with many traditions, songs and foods. Many words in the Romanian language also have their roots in traditional pastoralism.

4.3 Mitigation of Climate Change

Agriculture is an important source of the three major greenhouse gases (GHGs): carbon dioxide, methane and nitrous oxide. Emissions of each gas vary by livestock type and farming system, but globally, agriculture contributes about one-third of total carbon dioxide emissions and is the largest source of methane and nitrous oxide.

GHG emissions from traditional pastoralism in southern Transylvania are likely to be significantly lower than other farming systems in the EU due to:

- the minimal use of nitrogen fertilizers and pesticides that use large amounts of fossil fuels to produce;
- the limited use of tractors and other powered farm machinery and the widespread use of horses for transport and manual labour for fieldwork, and
- subsistence farming uses significantly less energy (and therefore emits less carbon dioxide) for the transportation of food, since most food is consumed by the household or transported short distances for sale.

31 *Metapopulations can be described as spatially separated populations of the same species from which individuals can disperse and colonise other patches of suitable habitat.*

32 *Lennartsson, T. and Helldin, J-O (2007). Agricultural landscapes in Eastern Europe as reference areas for Swedish land management. In: Valuable Agricultural Landscapes - the Importance of Romania and Scandinavia for Europe, Kungl. Skogs-och Lantbruksakademiens TIDSKRIFT No. 5 (a report from a seminar at the Royal Swedish Academy of Agriculture and Forestry in co-operation with the Swedish Biodiversity Centre held on 19 April, 2006), 26-30.*

33 *The Saxon Villages Area of southern Transylvania is approximately 300,000 ha, with a population of about 100,000 scattered in some 150 small villages and settlements that lies in the triangle between the historic cities of Sibiu, Sighişoara and Braşov.*

Grasslands are receiving increasing attention as a potential “sink” for sequestering and storing carbon dioxide as carbon in soils and plants. Grasslands store approximately 34% of the global stock of carbon in terrestrial ecosystems, whilst forests store approximately 39% and agro-ecosystems approximately 17%. Unlike forests, where vegetation is the primary form of carbon storage, most of the carbon stored in grasslands is in the soil.

There is no literature specific to Romania on this topic, but it is very likely that the semi-natural grasslands of southern Transylvania have the potential to contribute to the mitigation of climate change.

5. Policy Support for HNV Farming

The HNV Farming concept was originally developed as a tool for emphasising the **crucial importance of low intensity farming systems for biodiversity conservation** in Europe, with a particular focus on promoting biodiversity conservation on large areas of low intensity farmland that remain outside of protected areas.

In order to help fulfil its commitments on halting biodiversity decline, the EU has embraced the HNV Farming concept. Within the framework of the EU rural development policy, all Member States are required to:

- identify what “HNV farming” means in their own national context;
- support HNV farming systems and the preservation of HNV farmland by including appropriate measures in their national/regional rural development programmes, and
- monitor and report changes in the total (baseline) area and quality of HNV farmland in order to assess the impact of the measures for supporting HNV farming included in their national/regional rural development programmes.

There are four broad types of EU rural development support of relevance to HNV farming:

- measures that can be used to protect and reward specific practices of HNV farming and/or to encourage adjustments to some farm management practices;
- measures that provide income support to HNV farmers, e.g. through payments in areas with natural handicaps;
- measures that provide investment aid which could be targeted to help maintain or improve the viability of farms/farming systems with basic HNV characteristics;
- measures for supporting development of the quality of life in the marginal and disadvantaged areas where HNV farmland and farming systems are most commonly found.

All four types of support are currently available under Pillar 2 of the CAP for the period of 2007–2013. Some measures have the potential to be targeted very specifically at supporting the maintenance and development of HNV farming practices in particular geographical locations or farming systems, whilst other measures are more horizontal and less targeted.

Table 3 summarises the EU-funded rural development measures of relevance to HNV farming that are currently implemented in Romania.

Is it Enough?

EU rural development policy obviously has a major role to play in the support of HNV farming and it is anticipated that the restoration, preservation and enhancement of biodiversity-rich farmland ecosystems will remain a very high priority of the EU in the forthcoming programme period of 2014–2020.

Agri-environment payment schemes are undoubtedly an important policy instrument in this respect, but they do need better tailoring and targeting at the national, regional and local level in order to be more accessible to HNV farmers, including those farming on a small-scale. It is also clear that agri-environment payments rarely make farm businesses more commercially viable. Therefore, in marginal farming areas (where most HNV farmland tends to be found), they need to be combined with effective income support and investment aid from other RDP measures in order to support both nature-friendly farming practices *and* socio-economic sustainability.

However, encouraging HNV farmers to take advantage of the opportunities available to them will continue to require, amongst other things, the introduction of new skills and competences through education, vocational training and well-targeted advice. This is a challenge!

Table 3. Rural Development Measures relevant for supporting HNV farming included in the Romanian National Rural Development Programme (2007–2013). The numbers in brackets are the EAFRD Measure code in Table 1.

Priority Axis 1	<ul style="list-style-type: none"> • Vocational Training, Information Actions and Diffusion of Knowledge (111)—support for organization of vocational training courses, including those relevant to HNV farmers • Setting-up of Young Farmers (112)—support for young farmers taking over medium-sized farms. Selection criteria include farming in a natural handicap area³⁴ and participating in an agri-environment measure, all of which are very relevant to HNV farming • Modernisation of Agricultural Holdings (121)—investment support for the modernization of facilities and processes regarding environmental protection, food safety and animal welfare. Available to larger subsistence and HNV farms or associations of farmers • Adding Value to Agricultural Products (123)—investment support for improving the processing and marketing of agricultural products. Available to HNV farmers prepared and able to establish the necessary micro-enterprises, particularly those interested in developing new or high quality products in accordance with EU standards • Supporting Semi-subsistence Agricultural Holdings (141)—to support the transformation of larger and more active subsistence farms into economically viable farms. Available to HNV farmers, but conditional upon submitting a business plan to show that the farm will become “competitive within three years”. Priority is given to those in a natural handicap area and participating in an agri-environment measure • Providing Farm Advisory and Extension Services (143)—a specific measure for funding the provision of advisory services for farmers in Bulgaria and Romania. Targeted at larger subsistence and other farms, and at farmers applying for agri-environment measures. Advice must be used for the “overall improvement” of the farm and as a minimum must cover cross-compliance, but could also be used to provide training for HNV farmers on a range of subjects relevant to farm business development and biodiversity conservation
Priority Axis 2	<ul style="list-style-type: none"> • Support for Mountain Areas (211)—annual support payments of EUR 50/ha of “used agricultural land” available to HNV farmers in designated mountain areas with a minimum area of 1 ha identified in the land register system • Support for Less Favoured Areas other than Mountain Areas (212)—annual support payments of EUR 50/ha of “used agricultural land” available to HNV farmers in designated non-mountain areas with a minimum area of 1 ha identified in the land register system • Agri-environment Payments (214)—there are currently three sub-measures (others are under development) offering five-year management agreements and annual payments for the maintenance and enhancement of semi-natural grassland management in designated communes, namely: EUR 124/ha/year for the maintenance of high nature value grasslands; EUR 58/ha/year for the maintenance of traditional hay-making practices, and EUR 101–209/ha/year for managing grasslands supporting important bird species in selected Important Bird Areas (IBAs)
Priority Axis 3	<ul style="list-style-type: none"> • Support for the Creation and Development of Micro-enterprises (312)—investment support (up to 70% grants) for diversification into non-agricultural activities (support for diversifying into food processing is available under Measure 123 above). A diverse range of alternative economic activities are eligible for support, including traditional trades such as wood processing. Of relevance to HNV farmers wanting to improve their family income and able to establish the necessary micro-enterprises • Encouragement of Tourism Activities (313)—investment support (up to 70% grants) for the development of small-scale rural/agri-tourism and leisure activities as a source of income. A range of profit-generating activities are eligible for support which are of relevance to HNV farmers able to establish the necessary micro-enterprises

It is not easy to reach large numbers of farmers, often in relatively isolated rural locations with poor infrastructure, with training or advisory support. Furthermore, many farmers are reluctant to participate unless they can see clear and immediate benefits. This requires well-formulated training courses and advisory messages, which in turn also requires skilled and experienced trainers and advisers. Further investment in building such capacity amongst farm advisory and other rural extension services is therefore essential.

With properly targeted support, HNV farming could yield a viable economic future and modern quality of life for local rural communities. Low intensity farming methods, quality food products, traditional crafts and related rural tourism could sit at the heart of sustainable rural development in many regions of Europe.

³⁴ In designated ‘natural handicap areas’ agricultural production or activity is more difficult because of natural handicaps, e.g. difficult climatic conditions, steep slopes in mountain areas, or low soil productivity in areas. Due to the handicap to farming, there is a significant risk of agricultural land abandonment and thus a possibility of loss of biodiversity, desertification, forest fires and the loss of highly valuable rural landscape.

III. Future Policy Developments

In light of the needs, challenges and opportunities that still exist throughout Member States' rural areas (including further enlargement of the EU), the European Commission has developed proposals for the operation of rural development policy from 2014 to 2020. The process of developing this new EU rural development policy has been supported by a major public debate on the future of the CAP³⁵.

New proposals for reforming the CAP after 2013 were released in October 2011. The proposals included a draft regulation covering support for rural development by the European Agricultural Fund for Rural Development (EAFRD).

These proposals aim to strengthen the competitiveness and the sustainability of agriculture and maintain its presence in all regions, in order to guarantee European citizens healthy and quality food production, to preserve the environment and to help develop rural areas.

A short guide to the European Commission's proposals for EU rural development after 2013 can be downloaded at: http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=FE667808-ABC1-3562-FEDB-2A3F7DB09295.

More generally, progress with EU agricultural and rural development policy can be followed via the website of the European Commission's Directorate General for Agriculture and Rural Development at: http://ec.europa.eu/agriculture/index_en.htm.

IV. Practical exercises

Activity 1: Farmers and Nature ... the Good, the Bad and the Ugly

Purpose: To introduce a simple SWOT-type framework for any 'agri-environment situation analysis' that aims to develop an understanding of the relationship that exists between agriculture and the rural environment.

Background: Effective agri-environment policy-making—and the promotion of more environmentally-friendly and sustainable agriculture—must always be based upon a clear understanding of the relationship that exists between agriculture and the rural environment. This is commonly prepared as an **agri-environment situation analysis** which assesses the relationship between agricultural activity and:

- soil and water resources;
- biodiversity and wildlife habitats;
- the genetic diversity of agricultural crops and animals, and
- climate change and energy related issues.

However, the relationship between agriculture and the environment can be complex, including both positive and negative impacts upon the natural environment. For example, traditional agricultural practices such as extensive grazing often have a positive impact upon the environment, including the creation of valuable semi-natural habitats such as pastures that are rich in many different plant species. On the other hand, the more modern farming practices associated with the expansion, specialisation and intensification of agricultural production commonly have many negative impacts, including the loss of biodiversity, soil degradation and increased pollution of ground and surface waters.

It is therefore important to prepare a situation analysis using a clearly defined framework that presents relevant data and information in factual and concise form. The European Commission encourages the preparation of a "SWOT analysis" as a tool for summarising the agri-environmental situation analysis and for the identification of agri-environmental priorities.

Materials: Paper and pens

³⁵ More information on the CAP reform debate can be found at: http://ec.europa.eu/agriculture/cap-post-2013/index_en.htm

Tasks:

1. Undertake a rapid situation analysis on the relationship between agriculture and biodiversity in the Western Balkans using the following SWOT-type framework:

STRENGTHS Existing positive impacts of agriculture upon biodiversity	WEAKNESSES Existing negative impacts of agriculture upon biodiversity	<i>Internal factors</i>
OPPORTUNITIES Factors that may increase the positive impacts of agriculture upon biodiversity	THREATS Factors that may increase the negative impacts of agriculture upon biodiversity	

2. Identify the priorities and objectives for appropriate actions that might:
 - **build upon** the strengths;
 - **correct** the weaknesses;
 - **take advantage** of the opportunities, and
 - **protect against** the threats
3. Identify (from the list in Table 1) relevant rural development measures that might be used to support or implement the actions identified in task 2.

Activity 2: HNV Farming in the Western Balkans

Purpose: This is a simple exercise with the objective of trainees working together in small groups to apply the principles outlined above to identify the likely distribution of HNV farmland in your country, and the actions that might be taken to conserve the biodiversity value of this HNV farmland.

Materials: Paper and pens

Tasks:

1. Work in country groups
2. Sketch a map of your country and indicate where you are most likely to find HNV farming
3. Determine the main pressures on farmland biodiversity for each HNV farming area
4. What can you do as civil society organisations (CSOs) to promote and support HNV farming?

Activity 3: Looking to the Future

Purpose: To begin the process of orientation towards opportunities for HNV farming and biodiversity conservation arising from the ongoing reform of the Common Agricultural Policy (CAP).

Materials: Download and print the short guide to the European Commission’s proposals for EU rural development after 2013 listed above

Tasks: Work in groups to brainstorm the full range of potential opportunities emerging in the proposals for EU rural development policy from 2014 to 2020. If the issues or terminology are not clear, research them. The capacity of your CSO to engage fully and effectively with future EU rural development policy begins today!

Good luck and enjoy!

V. References

Andersen, E., Baldock, D., Bennet, H., Beaufoy, G., Bignal, E., Brower, F., Elbersen, B., Eiden, G., Godeschalk, F., Jones, G., McCracken, D.I., Nieuwenhuizen, W., van Eupen, M., Hennekes, S. and Zervas, G. (2004). Developing a High Nature Value Farming Area Indicator. Consultancy report to the EEA, European Environment Agency, Copenhagen.

http://www.ieep.eu/assets/646/Developing_HNV_indicator.pdf

Accessed 1 October 2011.

Beaufoy, G. and Cooper, T. (2009). Guidance Document: The Application of the High Nature Value Impact Indicator 2007-2013. European Evaluation Network for Rural Development, Brussels.

http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=6A6B5D2F-ADF1-0210-3AC3-AD86DFF73554 (English version)

Accessed 1 October 2011.

Cooper, T., Pezold, T. (eds), Keenleyside, C., Đorđević-Milošević, S., Hart, K., Invanov, S., Redman, M. and Vidojević, M. (2010). Developing a National Agri-environment Programme for Serbia. IUCN Programme Office for South-Eastern Europe, Gland, Switzerland and Belgrade, Serbia.

<http://data.iucn.org/dbtw-wpd/edocs/2010-078.pdf> (English version)

and

<http://data.iucn.org/dbtw-wpd/edocs/2010-078-Sr.pdf> (Serbian version)

Accessed 1 October 2011.

Kazakova, Y. and Stefanova, V. (2010). High Nature Value Farming in the Western Balkans: Current Status and Key Challenges – a Scoping Document (available in English, Albanian, Croatian, Macedonian and Serbian). EFNCP Bulgaria, Sofia.

<http://see.efncp.org>

Accessed 1 October 2011.

ANNEXES



Annex I. Important environmental definitions

As defined in:

Kettunen, M., Terry, A., Tucker, G. and Jones A. 'Guidance on the maintenance of landscape features of major importance for wild flora and fauna'. Guidance on the implementation of Article 3 of the (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC). Institute for European Environmental Policy (IEEP), Brussels, 114 pp.& Annexes [online publication], (2007).

http://ec.europa.eu/environment/nature/ecosystems/docs/adaptation_fragmentation_guidelines.pdf

Accessed on 4 October 2011.

Ecological coherence of Natura 2000

"Sufficient representation of habitats / species to ensure favourable conservation status of habitats and species across their whole natural range. 'Sufficient representation' is a function of patch quality, total patch area, patch configuration and landscape permeability."

Ecosystem services

Ecosystem services are the benefits people obtain from ecosystems. These include four different categories, namely provisioning services such as food, water, timber, and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Ecosystem resilience

The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks (Walker et al. 2004). Resilience depends on ecological dynamics as well as the organizational and institutional capacity to understand, manage, and respond to these dynamics.

Ecotone

Zone / transition areas between two ecosystems where these two systems overlap. Ecotones support species from both of the overlapping ecosystems and also species found only in this zone. Consequently, the species richness in ecotones might be higher than in surrounding areas.

Habitat continuity

Permanent and long term stock of all necessary habitat requirements for an organism within a given landscape/ ecosystem, including dynamic/spatial mosaics.

Landscape connectivity

The degree to which the landscape facilitates or impedes movement among patches. Landscape connectivity is a combined effect of structural and functional connectivity, i.e. effect of landscape structure and the species' use, ability to move and risk of mortality in various landscape elements on the movement rate among habitat patches in the landscape.

Habitat Fragmentation

The breaking up of extensive landscape features into disjunct, isolated, or semi-isolated patches as a result of land-use changes.

Annex II. Public participation in EIAs, SEAs and AAs

Source: European Commission, Environment DG. 'Assessment of plans and projects significantly affecting Natura 2000 sites'. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, [online publication], (2001).

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

Accessed on 3 October 2011.

Table 1. Comparison of procedures under AA, EIA and SEA

	AA	EIA	SEA
Which type of developments are targeted?	Any plan or project which - either individually or in combination with other plans/projects - is likely to have an adverse effect on a Natura 2000 site (excluding plans or projects directly connected to the management of the site)	All projects listed in Annex I. For projects listed in Annex II the need for an EIA shall be determined on a case by case basis and depending on thresholds or criteria set by Member states (taking into account criteria in Annex III)	Any Plans and Programmes or amendments thereof which are (a) prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC, or (b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.
Are the public/ Other authorities consulted?	Not obligatory but encouraged 'if appropriate'	Compulsory –consultation to be done before adoption of the development proposal Member States shall take the measures necessary to ensure that the authorities likely to be concerned by the project by reason of their specific environmental responsibilities are given an opportunity to express their opinion on the request for development consent. Ditto for the public.	Compulsory –consultation to be done before adoption of the plan or programme. The authorities and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure Member States must designate the authorities to be consulted which, by reason of their specific environmental responsibilities, are likely to be concerned.
How binding are the outcomes?	Binding. The competent authorities can agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site.	The results of consultations and the information gathered as part of the EIA must be taken into consideration in the development consent procedure.	The environmental report, as well as the opinions expressed shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.

Annex III. Communication tips in public participation events

Source:

Dewey, J. 'Enhanced Group Facilitation: Techniques & Process'. AEA/CDC 2006 Summer Evaluation Institute, Atlanta, Georgia, [online document] (12 June 2006).

<http://www.eval.org/summerinstitute/06SIHandouts/SI06.Dewey.TR1.pdf>

Accessed on 14 October 2011.

Involvement Tips

- Use a Koosh Ball to get participation. The person with the Koosh has the floor. When they are finished speaking, they toss the Koosh to someone else. This allows the team to direct the discussion and prevents interruptions.
- Have individuals write one question they want answered about the topic of the meeting on a 3x5 card. Then revisit the question at the end of the meeting and have their team mates answer the questions.
- Use chips to control talkers. Each person receives 3–5 chips, each worth up to 1 minute of floor time. When you want to speak, you turn in a chip. When chips are gone, you cannot speak.

“Good” triggering questions ...

- Provide relevant context, background, explanations
- Are open-ended -- Avoid dichotomous questions and create opportunities for discussion and creativity
- Ask for ideas, possibilities, solutions, strategies, recommendations instead of perceptions, attitudes, values
- Convey one main inquiry - Some questions may have different parts, but you need to watch for too much layering. It takes more time for participants to complete the process and clarify their responses, and it may create conditions where the group only responds to one piece of the original idea, or each individual responds to a different part of the idea.
- Stimulate a variety of responses - it will likely fizzle if there's no diversity around a particular topic
- Incite sufficient reflection so that people will have something to write about and something to interact around ... this means it should have some degree of complexity
- Are based on topics that people are comfortable sharing with others in writing and orally
- Are questions that go beyond what has been asked of the participants through other mechanisms (e.g., a survey) - - Asking the same questions again may make people feel that they haven't been heard

The acid test: Finally, remember it should be a “triggering” question. If it doesn't act as a catalyst for reflection and discussion it won't work.

Some good “starters” for triggering questions:

- “What is an effective strategy for ...”
- “What are critical considerations that must be taken into account in implementing...”
- “What actions would you recommend for...”
- “What actions would you recommend that this organization could use to...”
- “What can we do to...”
- “What actions can we take to...”

Meeting Facilitation Tips

- Use a “Parking Lot” flip chart—record side issues or those outside of the agenda on a flip chart. At the end of the meeting, determine when those issues will be addressed.
- When you want to lead the discussion, stand front and centre in the room. When you want the team to lead the discussion, sit or stand to the side of the room. Changing position sends cues to the team and helps you maintain control.
- Have the team identify the criteria they will use to make a decision. Then evaluate ideas against each criteria.
- When two people disagree, ask each to reflect the opposite position using active listening. Continue reflecting until the other person agrees that they fully understand the position. Summarize the issues on which there is agreement and confirm to show progress and possibilities. When there appears to be agreement, confirm with each team member.

Annex IV. Giving your opinion about a project

Source:

Cornu-Thenard, E. and Ozinga, O. ‘The EU’s impact on forests, A practical guide to campaigning’. Macula, Boskoop, Netherlands, [online publication], (2004), <http://www.fern.org/sites/fern.org/files/pubs/reports/EU-guide.pdf>
Accessed on 11 October 2011.

For projects funded by international institutions:

This is the best case scenario, if the project is funded or partly funded by an international organization such as the European Bank for Reconstruction and Development (EBRD), the World Bank (WB), the EU through the Instrument for Pre-Accession Assistance¹ (IPA), the project developers will have to fulfil high social and environmental requirements based on EU law and international treaties and conventions. If you contact these institutions and give them proof that the project developers are not respecting criteria, they can stop funding the projects.

For projects funded by national institutions or private investors:

This is not an easy situation because the environmental institutions of Serbia, Macedonia, and Montenegro (Institute for Nature Protection, Ministry of Environment) are not powerful enough to correctly implement the environmental laws. Nonetheless, you should:

a. Identify the legal text that can help you:

Make sure that you know the national law, treaties and conventions signed by your country and the EU directives that should be transposed in the national law of candidate countries. These are your weapons. Ask whether your project falls within the competence of the EU (e.g. species protected by the Habitat Directive). “The EU can only act within the limits of the powers given to it by the Treaties. Thus, it is important to know what the Treaties say about your particular issue². “ You can use the following texts from the EU:

1 *The Instrument for Pre-Accession Assistance (IPA) offers assistance to countries engaged in the accession process to the European Union (EU) for the period 2007-2013.*, http://europa.eu/legislation_summaries/agriculture/enlargement/e50020_en.htm

2 *Cornu-Thenard, E. and Ozinga, O. ‘The EU’s impact on forests, A practical guide to campaigning’; Macula, Boskoop, Netherlands, (2004).* <http://www.fern.org/sites/fern.org/files/pubs/reports/EU-guide.pdf>
Accessed on 11 October 2011.

- EU Treaties,
- EU public policy commitments on poverty alleviation and environmental integration,
- Aarhus Convention,
- Convention on Biological Diversity (ratified by the EU).

b. Use the space dedicated to public participation

Make sure that you know the public participation processes defined in your national law and use them: obligation to organize public meeting, to consult relevant stakeholders: local scientists, environmental organizations, representatives of local communities, etc.

c. Find support among Civil Society Organizations

If a project is dangerous for the environment and for local communities, you should contact a local or national CSOs that will help you to raise awareness and talk to the authorities.

d. Contact national institutions

It is important to use rational argumentation based on facts: scientific papers, pictures and on legal texts. Avoid being too emotional while explaining why a project should not be implemented. If the local authorities are not willing/cannot implement the law, use pressure from public opinion on the European Union institutions.

e. Develop an awareness raising campaign

An awareness raising campaign may be a good tool if the project is developed by a large company that wants to protect its reputation, particularly companies from the EU or North America. Use the knowledge received by some of the NGOs of the region, like the Montenegrin NGO Green Home did, obtaining information from the World Wildlife Fund (WWF).

f. Contact the EU institutions

Contacting the EU institutions can be efficient if your national government is willing to enter the EU and should prove that it has transposed the EU directives into the national law and is implementing it. *“The first step will be to raise your concerns with the competent authority in the country in which the project is planned or located. If your concerns are not acted upon, and you think the project in question infringes an EU law, you might want to contact the Commission and/or Parliamentarians for them to consult with the Member State or even to file a complaint at the Commission.”*

“Accession Countries are meant to transpose all EU legislation into their own legal system, and the Commission is quite keen to make sure that this is done correctly and then applied. You can prove that it is not applied correctly.” (Cornu-Thenard, E., et Ozinga, O., (2004))

You can contact the EU delegations that are present in your country, and they will help you to contact the relevant EU institution.

EU delegations: http://eeas.europa.eu/delegations/index_en.htm

Macedonia : http://eeas.europa.eu/delegations/the_former_yugoslav_republic_of_macedonia/index_en.htm

Montenegro : <http://www.delme.ec.europa.eu/code/navigate.php?ld=1>

Serbia: <http://www.europa.rs/en.html>

