panet
protected area networks

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CADSES

PANet
Protected Area Networks

A handbook.

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1 PREFACE

Having the experience as head of Carinthia's public nature conservation authority, I would like to emphasise the need to develop protected areas in close cooperation with all relevant stakeholders. On the one hand, the preservation and development of the land's biodiversity is one of the PANet project's core objectives. On the other hand, the far-reaching value-added effects of national parks, nature parks and European Protected Areas for the regions are becoming more and more apparent. Therefore I will advocate the development of protected areas into sustainable models for the future, not only in Carinthia, but also, through intensified networking, beyond our borders.

We are working towards this goal by forming effective international partnerships. To this end, and speaking from my personal point of view, the PANet 2010 Interreg project can be seen as a milestone in the improvement of international networking between the management of protected areas and dedicated experts. Last but not least, the importance of this intensification is illustrated by concerted actions of partners from Italy, Croatia, Austria, Poland, Slovenia, the Czech Republic, Slovakia, and Ukraine. The exchange of knowledge, experience and technology is exemplified by the implementation of best-practice projects. It is safe to say that these projects have provided significant momentum for all PANet areas involved.

I am very pleased to announce that the project has recently been finished successfully and that the core results are now being made available to a wider community. I would like to thank the entire PANet project team for the fruitful cooperation.

Dipl. Ing. Uwe Scheuch
Landesrat

2 CREDITS

Environmentalism in the 20th century was undoubtedly a story of success. After the beginnings of public awareness of environmental issues in the late 19th century, a persistent movement formed that finally resulted in global action plans, international conventions, a tremendous variety of logistical instruments and organisations and, last but not least, the protected areas themselves. Today, one in ten square metres of the Earth's land surface and one in five square metres in Europe is managed according to conservation requirements.

This handbook was prepared by an international, interdisciplinary team to provide a snapshot of the status quo of the development of protected area networks. In particular, we would like to respond to the emerging demand for creating and communicating the benefits of protected area networks, as they are important tools for shaping the future of protected area systems in Europe. We hope that our contributions will further promote the awareness of the importance of protected area networks.

This project would not exist without numerous contributions from the pilot actions, the trans-national activities, and the workshops. The following persons have made their experience and know-how available to the PANet team:

Andreas Berchtold (GEOS, A), Barbara Boemo (University of Trieste, I), Enrico Bressan (University of Trieste, I), Massimo Dragan (University of Trieste, I), Enrico Feoli (University of Trieste, I), Michele Fernetti (University of Trieste, I), Miljenko Gásparac (National Park Risnjak, HR), Michael Getzner (University of Klagenfurt, A), Bernard Goršak (Kozjansko Regional Park, SL), Michael Grote (GEOS, A), Bernhard Gutleb (Office of the Carinthian Government, A), Jan Hanušin (Slovak Academy of Sciences, SK), Wolfgang Honsig-Erlenburg (KIS, A), Mikulas Huba (Slovak Academy of Sciences, SK), Vladimir Ira (Slovak Academy of Sciences, SK), Michael Jungmeier (E.C.O. Institute of Ecology, A), Jan Kajdas (Foundation for the support of ecological initiatives, PL), Izabela Kawecka (Foundation for the support of ecological initiatives, PL), Norbert Kerschbaumer (GEOS, A), Christian Keusch (E.C.O. Institute of Ecology, A), Hanns Kirchmeir (E.C.O. Institute of Ecology, A), Josef Knappinger (LWK Ziviltechniker, A), Klaus Krainer (Arge NATURSCHUTZ, A), Željko Kramarić (National Park Risnjak, HR), Sibylle Krassnitzer (Office of the Carinthian Government, A), Alois Lang (European Greenbelt Initiative), Sigrun Lange (E.C.O.-Deutschland, D), Ivan Mal-

nar (National Park Risnjak, HR), Barbara Ursula Müller (University of Klagenfurt), Peter Podolák (Slovak Academy of Sciences, SK), Anna Potaczek (Foundation for the support of ecological initiatives, PL), Ulrike Prochinig (KIS, A), Agata Pustelnik (Foundation for the support of ecological initiatives, PL), Piotr Rymarowicz (Foundation for the support of ecological initiatives, PL), Mauro Scimone (University of Trieste, I), Enrico Spezzati (ST Consulting, I), Åsa Svensson (E.C.O. Institute of Ecology, A), Guido Temporin (com. by ST Consulting, I), Jan Těšitel (Academy of Sciences, CZ), Robert Unglaub (Archi Noah, A), Sandra Wagenleitner (Arge NATURSCHUTZ, A), Johann Wagner (Office of the Carinthian Government, A), Taras Yamelynets (Radekhiv District Council, UA), Daniel Zollner (E.C.O. Institute of Ecology, A), Laura Zuccato (ST Consulting, I), Andrzej Zwawa (Foundation for the Support of Ecological Initiatives, PL).

To be honest, the compilation of the results was not an easy job. The diversity of authors, none of whom was writing in his native language, the diversity of approaches, intentions and backgrounds, and demanding deadlines as the project was squeezed into the last days of the programme's schedule may have led to some compromises. Anyway, a comprehensive piece of work could be finalised in time. We also would like to thank the proofreading editor, Mr. Tim Blömeke, for turning these texts into proper English.

Finally, we would like to thank our project partners, the people in the project regions, the publishing house, and many others who have contributed to this project. The experience was one of hard work, friendship and hospitality.

Figure 1: A net to work with.
Regular meetings are an essential element of the international PANet project (1st regional conference, Klagenfurt, June 9th, 2007; photo: Bauer).

3 PROTECTED AREA NETWORKS: ABSTRACT

3_1 PANET – THE PROJECT

The Interreg III B CADSES project „PANet 2010 – PA Networks" – Establishment and Management of Corridors, Networks and Cooperation" focuses on systems of protected areas (PAs) and their integrated management. PA networks are systems of at least two individual PAs with a coordinated spatial, economic or social management.
The project is a follow-up to the project "IPAM Toolbox: Integrative Protected Area Management by Example of the Alps-Adriatic Region", which focused primarily on the integrated management of individual sites. The main output of the IPAM project, the web-based Toolbox (expert system), is also the main platform for the PANet project. Results achieved within PANet were also integrated into the existing Toolbox (www.ipam.info).

3_2 PANET – THE INTENTIONS

The main intentions of the PANet project are:

- Establishing networks of PAs as components of integrated and sustainable spatial development strategies, specifically in accordance with the European Spatial Development Perspective (ESDP), regional and national development strategies, and rural development activities.
- Empowering the regions and authorities involved in the management of PA networks, in particular improving the effectiveness of management, raising awareness of the importance of PA networks, and increasing technical expertise and practical experience in the field of PA network management.
- Supporting international and European conservation obligations (conventions and directives), specifically Natura 2000, conventions (Ramsar, Biodiversity, Berne).
- Increasing the impact and effectiveness of individual PAs through synergies and cumulative effects, specifically by establishing corridors, buffer zones, and networks, through effective backbones for communication and management, and by combining features of different categories.

3_3 PANET – THE COMMON EFFORT

PANet consists of five different work packages. Three of them are dealing with regional pilot actions, one with the overall management, and one with trans-national aspects.
In the final work package, nine institutions from eight European countries worked together to implement the following measures:

- **Inquiry:** An international inquiry was conducted to provide an overview of existing standards and obligations, as well as of the state of the art and best practices in the field of managing functional PA networks.
- **Theory:** Theoretical and scientific approaches of functional PA Networks were prepared, discussed in workshops, and reported.
- **Best practice:** Based on the inquiry, a documentation of the results of the pilot actions and the overall results, of best practices, instruments, methods, and tools has been drafted.
- **Knowledge base:** The results of this work package were made available to the public as an Internet database.
- **Expert system:** In addition to the knowledge base, the existing expert system was enhanced by adding additional features dealing with networking.

3_4 PANET – THE COMMON RESULTS

This handbook presents the main results of the trans-national WP-2 initiatives. Furthermore, for the purpose of providing the "big picture" of the PANet project, specific information on further activities within PANet is given. The main results are therefore divided into six parts that are represented by the subsequent chapters of this handbook:

Chapter 4 – "Protected Area Networks: from IPAM to PANet" – provides an overview of the background of PANet, its main objectives, and its relation with the preceding project, IPAM.

Chapter 5 – "Protected Area Networks: concepts and examples" – casts a spotlight on existing theories, considerations, and examples of ecological, social, and economic networking methods.

Chapter 6 – "Protected Area Networks: pilot actions and best practices" - describes the pilot actions carried out within PANet and outlines criteria for a successful implementation of networking activities.

Chapter 7 – "Protected Area Networks: tools" - sketches the new networking features and functions in the existing web-based IPAM Toolbox.

Chapter 8 – "Protected Area Networks: literature" – provides a compilation of further information available on PA networks.

As this handbook is intended for public use, the information is presented in a very general way. To provide further details, technical reports on the various actions and activities have been prepared. These and other results of the PANet project are available on the Internet at www.panet2010.info. The Toolbox for the extension of the network is available at www.ipam.info.

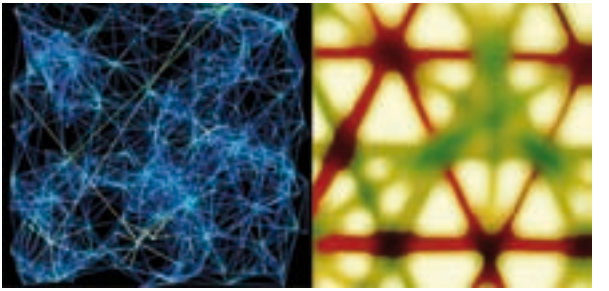

Figure 2: Networks – connecting nodes.
Networks can be highly complex or diffuse constructions, however, the core aim is always to connect one node with another.

4 PROTECTED AREA NETWORKS: FROM IPAM TO PANET

4_1 MANAGING PROTECTED AREAS – A SUBSTANTIAL CHALLENGE

IUCN – The World Conservation Union defines protected areas (PAs) as: "land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means".

According to the definition by the Convention on Biological Diversity, a protected area is "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives."

Figure 3: Just a law – it's not enough.
PAs need care (the "Gurkursprung" nature reserve, Carinthia, Austria; photo: Jungmeier).

The protection of specific areas and sites is one of the most important instruments of modern anticipatory strategies for nature conservation and long-term strategic planning. Therefore, an enormous increase in the number and acreage of PAs has been registered, as well as in the number of site categories. From 1970 to 1990, the number of PAs in Europe as listed by the IUCN (category I-VI) has doubled from 2060 to 4400. The development of the coherent NATURA 2000 PA system also shows a rapidly increasing network of sites, covering approximately 436,887 square kilometres in Europe today.

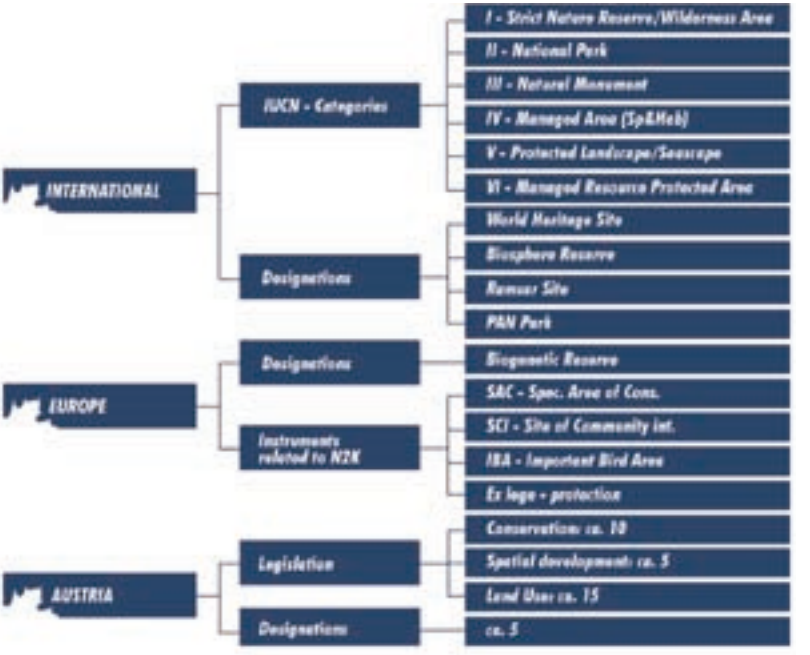

Figure 4: Diversity of protected areas. International conventions and systems, European legislation and instruments, as well as national systems have defined some two or three dozens of different types of PAs. (Source: Jungmeier et al. 2005)

On the one hand, the diversity in the types of PA sometimes leads to confusion. On the other hand, this diversity also offers many possibilities of categorising sites in order to meet specific regional, national or international requirements.

4_2 MANAGING PROTECTED AREAS – SHIFTING CONCEPTS

Mose (2006) states that PAs are socially constructed "landscapes of hope". As society is perpetually changing, the concepts of PAs also have evolved. Sociologists have detected a significant shift in paradigm from a "static preservation approach" to a "dynamic innovation approach" (Weixlbaumer 1998). These new approaches are characterised by:

- Nature conservation as a general concept of spatial and integrated rural development, overcoming the separation of nature conservation from economic development
- Protection of spaces and processes, instead of focusing on species and habitats
- Managerial control of the areas instead of non-management strategies

Figure 5: A traditional concept.
The poster, presenting PAs as a "homeland" for endangered species under strong, knightly protection, represents a traditional understanding of conservation. (Picture: Mose 2006)

This new understanding has resulted in new PA concepts:

- The PAN Parks concept, intending to link wilderness and tourism
- The Seville Strategy for Biosphere Reserves, focusing on Biosphere Reserves as models for sustainable development
- The Ramsar "wise use" concept, integrating conservation and land use in wetlands

4_3 MANAGING PROTECTED AREAS – A COMPLEX TASK

Since the planning and management of PAs necessarily has to deal with many different legal, administrative, and technical realities, the responsible experts have to face an almost unmanageable variety of tasks:

- Integration of different interests
- High diversity of categories
- High diversity of technical issues
- High diversity of approaches
- International requirements and regional demands
- Perpetual shortage of resources

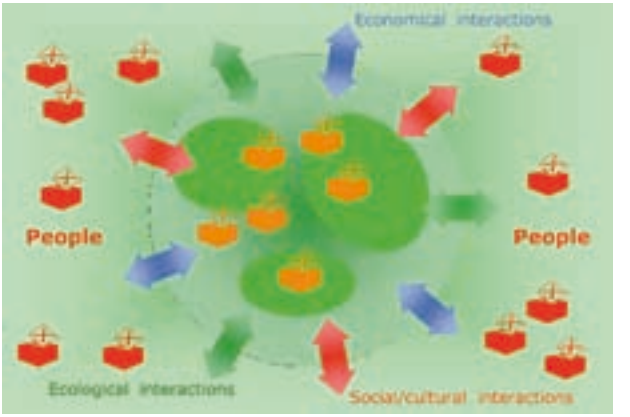

Figure 6: Integrated management.
PAs need to interact not with a single environment, but with a wide variety of different people, environments, and framework conditions.
This problem has many ramifications and occurs at different levels.
(Picture: Imboden 2005)

In this complex environment, the persons in charge of a PA are under a constant pressure to decide, communicate, market, finance and – last but not least – generate benefits.
This is why the demand for highly skilled and highly motivated personnel has been increasing steadily in recent years. Implementing a PA is always a big challenge. Various interest groups such as farmers, land owners hunters, or the forestry industry, are often apprehensive of the changes brought by a PA.

4_4 MANAGING PROTECTED AREAS – THE INTEGRATED APPROACH

With regard to the complexity of running a PA, management has become a challenge for nature conservation and regional planning policies alike. Within the European Community for example, an average of 23% of the land surface is under some type of legal protection. Considering the acreage, the planning of PAs has become one of the most extensive planning processes in modern society. The three dimensions of sustainability play an important role in this process and need to be considered appropriately in order to guarantee a balanced, sustainable development of the PA:

- Ecological dimension (natural heritage, ecosystems, land use regulations, spatial conflicts, spatial development policies, disaster prevention, etc.)
- Socio-cultural dimension (acceptance, involvement, participation, traditions, governance, etc.)
- Economic dimension (regional value added, marketing and branding, sponsoring, subsidy schemes, benefits, etc.)

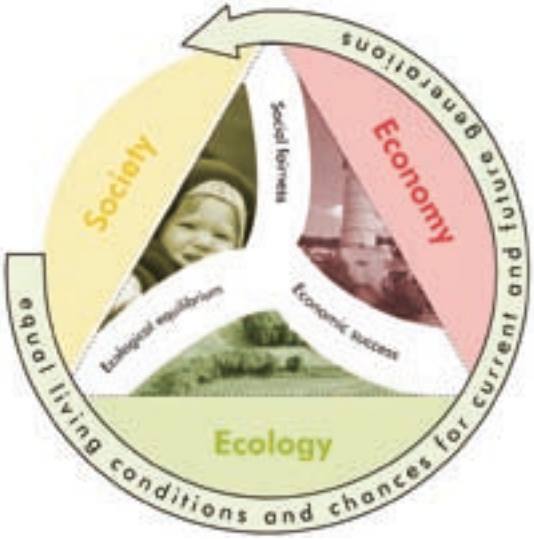

Figure 7: Sustainability in protected areas.
To understand PAs as "cornerstones" of a global sustainable development, the three pillars of sustainability need to be taken into account.
(Picture: Lange 2005)

4_5 THE IPAM PROJECT

IPAM (for Integrative Protected Area Management), was an Interreg III B CADSES project with the aim of supporting an integrative, holistic management of PAs in accordance with the principles outlined in the chapters above.

4_5_1 IPAM AT A GLANCE

Project title:	IPAM Toolbox: Integrated Protected Area Management
Organisation:	Leading Partner: Office of the Government of Carinthia, Dept. of Spatial Planning
Contact:	Johann Wagner, johann.wagner@ktn.gv.at Michael Jungmeier, jungmeier@e-c-o.at
Budget:	€ 2.370.000
Funding:	Co-funded by the European Union within the Interreg III B Cadses Programme
(Funding) partners:	• Office of the Government of Carinthia, Dept. of Spatial Planning (A) • Office of the Federal State Government of Styria, Dept. of Nature Conservation (A) • Regional Directorate of Agricultural, Natural and Forest Resources of the Friuli Venezia Giulia Autonomous Region (I) • Regional Park of Colli Euganei, Veneto (I) • Academy of Sciences, Institute of Landscape Ecology (CZ) • Medimurje County, Department of Spatial Planning (HR) • Ministry of the Environment and Spatial Planning (SLO)
Project term:	2003/04 - 2006/03
Website:	**www.ipam.info**

4_5_2 IPAM – SUPPORTING PROTECTED AREA MANAGERS

Managers of PAs are facing a wide range of different interests, as well as technical and legal issues. An international survey among 170 PA managers showed a substantial need to support managers in their daily work (Jungmeier et al., 2005).

Figure 8: The many worries of a protected area manager. Managing a PA requires a wide variety of skills. The presented tasks are the outcome of a survey among 170 PA managers in Central and Eastern Europe. (Source: Jungmeier et al., 2005)

For this reason, one of the project's main goals was to create a system of standardised instruments (the IPAM Toolbox, see chapter 7). Based on an international inquiry and the findings of pilot actions, general results were developed and implemented.

4_5_3 IPAM – UNDERSTANDING THE STAGES OF DEVELOPMENT

From the initial idea to the ongoing functioning of a long-established PA, there are various phases of development. With the help of relevant organisations that are responsible for PAs (IUCN, Europarc, Ramsar,…), the IPAM project has organised these phases into a general

system. The aim was to structure the life cycle of a PA and to identify the core tasks (fields of activities) to be considered in each phase. This structure served as the framework to which the various tools and instruments developed within IPAM for the support of management are connected.

Phases		Fields of Activity (FoA)
Pre-Phase		Development of Idea and Vision
		Feasibility Check
		Communication and Participation I
		Incorporation into PA-Systems
Planning Phase	Basic Planning	Planning Handbook
		Communication and Participation II
		Basic Investigation
		Implementation Planning
		Designation and Establishment
	Detailed Planning	Mission Statement and Basic Concepts
		Ecosystem-based Management Plans
		Design of (Regional) Economic Programs
		Specific Planning (Subsidiary Plans)
Implementation Phase		Personnel and Organisational Development
		Evaluating Management Effectiveness
		Financing (Business Plan)
		Impact Assessment and Limitation
		Data and Information Management
		Research Setting and Monitoring
		Communication and Participation III
		Development of Protected Area's Region
		Co-operation Design
		Information, Interpretation and Education
		Visitor Management, Services and Infrastructure
		Marketing and Public Relations

Figure 9: Life cycle of a protected area. The phases and so-called fields of activity (FoA) describe the life cycle of a PA. (Source: Jungmeier et al., 2005)

4_5_4 IPAM – INTEGRATED MANAGEMENT IN PRACTICE

Within IPAM, a large number of pilot actions were carried out. These regional activities focused on generating „visible results" for the solution of manifest problems. They involved regional initiatives and

administrative bodies, supported local implementation, and emphasised the communication with regional stakeholders. This „bottom-up" approach ensured that a broad spectrum of practical aspects was included in the project's general results on a trans-national level. For each pilot action, a booklet detailing the results was distributed to regional stakeholders and national authorities. The following sample pilot actions were implemented in three methodological work packages (ecological, social, and economic dimension).

- „Branding" different PA categories as a contribution to a better understanding of the types of PA by example of Carinthia (A):

Figure 10: The guidance system in Carinthia. Impressive monuments (e.g. the Felsentor Eberstein natural monument, Carinthia/Austria) should be branded accordingly. This helps promote heir value and makes them easily identifiable. (Source: Pichler-Koban et al., 2005)

- Holistic presentation of the Kočevsko-Kolpa Natura 2000 site and awareness-raising (SLO)
- Management plans for riverine and alpine Natura 2000 sites in Carinthia (A)
- Communication processes accompanying the expansion and management of a Natura 2000 site in Val d'Alba with the goal of establishing a regional nature reserve in the Friuli Venezia Giulia region (I)

Figure 11: Pilot action in Val d'Alba.
The involvement of the community as well as interest groups and stakeholder organisations was intended to promote a common understanding of the future management plan for the existing Natura 2000 site. In addition to this, a system of existing paths complemented by new infrastructure was to become a useful means of raising awareness. (Source: Fabian et al. 2005)

- Establishing and managing a new Ramsar site in Carinthia (A)
- Establishing an eco-management and audit scheme (EMAS) in the Euganean Hills Regional Park in Veneto (I)
- Scientific foundation for a management plan for the Bohemian Forest and Novohradské Hory Mts. National Park (CZ)
- Development of a certification system for PAs in Carinthia (A)

4_5_5 IPAM – A PERMANENT PLATFORM

"Experience grows through being shared". The IPAM Toolbox is intended to serve as a central platform for information on integrative planning and management of PAs. The use of the system is to be free of charge. Also, the handling of data and information follows the open-source philosophy: The uploading and downloading of data is on a strictly non-commercial basis. The Toolbox is to be maintained and

enhanced by a network of partners, namely institutions dedicated to planning, researching, educating on, or managing PAs.

One of the first partners to join the network was the University of Klagenfurt. An MSc course in "Management of PAs" (www.mpa.uni-klu.ac.at) uses the Toolbox as the main support instrument for a two-year postgraduate study programme. Participants from a number of countries will learn how to make use of the Toolbox and supply the system with additional information. The Toolbox improves through use.

Figure 12: Learning for the future of protected areas. Professional skills are indispensable for running a PA. The MSc programme at the University of Klagenfurt aims to prepare students for practical work. (Photo: Jungmeier)

4_6 THE PANET PROJECT

PANet (for Protected Area Networks) was an Interreg III B CADSES project with the aim to promote an integrative, holistic management of PA networks. As a follow-up project to IPAM, main elements of IPAM were taken into consideration and developed further according to the requirements for linking up PAs.

4_6_1 PANET AT A GLANCE

Project title:	PANet 2010 Protected Area Networks
Organisation:	Leading partner: Office of the Government of Carinthia, Dept. of Spatial Planning
Contact:	Johann Wagner, johann.wagner@ktn.gv.at Daniel Zollner, zollner@e-c-o.at Sandra Wagenleitner, s.wagenleitner@arge-naturschutz.at
Budget:	€ 1.590.000
Funding:	Co-funded by the European Union within the Interreg III B Cadses programme
(Funding) partners:	• Office of the Government of Carinthia, Dept. of Spatial Planning (A) • Academy of Sciences of the Czech Republic (CZ) • Regional Park of Colli Euganei, Veneto (I) • University of Trieste (I) • Foundation for the Support of Ecological Initiatives (PL) • Slovak Academy of Sciences (SK) • Kozjansko Regional Park (SLO) • Risnjak National Park (HR) • Radekhiv District Council (UA)
Project term:	2006/04 - 2008/03
Website:	**www.panet2010.info**

Based on the developments in IPAM, PANet 2010 emphasised the building of networks between PAs and/or their environment. Nine partners from eight countries worked together to implement the findings of IPAM.

Figure 13: Participating countries and pilot actions within PANet. The wide range of different partners and PAs resulted in a high diversity of approaches and findings. (Picture: www.cadses.net, revised, state: 2004)

4_6_2 PANET – NO PROTECTED AREA IS AN ISLAND

A PA is not a closed system; it interacts with its surroundings and with other PAs. PAs are not isolated – they are embedded in their environment. PAs and their managers need to operate in changing systems and networks. PANet 2010, the follow-up project to IPAM, tried to explore this issue.

Figure 14: No Protected Area is an island.
In reality, PAs connect to each other through various types of "channels". Some of these channels may be physical (e.g. corridors), others however are "invisible", but nevertheless relevant (flow of money, cooperative structures, management agreements, etc.)
(Picture : http://www.ferienhaus-martofte-langoe.de/)

PANet 2010 focused on the management of networks of PAs and certified regions. The project intended to theoretically prepare and practically implement a „network of experience" in order to improve positive regional economic effects, communicative and participative processes („cooperative management"), the financial situation, and conservation issues by creating synergies between individual PAs. The project was run by nine institutions with comprehensive practical as well as theoretical and administrative expertise.
The project worked to develop the fundamental idea of integrated management: combining different theoretical approaches (e.g. nature conservation and economic interests) with a networking dimension. Based on the IPAM project, PANet 2010 incorporated the findings of IPAM and expanded both the theoretical concept as well as the Toolbox.

4_6_3 PANET – GOING FOR THE LINKS

The project's long-term objective was the establishment of PAs as components of integrated and sustainable spatial development strategies. PANet worked to empower the involved regions and authorities regarding the management of PA networks. In particular, the

effectiveness of management and the awareness for the importance of PA networks were to be increased. The project aimed to support international and European conservation conventions and directives and to use the synergies of corridors, buffer zones, and networks to strengthen the impact and effectiveness of individual PAs.

Figure 15: A functioning network.
PAs with their social, economic and ecological dimensions need to act as a network. The PANet project is an attempt to understand and improve the way these networks operate.

In the PANet research the integrated approach of IPAM was used as a guideline and expanded further. The scientific study investigated the theoretical background of managing PA networks in detail.

4_6_4 PANET – A NETWORK OF EXPERIENCE

Existing networks, trans-national institutions, and European bodies were extensively involved in the project. The „network of experience" is intended as an informal network of experts who communicate with each other through the IPAM Toolbox, an expert system, and a knowledge base developed by IPAM.
Experts gather information from the entire CADSES area to be made available in the form of a knowledge base. This ensures that the results of the pilot actions, combined with the trans-national results, will be useful and of interest to the entire CADSES area. The regional results of the pilot actions cover different types of PA networks to contribute to the transferability of the results.

Figure 16: Field trip to the Risnjak National Park.
The best means of transferring knowledge and experience is personal contact. Therefore, the project setting focuses very much on the exchange of experiences in meetings, workshops, excursions, and conferences.
(NP Risnjak, Croatia, May 2007; picture: Fernetti)

4_6_5 PANET – FROM PRACTICE TO RESULTS

The pilot actions played an important role in the PANet project. By applying various methods of integrative PA management with a focus on networking, one of the main goals was to extract and compile the key findings and make them available to a wider community.

Figure 17: The PANet concept.
Thirteen pilot actions were carried out and evaluated in eight countries. Best-practice instruments and tools were identified and made available in the web-based Toolbox. An ongoing exchange of experience between the partners (presentations, workshops, etc.) ensured a balanced process development.

The benefits detailed below will be enjoyed primarily by the pilot action areas, but also in other regions where the results are applied:

- Establishing networks of PAs as components of integrated and sustainable spatial development strategies, specifically in accordance with the European Spatial Development Perspective (ESDP), regional and national development strategies, and rural development initiatives.
- Empowering the regions and authorities involved in the management of PA networks by improving the effectiveness of management, by raising awareness of the importance of PA networks, and by increasing the „technical" know-how and practical experience in the field of PA network management.
- Supporting international and European conservation obligations (conventions and directives), specifically Natura 2000, conventions (Ramsar, Biodiversity, Berne).
- Increasing the impact and effectiveness of individual PAs through synergies and overall effects, specifically by establishing corridors, buffer zones and networks, through effective backbones for communication and management, and by combining features of different categories.

4_6_6 PANET – WORKING TOGETHER

Within the PANet project, WP-2 tried to concentrate the PANet-experiences by installing a joint working platform. The trans-national activities focused on finding, evaluating, organising and providing the available information and expertise. The partners worked on specific networking issues in periodical technical workshops. The overall work package comprised the following measures:

- Inquiry: An international inquiry is conducted to provide an overview of standards and obligations, as well as of the "state of the art" and best practices in the field of managing functional PA networks. The methods applied are research for material, literature and data, as well as qualitative interviews with experts at the European level. The results of the inquiry are used to support the implementation of the pilot actions.
- Theoretical concepts of functional PA networks: Theoretical and scientific approaches are prepared, discussed in workshops, and comprehensively reported. Special attention is given to inter- and trans-disciplinary aspects. This provides the theoretical base for the practical aspects and the implementation of pilot actions.

- Best practice, methods, instruments and tools: Based on the inquiry, the results of the pilot actions, as well as the overall results, a documentation of best practices, instruments, methods, and tools is published. Practical demands are given special attention. Expert workshops compile a bundle of recommendations. A draft version of the documentation is provided as a basis for the pilot actions. The results of the pilot actions are included in the final version of the documentation.
- Knowledge base and manual: The results are made available in the form of an internet database open to public use. Detailed documentation is provided, supported by a metadata catalogue, a search engine, and detailed descriptions of the data sources. The printed manual, "Planning, implementing and evaluating networks and systems of PAs" provides a comprehensive overview of the focal outcomes.
- Expert system: In addition to the knowledge base, the expert system provides opportunities to assess occurring problems, benchmark own activities and interact with other partners. The expert system is set up in continuation of the "IPAM Toolbox" expert system that has already been successfully implemented, but focuses on the management of individual PAs. The activities covers conceptualisation, technical implementation (CMS), and the development of a prototype and final expert system.

Figure 18: One of many technical workshops.
Periodical technical meetings are important elements of international projects. Personal meetings are the best way of generating of new knowledge and insights. (Klagenfurt, 19 Nov 2007; picture: E.C.O)

The PANet team tried to approach the wide field under investigation in a series of workshops, meetings and conferences:

DATE	LOCATION	EVENT
07-08/06/2006	Pörtschach (AT)	Opening conference
03/10/2006	Trieste (IT)	TSC meeting (1st)
13-14/12/2006	Trieste (IT)	Technical workshop (1st)
19/02/2007	Friesach (AT)	Technical workshop (2nd)
26-27/03/2007	Tatra (SK)	TSC meeting (2nd)
24-25/05/2007	Risnijak (CR)	Technical workshop (3rd)
14/06/2007	Klagenfurt (AT)	Regional conference (1st)
13-14/09/2007	Este (IT)	Technical workshop (4th)
26/09/2007	Palmanova (IT)	Technical workshop (5th)
2-3/10/2007	Kasperke Hory (CZ)	TSC meeting (3rd)
29/10/2007	Zator (PL)	Regional conference (2nd)
20/11/2007	Klagenfurt (AT)	Technical workshop (6th)
30/11/2007	Palmanova (IT)	Technical workshop (7th)
28-29/01/2008	Kozje (SI)	TSC meeting (4th)
19-20/02/2008	Opatija (CR)	International final conference

Figure 19: List of meetings, conferences and workshops within PANet. The (international) conferences at the beginning and the end of the project presented the project goals and the results, respectively, to a wider (scientific) community. Regional conferences facilitate an exchange of experiences between local scientists (some of whom are involved in PANet pilot actions) and the PANet project partners. The Transnational Steering Committee (TSC) meetings are the common platform for the organisational management of the project (accounting, finances, Cadses programme requirements, project controlling, organisational issues, etc.). In the technical workshops, the PANet partners work together towards a common understanding and the further development of PA networks (status quo evaluation of PA networks, best practices, web-based networking tools, etc.). Technical workshops very often conclude with field trips to demonstrate best practices for the implementation of PA management and networks.

Figure 20: PANet workshops.
The workshops, here in Klagenfurt (AT), Este IT) and Kasperske Hory (CZ) , helped to develop a common understanding of networking.
(Pictures: Bauer, E.C.O.)

4_6_7 PANET – PILOT ACTIONS TO PREPARE THE GROUND

The pilot actions are practical examples for the implementation of innovative solutions to concrete problems. The pilot actions focus on specific regions. The following 13 pilot actions were carried out (overview; for details see chapter 6 on pilot actions and best practices).

4_6_6 PANET – WORKING TOGETHER

- Establishment and management of green corridors; example: Central Carinthia (A)
- Improvement of the PA network; example: the Tatra region (SK)
- Suitability maps for ecological corridors; example: Friuli Venezia Giulia (I)
- Establishment and management of water networks; example: the Colli Euganei regional park (I)
- Creation of a PA network in the Radekhiv District Council (UA)

4_6_7_2 WP4: SOCIO-ECONOMIC FUNCTIONS, MICRO AND MACRO-ECONOMY OF PROTECTED AREA NETWORKS

- Integrated management of water networks; example: the Colli Euganei regional park (IT)
- Financing and managing PA networks; example: Carinthia (A)
- Financing and managing PA networks; example: Slovenia (SLO)

4_6_7_3 WP5: COMMUNICATION, PARTICIPATION, TWINNING AND CROSS-BORDER COOPERATION

- Services and communication for PA networks (A):
- Sound tourism in biosphere reserves – cooperation and international networking (CZ)
- Integrated management of green corridors; example: the Carp Valley in the Malopolska region (PL)
- Development of a PA network at the level of the Priomorsko-Goranska county (HR)
- Improving the socio-economic functions of PA networks by means of CPC and cross-border cooperation; example: Friuli Venezia Giulia (I)




Figure 21: PANet excursions.
Different parks in Central Eastern Europe, different seasons, different problems, different solutions. The field trips were an important element of the PANet project. (Pictures: Fernetti, Wagenleitner, Zollner)

5 PROTECTED AREA NETWORKS: CONCEPTS AND EXAMPLES

5_1 NETWORKS – A "SECRET TO SUCCESS"

Stolton & Dudley (1999) emphasised the fundamental need to become connected: „Protected Areas need to expand in size, concept, number of partners involved, in vision (from island to a system) and connect to each other, wider landscape, society and economy, other countries".

A large number of "experts" are promoting systems and principles for developing a personal network. Some of these ideas can be transferred to protected areas (PAs). The PANet team experimented with some of the ideas without taking these efforts too seriously. According to Keith Ferrazzis "10 secrets to success" (Ferrazzi 2005), three universally valid principles for networking are as follows:

- "You can't get there alone": Many objectives cannot be achieved by individual PAs alone. Ecological problems rarely stop at the border, there is often not enough money to implement suitable solutions, public attention is easier to get by a bigger consortium, influencing political and social issues is hard for individuals or small groups. There are many other reasons for networking. Considering their specific goals, this is essential for PAs.

- "Never eat alone in good times…" and you won´t be alone in bad times. Building networks in good times to have friends in bad times means that PAs should give support to other PAs. The network will help mitigate the natural ups and downs in the development of a PA.

Figure 22: Never eat alone in good times….
…and you will never be alone in bad times.
(Picture: http://www.ckrumlov.cz/)

- "The buddy phenomenon". Sparring partners help to "find one's way". By exchanging knowledge, skills or experiences, PAs can use networks to gain valuable synergies. In ping-pong discussions, issues will be evaluated from different perspectives, and the quality of the final decision or result will be higher.

5_2 NETWORKS - NETS TO WORK WITH

When googling, an internet user will find some 1,300,000,000 entries dealing with networks: personal networks, IT networks, company networks, broadcasting networks, scientific networks, criminal networks, and so on. The word "network" is probably one of the most used words– and one of the most abused as well. However, networks support our whole lives. Being aware of this, each system and subsystem of society has devoted considerable efforts to identifying, defining, describing, or developing its networks and its rules of operation. The tremendously high number of entries in the Internet may serve to give a first impression.

The PANet 2010 project is intended to approach, analyse, understand, and improve networks of PAs. A network of PAs is understood as a system of at least two individual PAs that are managed in a coordinated way. This may include:

- Ecologically - developing corridors, bridging segregation, harmonising conservation measures, etc.
- Economically - joint funding, creating umbrella brands, sharing resources, etc.
- Socially - exchanging staff or experiences, joint activities, linking with stakeholders, etc.

However, PAs networks are predominantly multi-functional.

Any network consists of three key elements:
- Nodes (objects, "beneficiaries")
- Links ("paths of flow")
- Rules of operation (modes and means of transport – "channels")

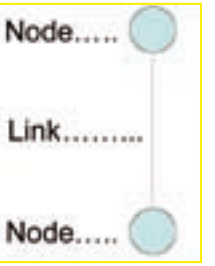

Figure 23: Links and nodes.
A network consists of nodes and links. Whereas the nodes usually are easy to identify, the "in-betweens", i.e. the links or the interactions between the nodes, are more difficult to grasp.

Links are the relationships between objects and can be seen in the flow of information, motivation, money, or plant and animal species. The "methodical" part of the network refers to the rules of operation between the nodes. The rules of operation are the set of applied methods and channels with the aim to shape the flow in a defined way. The channels of interaction may be infrastructural/connective (cable, corridor, …) or non-infrastructural/interactive (meetings, contracts, …).

5_3 NETWORKS – SKETCHING THE MENTAL IMAGE

Intentionally or not, any PA is a member of various networks. In a workshop in Este (Italy, 13 Sep 2007), the PANet team tried to draw schematic representations of some of these complex interactive patterns.
Based on these outlines, the "Protected Area Network Assessment" method (PANA) was developed. It intends to analyse and actively organise the networking environment of a PA. PANA is a simple method derived from Social Network Analysis (SNA) and adapted to the requirements of PAs. PANA may be used to gain a first overview of the various kinds of existing networks a PA is embedded in. Basically, the network assessment is performed from the perspective of a particular PA. The PA itself assesses its position/embedment in the network structure by sketching and subsequently describing it.

Figure 24: Protected Area Network Assessment (PANA).
Protected Area Network Assessment can be performed in different ways. The common purpose however is visualise the "mental image" of a PA's networks. By describing the qualities of the links, the "shape" of the various relationships becomes more and more apparent. (Source: Drawings by individual project partners within PANet for the PAs Euganean Hills Regional Park (I), Hohe Tauern National Park Carinthia (A), Kozjanski Regional Park (SL)).

5_4 NETWORKS – APPROACHING THE DIMENSIONS

In a workshop at the Risnjak national park (Croatia, 24 May 2007) the PANet team attempted to outline the nodes, the links, and the barriers existing in PA networks.

- Social networks primarily link people and institutions. The purpose is for instance the exchange of information, of know-how, of management styles, or of motivation. The "physical" links may be meetings, platforms, or the Internet. Obvious barriers are differences in language and culture, or the borders between countries or regions.
- Ecological networks primarily link habitats and species. The purpose of the network is to exchange genes to ensure sustainable populations of important (rare, endangered) species. The "physical" links between the nodes are corridors, "green" bridges, or stepping-stone biotopes. Potential barriers are (linear) infrastructure, intensive land use, or industrial sites.
- Economic networks primarily link economic entities. PAs frequently are or may be seen as "companies" working with a certain quantity of resources and producing a certain quantity of output and services. A network in this case focuses primarily on synergies and the exchange of resources, on the joint generation of benefits, or on joint fundraising efforts. Potential barriers may be fiscal or legal constraints, differing institutional settings, or the balancing of interests.

The workshop also compiled examples of these kinds of networks or networking activities. Some of them are described in the following chapters.

Figure 25: Functions of networks.
Nodes, links, and barriers in networks of PAs are approached in a workshop to serve as a foundation for the further progress of the project.

5_5 NETWORKS – APPROACHING THE SOCIAL ASPECTS

Figure 26: The social link.
The nodes ("beneficiaries") are people. By providing defined methods, infrastructures, or instruments ("channels"), information, experiences, fun, emotions, etc. ("flow objects") may be exchanged between the PAs (staff).

In a workshop in Kasperske Hory (Czech Republic, 2nd Oct 2007) the PANet team tried to identify the qualities of social links in networks of PAs.

- Institutional versus personal. The distinction between institutional and personal can be determined by asking whether the relationship is defined in formal terms only (e.g. an officially signed treaty), or if it is a "living" relationship forming a base for practical cooperation.
- Formal versus informal. Formal links in this case define the position of a particular PA in an officially established organisational scheme. These links describe the official distribution of decision-making powers. Informal links on the other hand provide evidence of "human relationships" that may illustrate actual alliances and decision-making rules.
- Short-term versus long-term (temporary vs. permanent). It is important for all stakeholders whether the relationship is new or casual to some extent, or if it is a long-term basis for cooperation. The question is who takes responsibility for the cooperation, who initiated it, and who keeps it "alive".
- Vertical versus horizontal. This quality describes the distribution of competences and responsibilities between partners. A vertical arrangement describes a hierarchical distribution of power among different levels of coordination (superior vs. subordinate partners). On the other hand, a horizontal arrangement represents equivalence between the partners.
- Compulsory versus voluntary. A PA may join a network by a "free" decision, or it may be part of a compulsory network, for instance a nation state.

PA networks therefore are – in most cases – structurally unique. The various types of characteristics result in an enormous diversity in the manifestations of PA networks. Nonetheless, networking works the better

- the greater the similarity
- the smaller the distance
- the more attractive the incentives (imbalance?)

5_5_1 EUROPARC – A PLATFORM OF EUROPEAN PARKS

EUROPARC was founded in 1973 under the official title „Federation of Nature and National Parks of Europe", and has since grown to become the recognised professional organisation of European PAs. An independent, non-governmental organisation, its membership brings together the organisations responsible for the management of over 400 PAs. Yet the Federation is also very much a network of people: those whose daily task is to maintain the sites, and who combine forces within EUROPARC to achieve common goals. Each year, the EUROPARC Conference and General Assembly takes place in a different European country and brings together about 300 professionals from PAs, the ministries responsible for PAs, and major European conservation organisations.
This network should be described as institutional. However, the institutional framework offers multiple opportunities to develop personal contacts and networks. The membership is formal and voluntary. Any PA or institution related to PAs may apply for membership and – if accepted – pays a yearly fee. The network's organisation is horizontal; therefore, strong efforts need to be made in order to develop the federation further in a general process of discussion.

Figure 1: EUROPARC 2007 "Nature – crossing borders". Every year, Europarc connects more than 300 experts from all over Europe. (26th - 30th September 2007, Český Krumlov, Czech Republic; source: www.europarc.org)

5_5_2 PARKS OF VENETO – CONNECTING CITIZENS WITH NATURE

The project is situated in the Veneto region of Italy, where six regional and national parks are involved. In order to validate and maintain this great natural heritage, the „Regione Veneto" for the first time realises a project that will enable every citizen to get in contact with the territory's nature. With this initiative, everybody will be able to get to know the Veneto's environmental richness, delve deeper into the natural variety, and enjoy useful information about parks and PAs.
The main idea behind the project is to offer visitors and people living in the parks of the Veneto region more detailed information about the characteristics of this natural reserve. On the one hand, this allows to advertise the resources and peculiarities of the territory. On the other hand, the ecologically sustainable and compatible knowledge and culture of the area can be compiled in an exchange system that is accessible and usable to a network of parks.
The park service was created in recent years to coordinate and manage the activities of the different parks and to distribute resources. As a first result, it has created a website where information about all the parks is collected and presented in order to enable all visitors to get to know the area and the individual characteristics and opportunities offered by each park in the Veneto region (source: http://www.parchiveneto.it).

Figure 27: A view of the Euganean hills.
Detailed information about the Veneto's parks and nature reserves is available to every citizen. (Picture: Lake Costa in the Euganean Hills; from the regional parks' archive)

5_5_3 ECOREGIOALPEADRIA – LINKING REGIONS

The project involves three PAs: the Nationalpark Nockberge (Austria), the Triglavski Narodni Park (Slovenia), and the Ente Parco Prealpi Giulie (Italy). The project aims to promote sustainable development in regions that are currently facing similar problems related to territorial marginalisation the difficulties of life in the mountains.
To realise new visions for the region, initiatives have been launched in the fields of environmental education, the manufacture of typical products, and cooperation in tourism. Since its beginnings in 2003, the project has organised several activities, such as promotion for joint cultural events, an exchange of students to increase the knowledge about the territories among young people, or the organisation of annual conventions with the participation of stakeholders.
The project had a term of three years and was completed in 2006 (source: http://www.parcoprealpigiulie.org/ERA).

5_6 NETWORKS - APPROACHING THE ECOLOGICAL ASPECTS

Figure 28: The ecological link.
Within a PA network, the nodes ("beneficiaries") are the habitats and populations of species. Defined spatial connections such as corridors ("channels") enable the exchange ("flow") of genetic material and species of fauna and flora between the PAs.

Of course, PAs have become important nodes in the distribution pattern of endangered and rare species, and therefore in the preservation of global biodiversity. The biogeography of PAs has frequently been compared to islands. This lead to concepts indicating that:

- Large PAs are more effective than smaller ones
- Connected PAs are more effective than isolated ones
- Buffered PAs are more effective than those with "hard" boundaries

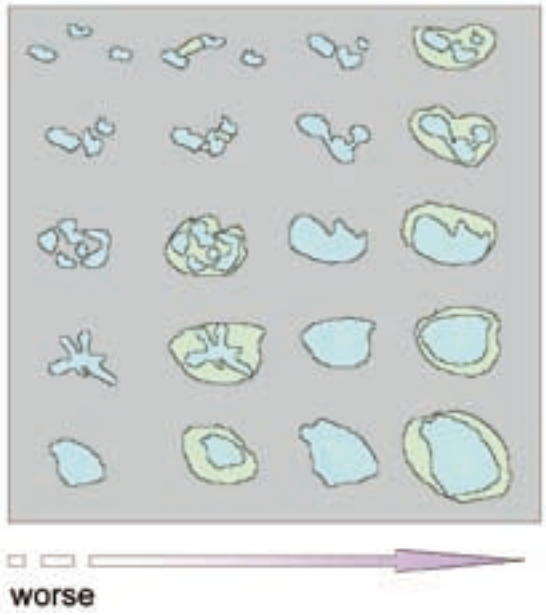

Figure 29: Learning from islands.
Studies of island biogeographies have led to modern concepts for planning, zoning and connecting PAs. In this context, "island" can mean any area or habitat that is surrounded by areas unsuitable for the species on the island. (Source: Primack, 1995, revised; Mac Arthur & Wilson 1967; http://en.wikipedia.org/wiki/Island_biogeography).

To ensure stable populations and meta-populations, isolation has to be prevented. One of the main challenges is to ensure connectivity in the landscapes between PAs. This leads to a complex understanding of systems or networks of PAs. According to Bischoff & Jongmann (1993), Jongman & Kristiansen (2001), and Bennet (2004) the following elements are required:

- Core areas: highly natural areas that host wildlife and vegetation, usually subject to some form of protection.
- Buffer zones: protection areas surrounding the core areas to mitigate negative influences from areas surrounding the PA.
- Ecological corridors and stepping stones: continuous and discontinuous connecting elements that aid the migration and dispersion of species and maintain spatial relationships. Synonyms are green ways, biocorridors, corridor zones, and migration corridors.

- Nature development areas or nature restoration areas: areas that retain natural characteristics, but are in need of restoration in order to become core areas or corridors.

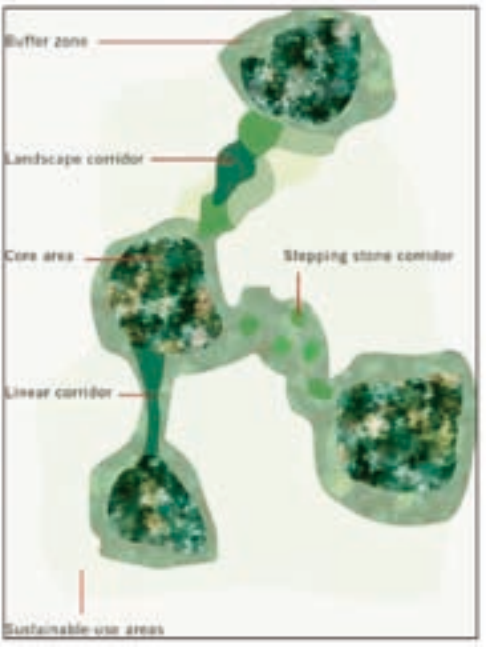

Figure 30: Structure of a spatial network.
The appropriateness of different interconnecting elements highly depends on the specific requirements of species or plants and the existing spatial preconditions. (Source: Bennet, 2004)

Ecological corridors and core areas constitute a physical ecological network, but the significance of networks extends beyond a mere system of connections. An ecological network of PAs may also be constituted by coordinating management practices and activities within a group of PAs.

Interestingly, large PAs very often show an overlap of different protection categories. The core area is therefore very often under strong protection in more than one category (e.g., core zone of a national park, Natura 2000 and World Heritage site). Between two large PAs, a number of smaller PAs of different protection statuses and non-PAs are alternating. This situation is often not intended, but may also yield positive effects.

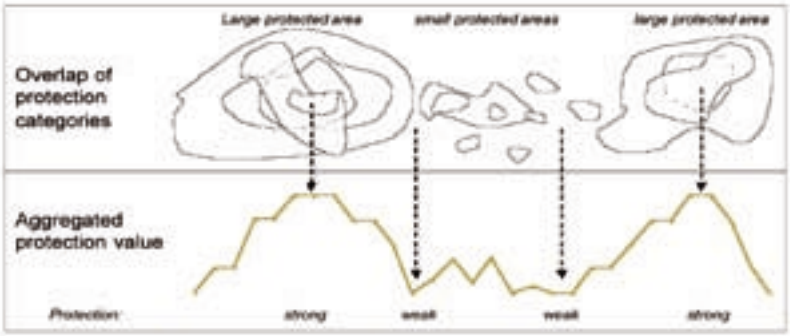

Figure 31: Conservation in concentric circles. Overlapping protection categories lead to a heterogeneous distribution of protection intensity.

However, not in all cases corridors and networks necessarily lead to an improvement in conservation. The PANet team is aware of important limitations to the networking concept:

- Endemic species that have developed in millennia of isolation might become degraded by new competitors, new predators or new genes.
- Invasive species might be able to pass new corridors easily and cause damage to natural habitats and species.
- Many species might not be able to pass the provided corridors, and for many species these corridors might not be beneficiary

5_6_1 EUROPEAN GREENBELT – GREENING THE "IRON CURTAIN"

The ‚Iron Curtain' divided Eastern and Western Europe for almost 40 years, cutting off contacts between people on both sides. An unintended result of this isolation was the preservation of a huge, almost continuous wildlife corridor throughout Europe. Today, a string of PAs connects European landscapes and forms a living monument of European history.
IUCN, the World Conservation Union, coordinates the Pan-European Greenbelt initiative, linking the stakeholders with each other and with the secretariat, contributing to the development of projects, and acting as an information hub (source: http://www.greenbelteurope.eu).

Figure 32: The European Greenbelt.
"Forgotten" habitats and PAs along the former iron curtain are constituting one of the most impressive spatial networks throughout Europe.
(Source: http://www.greenbelteurope.eu).

5_6_2 REINTRODUCTION OF THE BEARDED VULTURE IN THE ALPS – A CONCERTED ACTION

25 years ago, an international project was launched in order to re-introduce the Bearded Vulture in the Alps. Experts from France, Italy, Austria, Germany, and Switzerland decided to take Bearded Vultures from zoos and release them into the wilderness. Today, more than 100 Bearded Vultures are flying in the Alps again.

The four release sites in the Alps -- situated at a distance of about 200 to 300 km from each other -- are almost all located in national parks or nature reserves. Bearded Vultures once existed at all sites. Today, virtually unchanged natural habitats and extensive cliffs still provide optimal conditions for Bearded Vultures.

This concerted action has improved the ecological network not by establishing corridors, but by using the full potential of the nodes.

(Source: http://www.wild.unizh.ch/bg/index_e.htm).

Figure 33: The Bearded Vulture flies again.
A concerted action between Alpine protected areas and experts has accomplished the re-introduction of 100 Bearded Vultures.
(Gypaetus barbatus/Bearded Vulture/Lammergeier;
Picture: WWF Canon / Martin Harvey)

5_6_3 THE ALPINE NETWORK OF PROTECTED AREAS

The Alpine Network of Protected Areas, an international institution set up on the initiative of France in 1995 to promote cooperation among institutions managing the PAs, has been working since 2003 on the concrete implementation of Article 12 of the Alpine Convention's Protocol on Nature Conservation, which calls for an ecological network.

During the German presidency of the Alpine Convention, a study was commissioned on the subject of cross-border PAs and an ecological network in the Alps. As part of this study, an overview was drawn up, detailing the situation of existing networks in the Alps, the instruments available nationally and internationally, as well as existing projects. Numerous concrete proposals were put forward on how to create an ecological network of PAs throughout the entire Alpine region, in particular in eight areas that were selected as examples and studied in greater depth.

The ongoing coordination of this initiative and of the individual stages and initial concrete implementation measures in selected test areas is part of the work programme of the Alpine Network of Protected Areas". (Source: Kohler 2006, in: Alparc 2006)

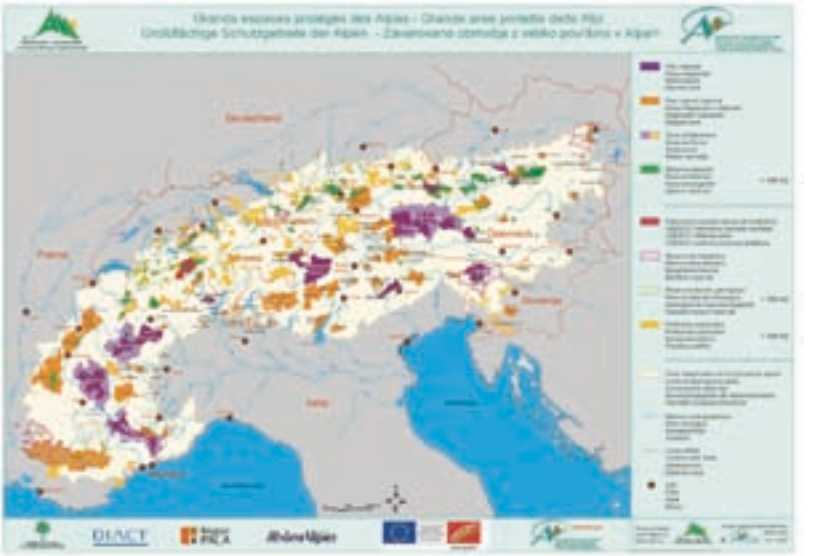

Figure 34: Large protected areas in the Alps.
At present, the map of the Alpine PAs and the corresponding databases cover over 800 PAs (> 100 hectares) in the eight Alpine countries. ALPARC aims at connecting these areas in different ways.
(Source: Alparc - http://www.alparc.org)

5_7 NETWORKS - APPROACHING THE ECONOMIC ASPECTS

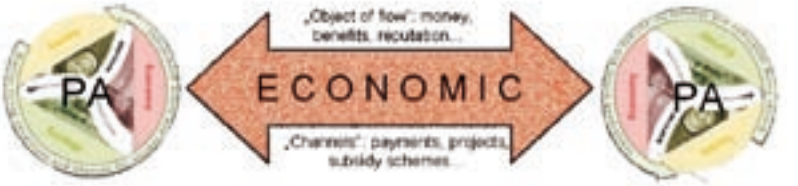

Figure 35: The economic link.
The nodes ("beneficiaries") are economic entities (Protected Area organisations, but also companies). By providing defined methods and instruments ("channels"), money, benefits, resources ("flow objects") can be exchanged synergetically between the PAs.

According to economic principles, large units may work more effectively than smaller ones. These principles can also be applied to PAs:

- Better prices for purchasing goods and services
- Better visibility for visitors, stakeholders and decision-makers
  - More powerful branding and cross-marketing
  - Better opportunities for lobbying
- Better "standing" in any case of a conflict and better chances assume opinion leadership
- Better disposability of resources
  - Money, own budget, as well as fundraising and sponsorship potentials
  - Institutional capacity, manpower, know-how, reputation and infrastructure
  - Division of work and distribution of workload
  - Improved problem-solving capacities
- Better price-performance ratio
  - Improved quality by more standardised processes and products
  - Lower cost for developing new services ("not inventing the wheel twice")

Since PAs are bound to a region and its natural givens, they cannot grow like a company or business unit. PAs have to work in a network to enlarge their capacity as a unit. They may form joint administrative or managerial units, develop umbrella organisations, or launch joint economic projects.
However, it should be noted that the benefits may become diminished by the cost of coordination, a potential loss of flexibility, and of course a loss of individual decision-making options.

5_7_1 JOINT BRANDING FOR PROTECTED AREAS IN CARINTHIA

PAs are very often targeted by different interests. Tourists, sportspeople, farmers, hunters, and many others make use of natural resources according to their requirements. In order to avoid conflicts, the management of PAs and rural spatial planning need to be connected and coordinated.

Hence it is of vital importance to promote the different categories and objectives of nature conservation to the public. The existing guidance system in Carinthia represents the 21 most important national and international PA categories. With that, all interested and involved persons have a „key" in hand for the understanding of the local PAs. The PAs of Carinthia are structured according to the conservation resource to whose conservation they primarily contribute:

- Species and habitats -- these areas primarily preserve defined animals, plants and their natural habitats.
- Landscapes -- these areas preserve and develop spacious natural and cultural landscapes.
- Natural monuments -- these are small-sized phenomena like rock formations, single trees, or special habitats.

Figure 36: Pictograms for protected area categories. Promoting PAs should be based on structuring and reducing the complexity of PA categories and their various objectives. The recognisability of different kinds of PAs should be communicated clearly by a corporate design. (Guidance system in Carinthia/Austria, developed within the IPAM project in 2005; Pictures revised; Source: http://www.schutzgebiete.ktn.gv.at)

5_7_2 ASSOCIATION OF AUSTRIAN NATURE PARKS

The number of nature parks in Austria has increased enormously during the last two decades. In addition to various federal-state laws, a shortage of personal and financial resources has intensified competition between PAs and categories.
In 1995, the Association of Austrian Nature Parks was established as an umbrella organisation. The aim of the association is to develop an efficient network of nature parks (quality standards, information exchange, lobbying, technical support, etc.) and to bundle marketing resources. The association initiates and supports network projects and is funded through a mix of membership fees, project aids, and sponsoring (Source: http://www.naturparke.at/)

Figure 37: Protected-area products.
Specialities from various nature parks are assembled in packages (e.g. a Christmas package) and distributed all over Austria. (Source: Verband der Naturparke Österreichs/Association of Austrian Nature Parks)

5_7_3 PARKS.IT – VIRTUAL ACCESS TO PROTECTED AREAS IN ITALY

Parks.it is the main web-based platform of Italian PAs and is organised by Federparchi (the Italian Federation of Parks and Nature Reserves). Federparchi was founded in 1989 and is a young association with strong roots. It connects more than 160 bodies managing national and regional parks, marine PAs, regional and state nature reserves. It consists of regional coordination offices.

The federation represents a reference point in a network of continuously developing relationships and, fully independent, represents the parks in their dealings with the state, the regions, local authorities, the European Union, and with any other public or private entity interested in the aims of the association.

To connect visitors and park offers, a comprehensive search tool available in three languages is an important part of the platform. This service helps to enhance the value added for the parks by attracting tourists and providing suitable accommodation offers or holiday packages (Source: http://www.parks.it/federparchi/Eindex.php).

Figure 38: The Parks.it web portal.
A search engine matches tourist demands with the parks' offers. This virtual access platform to PAs in Italy helps attract tourists and generates additional value added for the region. (Source: http://www.parks.it/index.html)

6 PROTECTED AREA NETWORKS: PILOT ACTIONS AND BEST PRACTICE

6_1 PILOT ACTIONS - DEVELOPING AND IMPROVING ECOLOGICAL NETWORKS

6_1_1 PILOT ACTION: "BUILDING GREEN BRIDGES OVER GREY SETTLEMENTS" (AUSTRIA)

Project title	Protected Area Corridors in Central Carinthia	
Responsible Partner	KÄRNTEN	Office of the Government of Carinthia, Dept. of Spatial Planning
Implementation	LWK	LWK–Ziviltechniker GmbH, www.l-w-k.at
Region		Southern Austria, Central Carinthia between Klagenfurt and Villach
Types of activities	• Conceptualisation and spatial analysis • Implementation planning	
Reference	Knappinger, J., 2007: PANet 2010. Verbundsystem Kärnten – Vernetzung von Schutzgebieten im Kärntner Zentralraum. Pilot action within the Interreg III B CADSES project PANet, WP-3. Klagenfurt, 24.	

6_1_1_1 INTRODUCTION

In the densely populated area of Central Carinthia between Klagenfurt and Villach, there are many PAs: three Natura 2000 sites, six nature protection areas, nineteen protected landscape areas, many natural monuments and a large number of ex-lege protected biotopes. To identify strategies for connecting these areas despite the high pressure of land use by settlements and infrastructure was the main aim of this pilot action.

6_1_1_2 APPROACH

The study tries to identify sections of land that could function as corridors to connect PAs. There are several circumstances to make connecting the protected areas difficult.
Most of the protection areas are located in a beautiful countryside. Therefore, considerable a pressure exists in these areas, e.g. for building hotels etc.
Furthermore, most of the PAs were established more than 30 years ago. At the time, there were no considerations to connect these areas and to keep corridors free from settlement or other "higher" utilisation.
In the analysis, 35 corridors between pairs of protection areas are investigated, and the feasibility of connecting each two areas is evaluated with regards to the distance between the protection areas, the ecological capacities and the spatial resistance in the area between the protection areas.

6_1_1_3 CONCLUSION

With the approach outlined above, matrices and maps were drafted to show the feasible degree of connectedness between PAs: Some areas are not to be connected at all; for others however, highly suitable conditions exist. The final list can be seen as a prioritised action plan. A number of guidelines and recommendations for practical implementation provide detailed information.

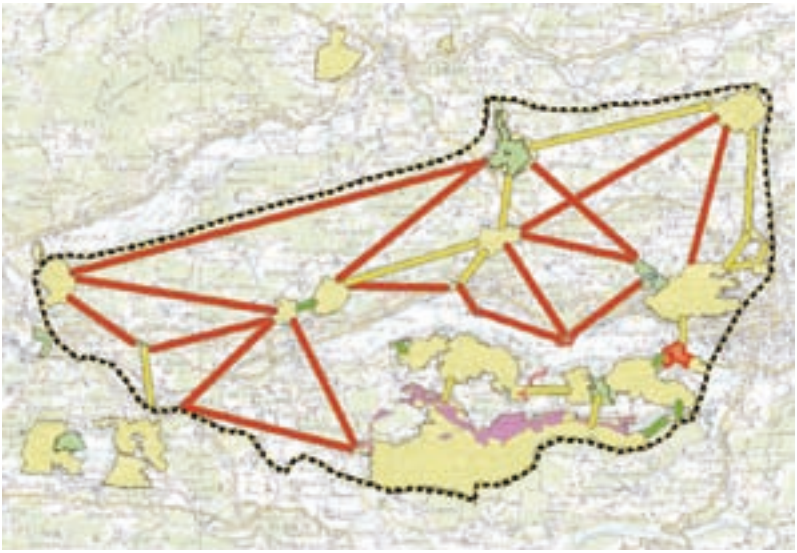

Figure 39: Planning links.
These high-priority corridors between PAs in Central Carinthia were identified. They are to be implemented by instruments of law, by "conservation by contract", and by spatial planning and technical measures.
(Source: Knappinger 2007)

6_1_2 PILOT ACTION: "CONNECTING AREAS – IMPROVING PROTECTION" (SLOVAKIA)

Project title	Improvement of Protected Area Networks in the area of Tatras	
Responsible Partner		Institute of Geography, Slovak Academy of Sciences www.geography.sav.sk
Implementation		Institute of Geography, Slovak Academy of Scienc es www.geography.sav.sk

Region		Northern Slovakia, the region of the Tatra mountains on the border to Poland
Types of activities	• Landscape assessment • Human systems analysis • Improvement of the spatial network	
Reference	Hanušin, J., et al. 2007: PANet 2010. Zlepšenie siete chránených území v oblasti Tatier. Pilot action within the Interreg III B CADSES project PANet, WP-3. Bratislava, 36.	

6_1_2_1 INTRODUCTION

The project investigated ways to improve the network of PAs in the Tatra mountain region Northern Slovakia, particularly in the mountain ranges Vysoké Tatry, Západné Tatry, Belianske Tatry and Nízke Tatry, as well as in the highland region of Stratenská Hornatina and in parts of basins situated between the above mountain ranges, which have the densest concentration of PAs in Slovakia and one of the highest in Europe. The region has a total area of 2,690 km^2 and includes 107 small-scale PAs with a total area of 481 km^2. Large-scale PAs in the categories of National Park and Protective Zone of a National Park extend across an area of 2,071 km^2. Of the 107smaller PAs, 90 are on the surface, while the remaining 17 are caves. The area is managed by the Žilina and Prešov regions. Its population amounts to 290 thousand (108 inhabitants per km^2) in 108 settlements.

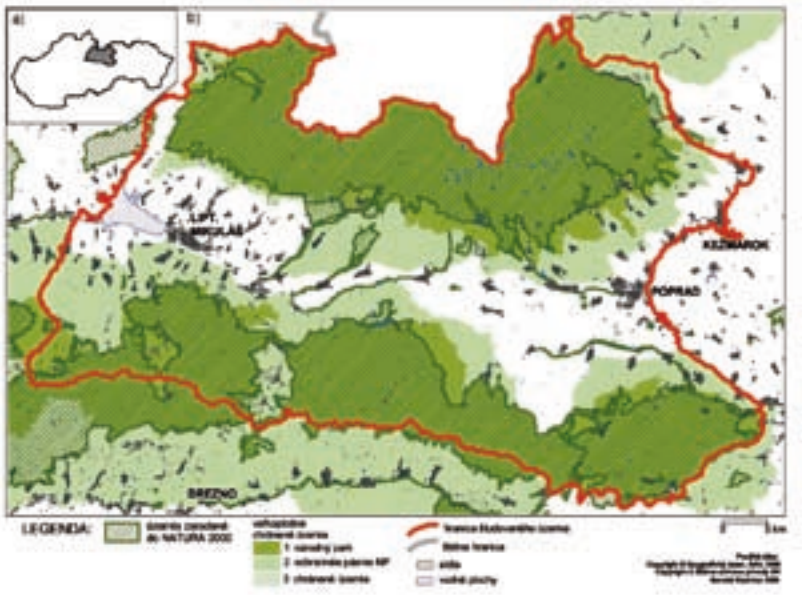

Figure 40: The protected areas in the Tatra region.
The map shows the high level of protection in the Tatra region and the necessity to connect the sites. (Source: Hanu_in et al. 2007)

6_1_2_2 APPROACH

The applied methodology consists of four consecutive steps. Because of ongoing and still unfinished research, not all steps of the project were realised within the framework of the PANet project.
Basically, three basic systems (blocks) are analysed to determine the natural conditions and organisational issues in the area under investigation that affect PA networking.

- The first block – landscape system – covers the primary natural and secondary cultural conditions in the presented landscape subsystem, expressed by the type of land cover. An assessment of the primary connectivity (determined by topography and the course of river-valley systems) and of the secondary connectivity (determined by the type of land cover) has resulted in the categorisation of the territory into five levels by landscape connectivity potential. These results were drawn in a map.

- The second block -- human systems -- analyses human activities and anthropogenic elements in the landscape. This part is broken down into four clusters of effects on PAs networking (demographic, social, economic, and infrastructure). The resulting map was compiled by a synthesis of the four aspects and their assessment. The first three aspects appear in form of an index. They are represented as a five-degree scale of settlement intensity. The fourth aspect of infrastructure is represented by linear elements in the territory.
- Socio-political effects (governmental and non-governmental sectors, management, legislation, interest groups and their impact on the functioning of the space) are analysed in the management system block (the institutional-legal aspects of territorial administration). This block identifies two dimensions: compulsory (stipulated by law or other legally binding provisions, top-down direction) and facultative (voluntary, bottom-up).

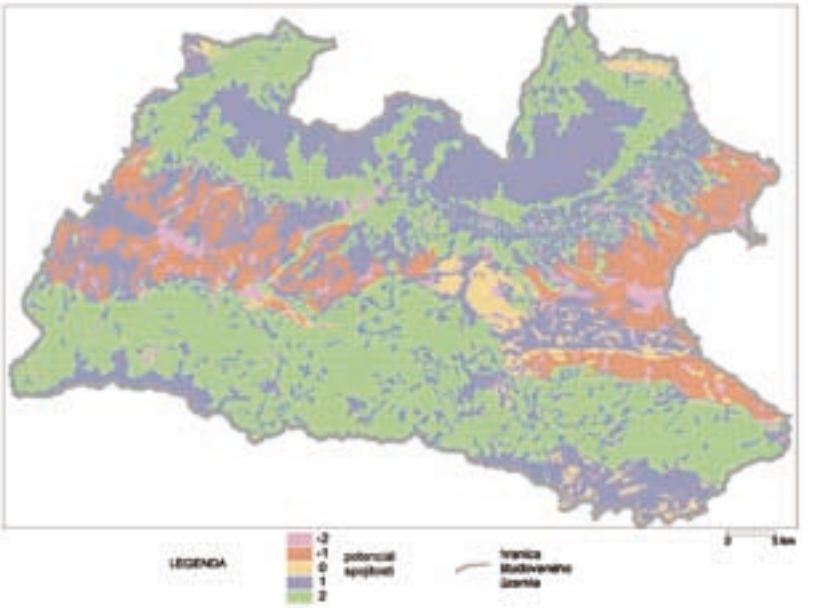

Figure 41: Landscape system.
The categorisation of the landscape is a basis to identify the connectivity potential of an area. (Source: Hanušin et al. 2007)

6_1_2_3 CONCLUSIONS

The presence of river-valley systems or of suitable land cover can be considered positive for PA networking in terms of landscape connectivity. Concerning the socio-economic system, suitable educational and age-distribution characteristics of the population living in the surrounding settlements may also favour connectivity. On the other hand, intensive industrial production or dense infrastructure of any kind (transport, energy, etc.) act as barriers. In the managing system, virtual networks are prevalent, and they considerably influence the situation of the PA network and options to improve it. Over-bureaucratised and complicated managing systems are barriers, while a simple, flexible, and functional system of nature conservation contributes to the improvement of PAs. Preliminary analysis has shown that horizontal links in the managing system are insufficiently developed, while vertical links are too strong. In reality, this results in deficiencies in or a complete absence of communication between contiguous PAs. The hierarchy of PAs also needs to be also taken into account, as it is excessively complex in Slovakia.
Since the PA network can be seen as a multi-dimensional system that combines a physical network of elements of the natural landscape with virtual, immaterial networks (management, institutional, and organisational aspects), it is reasonable to specify proposals for PA network improvement in the following areas:

- Functional aspects of the landscape
- Management
- Institutional considerations

Four principal core areas (nodal points of the network) characterised by a high concentration of PAs in a relatively small area were identified. The core areas offer the best conditions for connecting PAs (integration and expansion of the area). Due to the PA density and the high degree of conservation of the natural landscape, the generation and/or improvement of connections is very effective relatively and corresponds with the idea of establishing as many homogenous core zones at the NP as possible.

6_1_3 PILOT ACTION: "SUITABLE OR NOT? – USING HIGH-TECH TO IDENTIFY ECOLOGICAL CORRIDORS" (ITALY)

Project title	Suitability maps for ecological corridors	
Responsible Partner		University of Trieste, Department of Biology. www.units.it
Implementation		University of Trieste, Department of Biology
Region		North-Eastern Italy, Friuli Venezia Giulia region
Types of activities	• Spatial analysis • Methodology for deriving corridors	
Reference	Feoli, E., et al. 2007: PANet 2010. Realizzazione di una mappa di suitability per la creazione di corridoi ecologici: esempio per la Regione Friuli Venezia Giulia. Pilot action within the Interreg III B CADSES project PANet, WP-3. Trieste, 24.	

6_1_3_1 INTRODUCTION

The Department of Biology of the University of Trieste has launched a pilot action on the subject of suitability maps for ecological corridors. A case study was developed in the Friuli Venezia Giulia administrative region in Northern Italy to demonstrate a methodology for deriving ecological corridors. Recognising the fact that PAs are not

islands in a territory but subject to various human pressures, there is a need to evaluate the potential of the landscape for fostering connectivity and for guaranteeing the long term sustainability of the network of PAs.

6_1_3_2 APPROACH

The pilot action focuses on the following key aspects:

- Analysing the PA network in the Friuli Venezia Giulia region to identify areas for the application of the proposed methodology. The regional system of PAs is subject to European, national, and regional legislation;
- Defining methods to calculate the similarity between different habitat patches based on information about vegetation and fauna. The basic information layer is a habitat map obtained through a national protocol certified by the National Environmental Protection Agency (APAT); the similarity analysis takes into consideration the vegetation types as well as the core operational geographic units to create ecological corridors.

Figure 42: Identifying links and barriers.
The method applied in the pilot action calculates the ecological similarity of different habitats (carstic grassland, forest, urban settlement) and points out the most feasible connections between two PAs. (View form the Riserva de Val Rosandro towards Trieste and the Adriatic Sea, source: Jungmeier).

- Defining methods to derive a suitability map as a supporting tool for the design of ecological corridors between existing PAs. The suitability map combines structural elements (habitats) with the effects of anthropogenic pressures on the regional landscape.

Based on the habitats' similarity, the suitability analysis includes the habitat patches as well as transport infrastructures, industrial districts, urban settlements, and other sources of human pressure. Spatial analysis tools in a GIS environment are then applied to obtain the optimal path to connect existing PAs and create an ecological corridor.

6_1_3_3 CONCLUSION

The study proposes a data analysis protocol to understand similarities between PAs and to prioritise connections. Subsequently, a GIS analysis is used to find optimal ecological corridors to connect PAs. The method makes use of official datasets like the Natura 2000 database and the Map of Nature habitats map. It is therefore applicable to neighbouring areas and easily adaptable to a European context and may be integrated in the landscape planning phase.

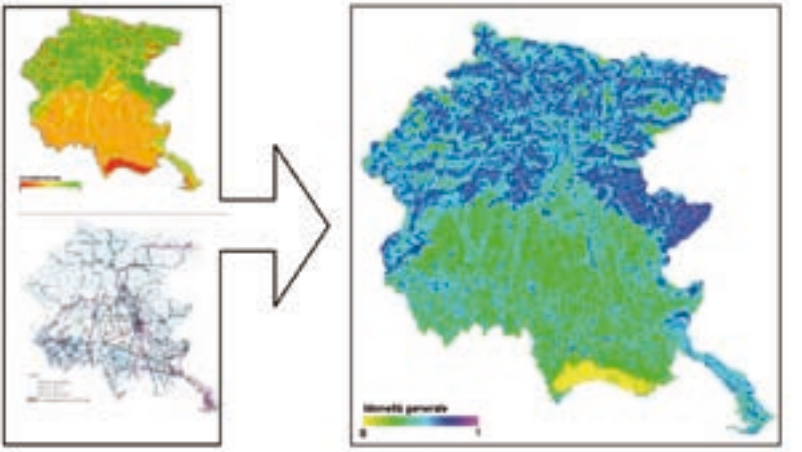

Figure 43: A biopermeability map of the Friuli Venezia Giulia region. The analysed biopermeability potential and the existing barriers are compiled into a final suitability map for ecological corridors. (Source: Feoli et al., 2007)

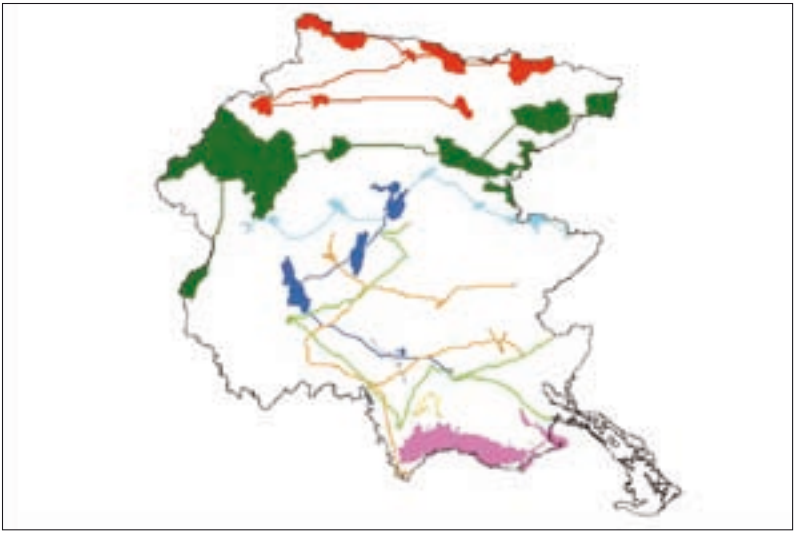

Figure 44: Ecological corridor map of the Friuli Venezia Giulia region. A GIS corridor analysis is used to derive the optimal path to connect similar PAs. The thin lines indicate the environmentally best lines for connecting PAs. The shortest way is not always the most efficient.

6_1_4 PILOT ACTION: "THE VEINS OF A LANDSCAPE: A NETWORK OF WATER COURSES" (ITALY)

Project title	Establishment and management of water networks	
Responsible Partner	PARCO REGIONALE dei COLLI EUGANEI	Euganean Hills Regional Park www.parcocollieuganei.com
Implementation		Euganean Hills Regional Park Bio Programme, ST Consulting

Region		Northern Italy, Veneto Region, near Padova
Types of activities	• Hydrological analysis • Monitoring system • Public awareness	
Reference	Matteazzi, C. et al. 2007: PANet 2010. Monitoraggio e caratterizzazione biologica dei corpi idrici del Parco Regionale dei Colli Euganei. Pilot action within the Interreg III B CADSES project PANet, WP-3. Este, 20.	

6_1_4_1 INTRODUCTION

The Euganean Hills Regional Park is composed of various small PAs and designated Natura 2000 sites that are linked by a system of rivers and canals. The project focuses on the study of the state of health of the flora and fauna in the water network and, as final result, provides a number of guidelines for a suitable management of aquatic ecosystems.

Figure 45: The Euganean Hills Regional Park.
A dozen hills surrounded by the flat plain of the Po river are the characteristic elements of the Euganean Hills Regional Park. (Picture: Velik)

6_1_4_2 APPROACH

The main project activities are:

- Environmental study of the hydrological components in the Euganean Hills ecological network
- Studies about the monitoring system for water flora and fauna and the environmental study of water courses in the Euganean Hills ecological network
- Results description, a final project report, and the publication of a pilot project booklet.

The water cycle study is specifically structured to quantify some indicators describing

- the physical-chemical-biological quality of the park's water network,
- the morphological and functional characteristics of the park's water network,
- the current status of the river flora and of the ichthyic fauna, especially in wetlands.

This study was conducted with the help of 30 monitoring stations distributed over the most strategic points in the water network and had a term of nine months.

6_1_4_3 CONCLUSION

The main critical elements in the hydrological components of the Euganean ecological network are defined by analysing the status of the ecological network of aquatic ecosystems and the conservation status of the autochthonous fauna. Problems result from the presence of allochthonous fauna and from the use of waterways.

6_1_5 PILOT ACTION: "A TECHNICAL BASIS FOR NETWORKING" (UKRAINE)

Project title	Creating a Protected Area Network in the Radekhiv District Council	
Responsible Partner		Radekhiv District Council
Implementation		Radekhiv District Council
Region		Western Ukraine, near Lviv
Types of activities	• Conceptualisation • Education and training • Data research and compilation • Public awareness	
Reference	Publication in progress	

6_1_5_1 INTRODUCTION

Although it is not a member state of the European Union, Ukraine participated in the PANet project under a special status. Having a different time schedule (Ukrainian pilot actions are scheduled to end in 2009), the pilot action has only just started. The subsequent passage therefore outlines the main goals of the project.

6_1_5_2 APPROACH

The technical objective of the Ukrainian pilot project is:

- Developing a network of individual PAs in the selected region (Radekhiv) and harmonising their digital databases according to EU standards
- Drafting legal documents aiming at the implementation of INTERREG CADSES initiatives in the region (ecological approach)
- Holding regional seminars on the creation, management and funding of PA networks in order to improve the quality of the sites
- Organisation of international networking meetings, connecting with project partners, and communicating with partner institutions

6_1_6 PILOT ACTION: "LETS TALK ABOUT... WATER" (ITALY)

Project title	Integrated management of water networks GOCCIA ("Let's work together for a careful management of the water resource")	
Responsible Partner	PARCO REGIONALE dei COLLI EUGANEI	Euganean Hills Regional Park www.parcocollieuganei.com
Implementation		Euganean Hills Regional Park ST Consulting – Laboratorio città

Region		Northern Italy, Veneto Region, near the town of Padua
Types of activities	• Participation process • Information and interpretation	
Reference	Matteazzi, C. et al. 2007: PANet 2010. Processo partecipato per una gestione integrata della rete idrogeologica del Parco Regionale dei Colli Euganei - GOCCIA (Gestiamo Ognuno con Cura e Cautela Il Patrimonio dell'Acqua). Pilot action within the Interreg III B CADSES project PANet, WP-4. Este, 16.	

6_1_6_1 INTRODUCTION

The GOCCIA project (Gestiamo Ognuno con Cura e Cautela Il patrimonio dell'Acqua – "Let's work together for a careful management of the water resource") is the second pilot action in the Euganean Hills Regional Park.
The aim of the project is to establish a participation process that, starting with the analysis and mapping of individual local requirements, eventually achieves the objective of involving all stakeholders engaged in territorial water management.
The Euganean Hills Regional Park project aims to share and promote a number of guidelines related to the ecological and functional improvement and management of water courses.
The resources and instruments of the participation process allow:

- the communication and sharing of the results of water network studies results with public and private bodies and residents;

- the promotion of cooperation networks among the residents and all stakeholders involved in water management;
- the generation of new aims;
- the development of shared actions and solutions;
- the discovery and validation of local resources.

Figure 46: Lively logo.
To take responsibility for nature means to involve all relevant stakeholders. This is one of the main tasks in PA management. (Picture: Jungmeier)

6_1_6_2 APPROACH

The process development consists of several meetings structured in two levels, organisational and participatory. The whole process is flanked by planning activities, the study of the water network's state of health, education of the residents, as well as communication activities.
At the organisational level, a "Referring Group" is established by the institutional actors to assist the Euganean Hills Regional Park with the involvement of inhabitants and the supervision of activities. The Referring Group also actively collaborates with the park manage-

ment for the opening and closure events of the project.
The participatory level is implemented as follows:

- Opening forum – presentation and official launch of the participation process;
- Six workshops with residents and stakeholders, three in the North-West and three in the South-East of the target area;
- Final event for the dissemination and sharing of results.

Information materials and a questionnaire are used to involve citizens and collect information and questions from people who attend meetings, but also from people who are unable to participate.
Experts on water analysis and management and representatives of public institutions contribute their technical expertise to the discussions at each meeting.
Workshops are guided by "facilitators", professionals who have the task of moderating the debate and promoting the exchange of ideas and the expression of different points of view.

6_1_6_3 CONCLUSION

The participation process has provided a definition of relevant topics that need to be considered for a better management and development of the park's network of water courses.
The main priorities are:

- Better coordination between the stakeholders
- Water courses monitoring
- Hydro-geological disorder and related urban aspects
- Water course management, conservation, and validation
- Water saving and climatic variation
- Preventing drainage and pollution
- Building awareness of the importance of environmental conditions and particularly the water courses (education for citizens, agricultural firms, schools, companies, and public bodies).

These topics were discussed, and a list of recommendations and guidelines was published.

Figure 47: Working table in Este.
The GOCCIA pilot action involved both experts and stakeholders.
(Source: Euganean Hills Regional Park, 2007)

6_1_7 PILOT ACTION: "IMPROVING REGIONAL NETWORKING" (CROATIA)

Project title	Analysis of the current situation and development of guidelines for the conservation of PAs in the Primorsko Goransko county	
Responsible Partner		Risnjak National Park
Implementation		Risnjak National Park

Region		North-Western Croatia, between Rijeka and Zagreb
Types of activities	• Analysis of the PA system • Creating a database • Development of guidelines	
Reference	In progress	

6_1_7_1 INTRODUCTION

The Primorsko Goransko county is located in the North-Western part of Croatia. Its capital is Rijeka. The county includes the mountainous region of Gorski Kotar, as well as Kvarner Bay and a number of islands. It is the only county in Croatia that includes all types of PAs and covers all ecosystems, from marine to Alpine.
The aim of the Croatian pilot action within the PANet project is to analyse the PA system at the county level in Croatia, develop an appropriate database for PAs using GIS, and produce guidelines for the future management of PAs in the county.
The project tasks are implemented by national park staff and contracted experts for legal analysis, project management, and PA management. The development of the GIS database is subcontracted to GISDATA, a major Croatian GIS company.

6_1_7_2 APPROACH

Over the course of the year 2007, all PAs in the county were visited and the managing authorities or owners interviewed in order to gain an accurate overview of current management practices. On the basis

of this analysis, guidelines for the management of the PAs are developed and published.
In May 2007, a regional workshop was held in Crni Lug, to which all regional stakeholders and managers of PAs were invited. The workshop was also attended by the international partners in the PANet project. A second workshop and final conference was held in February 2008 in Opatija with participation from local, national and regional participants, as well as the PANet partner organisation.

6_1_7_3 CONCLUSIONS

The results of the project are:

- a printed document on the legal analysis of PA management at the county level
- a printed document on existing management practices for PAs in the Primorsko Goransko county
- a GIS database on the PAs in the Primorsko Goransko county, installed at the Priroda public institution
- improved regional and international cooperation between PAs

Figure 48: Kupa spring in NP Risnjak.
The specific hydro-geological conditions and the green-blue water form one of the most impressive carstic springs in Croatia.
(Excursion NP Risnjak, May 2007; picture: E.C.O)

6_2 PILOT ACTIONS – DEVELOPING ECONOMIC NETWORKS

6_2_1 PILOT ACTION: "WHO PAYS THE RENT?" (AUSTRIA)

Project title	Financing and managing Protected Area Networks in Carinthia	
Responsible Partner	KÄRNTEN	Office of the Government of Carinthia, Dept. of Spatial Planning
Implementation	ALPEN-ADRIA UNIVERSITÄT KLAGENFURT	Universität Klagenfurt, Institut für Volkswirtschaftslehre Southern Austria, Carinthia
Region		North-Western Croatia, between Rijeka and Zagreb
Types of activities	• Status-quo analysis • Expert workshops • Suggestions for environmental funding strategies	
Reference	Michael Getzner, M. & Müller, B. U., 2007: PANet 2010. Finanzierung und Management von Schutzgebietsnetzwerken in Kärnten. Pilot action within the Interreg III B Cadses project PANet, WP-4. Klagenfurt, 24.	

6_2_1_1 INTRODUCTION

The current project focuses on the financing of PAs and networks of PAs in Central Carinthia. In Carinthia there are basically three main groups of PAs. First, the Hohe Tauern national park is one of the most

prominent PAs in terms of international recognition, budget capacity, and ecological value. Secondly, additional nature parks such as Dobratsch and Weissensee may be established in Carinthia. Third, there are numerous small and medium PAs, such as state parks (nature conservation areas), landscape protection areas, natural monuments, and Natura 2000 sites that account for quite a large share of the area of Central Carinthia around Lake Woerth.
Regarding financial issues, the national park is sufficiently equipped and managed in both ecological as well as economic (business) terms. By law, nature parks are managed and funded by the communities and the government. The large number of other PAs, many of them unknown even to local residents, are partly unmanaged, do not have a unified management, marketing strategy, or representation, and do not produce marketable regional products. Many of them suffer from a shortage of funds, particularly in the field of ecological management.

6_2_1_2 APPROACH

The current project explores possible strategies to fund nature conservation in Central Carinthia by proposing potential financing instruments and strategies, focusing on non-public funding. The pilot action is primarily intended as a communication process between the relevant stakeholders. This subject is investigated further by carrying out expert interviews and workshops with representatives of the Department for Nature Conservation of the Carinthian State Government. In addition to this, a literature review provides an overview of the status quo of possible funding tools.

6_2_1_3 CONCLUSION

The following conclusions can be drawn:

- A prerequisite for (private) PA funding is that the functions of PAs are fulfilled, in particular regarding nature conservation and ecological management. Without this very foundation of a clear and effective ecological management, private funding, and in the long term the support for public funding, will be lacking.
- Effective ecological management mainly concerns the "public" part of nature conservation. Private funds may more likely be available

for the more "private" areas of nature conservation, for instance recreation, education, and local and regional products.

- Private funds for nature conservation can only be a complement to public funding. Public funding not only involves ecological management, but is also the basis for branding and marketing strategies, which may in turn attract private funds.

PAs in Central Carinthia lack any form of joint representation on which private funding may be based. Public funding is therefore an economical, effective, and also "cheap" option for the further funding of PAs in the region.

6_2_2 PILOT ACTION: "NEW BLOSSOMS IN OLD ORCHARDS" (SLOVENIA)

Project title	Financing and managing PA Networks	
Responsible Partner	Kozjanski park	Kozjanski Regional Park
Implementation		Kozjanski Regional Park
Region		Eastern Slovenia, near the border to Croatia
Types of activities	• Educational • Entertainment	
Reference	Michael Getzner, M. & Müller, B. U., 2007: PANet 2010. Finanzierung und Management von Schutzgebietsnetzwerken in Kärnten. Pilot action within the Interreg III B Cadses project PANet, WP-4. Klagenfurt, 24.	

6_2_2_1 INTRODUCTION

Meadow orchards are a traditional and vital component of the cultural landscape of Kozjansko. Very convenient geographical, historical and other circumstances have resulted in the development of a highly diverse and colourful range of fruit crops.
A large part of the meadow orchard area in Kozjanski Park is proclaimed as a Natura 2000 site because of the many endangered species that live predominantly in these habitats. For this reason, Kozjanski Park is both obliged and competent to find adequate solutions for ongoing protection and preservation activities. In order to ensure a long-term Natura 2000 site management, Kozjanski Park has carried out a series of broad, dedicated actions that are consistent with the park's overall environmental strategy.

Figure 49: The potential of orchards.
In ecological terms, orchards are important as habitats and a form of traditional landscape. In economic terms, old breeds of fruit may be rediscovered. Socially, orchards are good places for meetings and group activities. (Source: E.C.O.)

6_2_2_2 APPROACH

In keeping with these intentions, one of the first steps was to work out methods for a goal-oriented survey to help building expertise, set up a database with all relevant information and, finally, to define further steps. The next step was to set up a network of meadow orchard landowners who expressed a desire for close cooperation with Kozjanski Park, and who are interested in taking part in a meadow orchards restoration project. As an extension to this, the Kozjansko Apples Society was established to allow not only landowners but all interested parties to participate in the process of deliberation and actions in the field of meadow orchards restoration. Also, a number of workshops have been organised to present tools and methods of meadow maintenance, such as mistletoe removal, rejuvenation cutting of the crown, and pruning and grafting. As the majority of landowners are elderly and have only limited resources for a sound, regular maintenance of the orchards, park workers have helped many of them to improve orchards' condition. In 4 years, more than 6,000 apple trees have been rejuvenated by park workers, completely free of charge.

To bring the whole meadow orchards restoration idea to a new level, representatives of Kozjanski Park decided, also because of the PANet 2010 project, to broaden the existing endeavours in this particular field. They proposed the idea to organise a fair where landowners would have the opportunity to sell their annual yield of apples. Producers of other products like home-made cheeses, brandies, sausages, juices, herbs and other traditional local products should also participate in this market.

Figure 50: A market for products and ideas. Selling products helps maintain meadow orchards. (Source: Slemenšek)

To make the whole event even more interesting and educational, and to draw as many customers as possible, the overall concept of this fair consist of three pillars:

- Education
  - Exhibition of the most popular and important apple varieties,
  - Guided hiking tours,
  - Demonstration of apple juice production,
  - Display of traditional local handicrafts,
  - One-day seminar on rural development;
- Market
  - Over 60 stands with exclusively regional producers and products – no industrial or low-quality products are allowed;
- Entertainment
  - Games (quiz, tug-of-war),
  - Local groups, singers, musicians, bands performing on the stage,
  - Children's programme,
  - Sporting event (football tournament)
  - Catering.

6_2_2_3 CONCLUSION

One of the first experiences and insights was that this type of event depends very much on the weather conditions on a particular day. The estimated overall turnover on the market exceeds 40,000 €. The average number of visitors was around 2,000 per day. As a result, over 6,000 kg of apples were sold, and many producers were sold out. The media coverage was very positive. A general consensus is that this Apple Festival was a successful PANet 2010 pilot action, and that it deserves a follow up – preferably every year.

6_3 PILOT ACTIONS - DEVELOPING SOCIAL NETWORKS

6_3_1 PILOT ACTION: "FROM EDUCATION TO CONSERVATION" (ITALY)

Project title	Raising awareness of ecological networks	
Responsible Partner		University of Trieste, Department of Biology
Implementation		University of Trieste, Department of Biology
Region		Northern Italy, Friuli Venezia Giulia region
Types of activities	• Literature review • Design of a Web-GIS • Textbook	
Reference	Feoli, E., et al. 2007: PANet 2010. L'educazione ambientale a supporto delle reti di aree protette. Pilot action within the Interreg III B CADSES project PANet, WP-5. Trieste, 32.	

6_3_1_1 INTRODUCTION

The Department of Biology of the University of Trieste has undertaken a pilot action with the stated goal of "raising awareness of ecological networks". The pilot action deals with environmental education and support of the institutions responsible for landscape planning and ecological networks. As tools to promote the awareness of the

importance of nature protection and the view of PAs as an interrelated and regulated network, online information on the network of PAs in Friuli Venezia Giulia and a paperback textbook addressed to students were used.

Figure 51: Riserve Naturali di Marano - Marano Lagoon Nature Reserve, Italy. Besides overwhelming vistas, PAs provide unique living conditions for many species of animals and plants. Appropriate information systems can promote the knowledge about and the appreciation of these sites. (Picture: Zollner)

6_3_1_2 APPROACH

The pilot action focuses on the following key aspects:

- Literature review of the legislation on nature conservation in the autonomous region of Friuli Venezia Giulia. A complex regulatory system of PAs exists in Friuli Venezia Giulia that includes European, national and regional laws with frequent overlaps on the same areas. The repository of documents is made accessible via a Web-GIS system that links PAs with the relevant legislative measures.

- Design and implementation of a Web-GIS on PAs in the Friuli Venezia Giulia region to foster the dissemination and exchange of information concerning conservation and environmental education. The area under investigation is characterised by a variety of valuable natural ecosystems in a relatively small territory reaching from coastal areas to the Alpine region. This example may be a model for further development on a broader scale.
- Publishing of a textbook on regional PAs to support environmental education. Parks have always been useful instruments to promote environmental awareness in the public opinion by offering a concrete opportunity for environmental education, involving teachers and students in a continuous synergy process. The structure of the textbook developed in the pilot action allows the reader to focus on a geographic area and, based on topics of interest and combined with educational activities proposed by the managing body, gain a better knowledge and understanding of a PA.

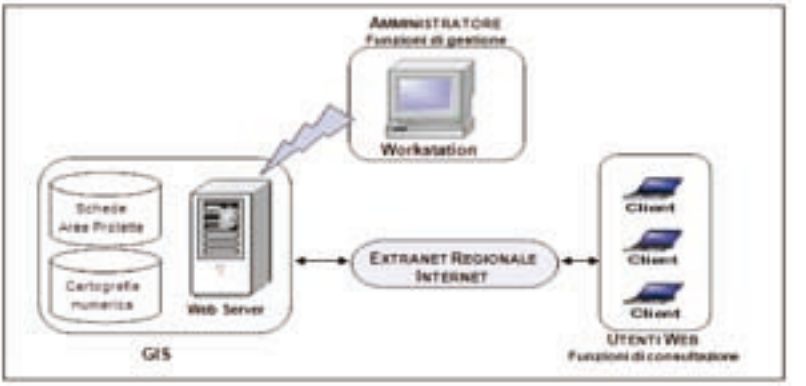

Figure 52: Architecture of a Web-GIS
The Web-GIS provides comprehensive real-time information to any client. This makes it a powerful instrument to provide transparency on the management of PAs. (Source: Feoli et al. 2007)

6_3_1_3 CONCLUSION

The legislative review helps understand the complex regulatory framework on nature protection. Publishing this set of documents in an organised and geographically explicit system represents a novel approach to information retrieval on legal documents.

Legislation is but one of the various layers of information that constitute this Web-GIS database on PAs, which is made available with a clearly stated environmental education purpose.

Furthermore, a paperback publication was prepared to raise awareness of environmental conservation issues and contribute to the development of recognition of key sustainability concerns, starting with school education.

6_3_2 PILOT ACTION: "CARINTHIAN HARMONY ORCHESTRA" (AUSTRIA)

Project title	1. Signage and visitor guidance in selected PAs in Central Carinthia; 2. Management plan for the Natura 2000 site Lendspitz-Maiernigg 3. Implementation of the management plan for the Keutschacher Moos PA 4. Ecomorphological and biological water survey in the Keutschacher Seental	
Responsible Partner	KÄRNTEN	Office of the Government of Carinthia, Dept. of Spatial Planning
Implementation	GEOS	GEOS Consulting Arge NATURSCHUTZ KIS – Kärntner Institut für Seenforschung

Region		Southern Austria, Carinthia
Types of activities	• Conceptualisation of a guidance system • Implementation of signage • Implementation of grazing activities and monitoring • Ecomorhpological survey • Survey of fish population and benthic survey • Connectivity research • Public awareness	
Reference	GEOS Consulting, Arge NATURSCHUTZ und KIS 2007: PANet 2010. Beschilderung und Besucherlenkung in ausgewählten Schutzgebieten; Managementplan Natura 2000 Gebiet Lendspitz-Maiernigg; Managementplan Schutzgebiet „Keutschacher Moos"; Zustandserfassung der Gewässer im Keutschacher Seental. 4 Pilot actions within the Interreg III B CADSES project PANet, WP-5. Klagenfurt, 44.	

6_3_2_1 INTRODUCTION

Wide areas of Carinthia were formed by glacial forces thousands of years ago. The specific conditions result in a diverse patchwork of different post-glacial landscapes. One of the most characteristic elements in these landscapes is water.
In this central region, which is also densely populated, various PAs having their origin in water or water-based habitats are located. One of the main problems in Central Carinthia is the restricted connection between these PAs, either in an ecological, economic, or social way.

Figure 53: Central Carinthia from space.
Carinthia is rich in water. About 20,000 years ago, glacial forces formed various types of basins, which subsequently filled with waters and wetlands.
(Picture: GoogleEarth)

6_3_2_2 APPROACH

In order to improve the situation of water-based PAs in Carinthia, a bundle of four pilot actions was set up within the PANet project. The overall aim is to connect PAs that focus on water-based habitats and species by different kind of activities:

- Signage and visitor guidance in selected PAs in Central Carinthia: The selection includes the following PAs:
  - Natura 2000 site Lendspitz-Maiernigg (Klagenfurt)
  - Natura 2000 site Reifnitzbach (a stream near Maria Wörth)
  - the Spintikteich nature reserve (a pond near Maria Wörth and Keutschach)
  - Protected Landscape Leonstein (Pörtschach am Wörthersee)
- The selected water-based PAs are located near the Wörthersee/ Lake Woerth, which is one of the most important tourist regions of Carinthia. Thus, they represent a highly frequented recreation area for the local population. These PAs are currently suffering from uncontrolled visitor paths.
- Management plan for the Natura 2000 site Lendspitz-Maiernigg: After the declaration of various parts of the Lendspitz-Siebenhügel and Maiernigg landscape conservation areas as Natura 2000 landscapes, the task emerged within PANet to set up a management plan with a special focus on the interconnection of different users and the adjusting of PAs. Special attention is accorded to the research of birds and bats.

Figure 54: Observing bats.
In developing the management plan, special attention had to be given to bats. Two exemplars of the observed species, Rhinolophus hipposideros (lesser horseshoe bats) are hanging head down (Picture: Krainer/Arge NATURSCHUTZ).

- Implementation of the "Keutschacher Moos" management plan: The project area is part of 550-hectare Ramsar area "Moor- und Seenlandschaft Keutschach – Schiefling", which is marked by four lakes and numerous silting-up moors. The abandonment of meadows and pastures several decades ago led to impoverished plant associations. The implementation of the management plan within PANet aims at building a refreshed network of biotopes by re-establishing traditional land uses.

Figure 55: Water buffaloes in their new habitat.
A long-term monitoring project on the grazing effects of water buffaloes is in progress. (Picture: GEOS Consulting)

- Ecomorphological and biological water survey in the Keutschacher Seental: The primary aim of this study is the assessment of the actual ecomorphological situation and to identify interruptions in the river corridors of the "Keutschacher Seental" research area (Lake Keutschach and Keutschach Valley).

6_3_2_3 CONCLUSION

This combined approach in a selected area of Central Carinthia has provided great momentum for the region. The valuable water-based habitats are now being discussed in various ways, by various stakeholders, at different levels. Generally, the pilot actions have resulted in

- a better understanding of the element of water and related habitats,
- controlled access to highly sensitive areas,
- the establishment of a panel of local experts, responsible authorities, and other involved persons,
- a better knowledge of existing species, their migration activities, and their ability to overcome barriers,
- experience in enhancing or re-establishing networks of biotopes in wetland areas.

Figure 56: Highlighting a protected area.
Establishing instruments of orientation and providing information about local natural treasures helps minimise the negative impacts of recreational activities.

6_3_3 PILOT ACTION: "SOUNDS GOOD – SOUND TOURISM IN BIOSPHERE RESERVES" (CZECH REPUBLIC)

Project title	Sound Tourism in Biosphere Reserves	
Responsible Partner	AKADEMIE VĚD ČESKÉ REPUBLIKY	Academy of Sciences of the Czech Republic, www.cas.cz
Implementation		Academy of Sciences of the Czech Republic
Region		Western part of the Czech Republic, the Šumava mountains on the border to Bavaria/Germany
Types of activities	• Network analysis • Strategies for sound tourism • Incentive systems • Training programmes	
Report	Těšitel, J., Kušová, D., Bartoš, M. 2007: PANet 2010. Šetrný turismus v biosférických rezervacích – nástroj formování sítí spolupráce (případová studie Biosférické rezervace Šumava). Úřad vlády Korutan. Pilot action within the Interreg III B CADSES project PANet, WP-5. České Budějovice, 32.	

6_3_3_1 INTRODUCTION

The Czech pilot action focuses on analysing two types of networks: an internal network in the Šumava biosphere reserve, which was formed by local nature conservation bodies and actors concerned with the development of sound tourism, and an external network of biosphere reserves with the goal of sharing the experiences made in the implementation of sound tourism practices in these reserves.

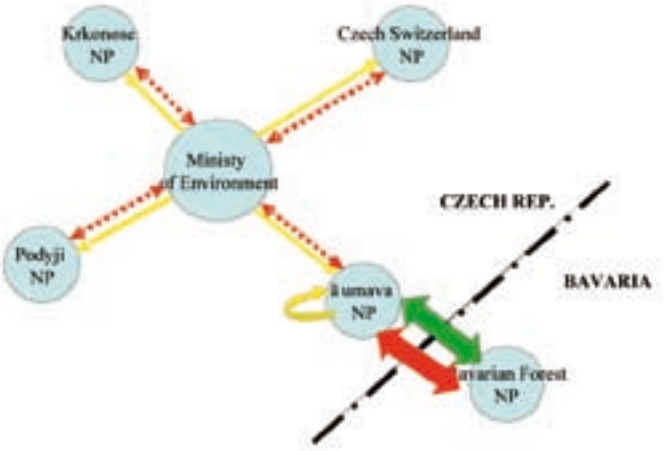

Figure 57: PANA of the Šumava national park.
For the preparation of the Czech pilot action, a detailed Protected Area Network Assessment (PANA) was carried out. It provides an overview of existing networks in the Šumava National Park. (Picture: Těšitel)

The concept of a biosphere reserve as stated in the Seville Strategy has been used as a gauge for evaluating the role of the Šumava National Park and Protected Landscape Area Administration in the formation of an internal network.
Internal networking is the subject of several projects running in parallel within the model area, all of which are both scientific and implementation-oriented. Their aim is to support networking activities in the territory, and at the same time, to analyse the necessary preconditions for networking and the possible impacts of emerged networks on nature conservation and the development of tourism.

Figure 58: The Šumava region.
The region is characterised be mire complexes embedded in large forests.
(Source: Těšitel, Kušová & Bartoš 2007)

6_3_3_2 APPROACH

The following networking activities can be used as examples to illustrate the scope of the project:

- Strategy of sound tourism development within the Šumava biosphere reserve, prepared cooperatively by all relevant stakeholders
- Analysis of the potential of the Šumava biosphere reserve regarding the newly-emerging tourist activities
- System of incentives (grant scheme) to support activities related to sound tourism development within the Šumava biosphere reserve
- Training programme for local guides

The promotion of the project has become a very important activity. In fact, three principal target groups have been addressed: the local population, the scientific community, and university students.

Figure 59: Understanding participation
In a training programme, students from the Czech Republic learn about the principles of participation processes.
(Source: Těšitel, Kušová & Bartoš 2007)

6_3_3_3 CONCLUSION

The project shows that participation by nature conservation bodies in networks formed by stakeholders involved in the development local tourism is widespread and can be encountered in any large-scale PA in the Czech Republic. For this reason, the Ministry of Environment of the Czech Republic intends to use experiences made in the Šumava biosphere reserve for preparing a general methodology to support the administrations of PAs in preparing their strategy towards tourism.

6_3_4 PILOT ACTION: "THE CARP IS IN THE NET – AS THE CENTRAL NODE" (POLAND)

Project title	Carp Museum. Biodiversity protection as a tool for eco-development in the Zator region. A social model of incorporating the Natura 2000 European Protected Areas Network in Carp Valley.	
Responsible Partner		Fundacja Wspierania Inicjatyw Ekologicznych /Foundation for Support Ecological Initiatives www.fwie.eco.pl
Implementation		Fundacja Wspierania Inicjatyw Ekologicznych
Region		Southern Poland, Oświęcimska Valley between Kraków and Katowice
Types of activities	• Educational activities • Promotion activities • Public awareness	
Report	Potaczek A., Plesnar A., 2008: PANet 2010. Muzeum Karpia. Ochrona bioróżnorodności jako instrument ekorozwoju Ziemi Zatorskiej. Społeczny model wdrażania Europejskiej Sieci Ekologicznej Natura 2000 w Dolinie Karpia. Akcje pilotażowe Interreg III B CADSES project PANet 2010 – WP 5. Kraków.	

6_3_4_1 INTRODUCTION

The Carp Valley covers the area surrounding a historical carp husbandry centre that has been famous since the Middle Ages. It is situated in the South of Poland in the Oświęcimska Valley near Kraków and Katowice.
Fish-farming ponds are a habitat for many rare and endangered bird and plant species. Resident birds include the black-crowned night-heron, little bittern, black-necked grebe, purple heron, ferruginous duck, red-crested pochard, black-tailed godwit, redshank, whiskered tern, black tern, little crake, and blue-throated thrushes. Some of the most interesting plants are elatin, bog bulrush, water chestnut, and yellow floating heart.

6_3_4_2 APPROACH

The pilot project includes a number of interrelated initiatives aimed at attracting tourists by advertising the available natural and historical resources. The main goal is to protect the local natural and cultural heritage and to support sustainable development and traditional techniques of fish breeding.
In order to support and develop ecological and environmental education, a Carp Museum has been created in the Internet. Future exhibitions of the Carp Museum were designed in the Agronomówka building, and the required documentation for the renovation of the building was drafted. In addition to this, numerous workshops, field trips, bird-watching trips, and contests were organised in order to raise the interest of local people, mainly schoolchildren, and to help them understand the role of fish ponds as a habitat for endangered bird species.
The project has furthered the cooperation between the non-governmental ecological organizations, local communities, scientists, and fishermen, which is very important for the successful protection of natural resources. Although such cooperation between different interests is critical in areas where Natura 2000 sites are planned, it is also difficult to implement, and conflicts seem to be unavoidable. The Carp Valley project can be seen as a model for how to overcome these difficulties in order to preserve the natural heritage. Our most important achievement in this field is a cooperation agreement between the Fishing Institute and the Foundation for the Support of Ecological Initiatives.

Figure 60: Fishermen.
Fishing has a long tradition in the Carp valley. (Picture: Rymarowicz)

6_3_4_3 CONCLUSION

The observable results of the project include the following:

- Public awareness and public acceptance for creating a Natura 2000 site have increased. People have realised the significance of natural and historical values in the region and understand the need for their protection.
- Cooperation and understanding between different local interest groups has improved. People are now better able to avoid conflicts and act together to protect the natural and cultural heritage and to promote the region.
- Promotion of eco-tourism in Carp Valley. Also, local residents have understood that tourism can be a great chance to develop the region without destroying its natural values. The role of fish ponds as an open ecological education centre for tourists and locals has been strengthened and developed.

7 PROTECTED AREA NETWORKS: TOOLS

7_1 THE TOOLBOX - A BOX OF USEFUL INSTRUMENTS

The PANet project is based on the results of the previous Interreg III B initiative named IPAM (Integrative Protected Area Management, http://www.ipam.info/), which has provided the IPAM Toolbox and an expert system for integrated PA management.
Technically speaking, the Toolbox is a knowledge-based expert system, or simply an expert system. It combines expert knowledge (data and rules) with information technology (a database, models, scenario technologies, and interactive user interfaces). An expert system reduces the complexity for the user and provides specific information according to user requirements.

- The expertise is in the system (structure, weighting).
- User requirements are identified.
- The available information is pre-selected (limited complexity).

The expert system of the IPAM Toolbox supports a dynamic, interactive consulting process to identify problems, focus questions, and find solutions. It addresses

- Planners, managers and consultants of PAs
- Issues that are relevant in Central and Eastern Europe
- Sites of all relevant international and European categories of PAs

The Toolbox can be accessed on the IPAM homepage (www.ipam.info). It is available to PA managers and other interested parties at no cost.
The system is multilingual. The first version was in English, Czech, German, Italian, Croatian, an Slovene. New languages have been added in this release, namely Slovak and Polish.

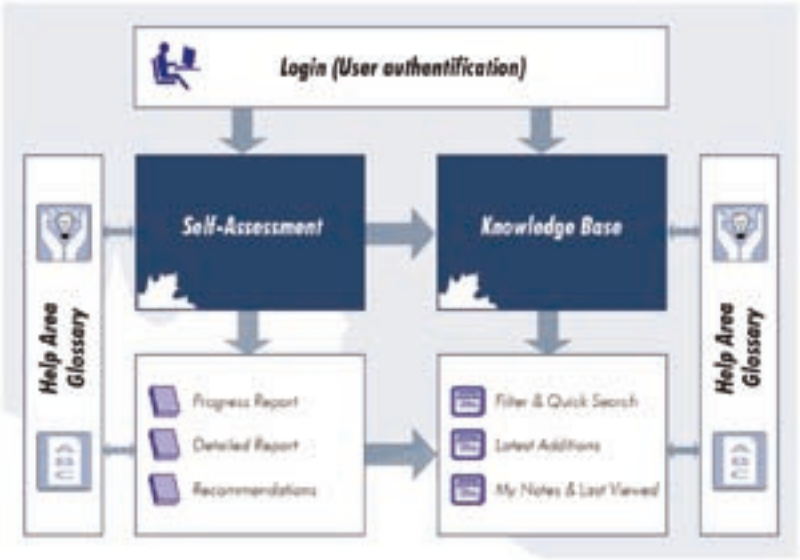

Figure 61: The design of the IPAM Toolbox.
Do you already know what you are looking for? In that case, you can access the knowledge base directly and browse for information by setting filters or by using the quick-search function. If you do not know exactly what you are looking for, the interactive consulting process in the self-assessment feature will provide various reports and standardised recommendations. When the knowledge base is accessed later, its filters are set automatically according to your requirements. A help section and a glossary also support your search. (Source: Jungmeier et al., 2005)

Expert systems in general and the IPAM expert system in particular are designed to reduce complexity and provide focused information only. The IPAM Toolbox consists of three components:

- Self-assessment. In a procedure of self-assessment, filters are configured in order to eliminate information irrelevant to the situation and (later) to rank information by importance. A major and desirable side effect of this self-assessment is a clear positioning of the PA in different "fields of activities" (FoA). Over the life cycle of a PA, 25 FoAs were identified and described. By running through a model life cycle (pre-phase, basic planning, detailed planning, implementation and management), all FoAs are covered and provide a helpful reference for determining the PA's situation. In an interactive, guided process, the user of the expert system answers a bundle of

key questions to determine the current situation and related problems.

- Recommendations. On a general level of course, but highly corresponding to the recent situation of the PA, the expert system offers a set of recommendations. These are automatically generated by the system. The conceptual structure behind these recommendations is the analysis of differences between the FoAs needed in the current situation and FoAs in which the PA actually has performed (well) so far. The recommendations are provided in the form of standardised reports. This way, they also enable progress reports on the development or management of the PA (time series). The system's information is further illustrated by examples of best practice and pointers to the most detailed information in the knowledge base.
- Knowledge base. In a comprehensive database, various examples of best practices, in-depth information about literature, projects, and available data, as well as links and further expertise are provided. The information is automatically ranked according to criteria derived from the self-assessment process, but can also be selected individually by the user. The content of the knowledge base is geographically focused on Central and Eastern Europe, but it also includes international standards and approaches.

Figure 62: IPAM instruction manual.
Only a few steps are necessary to take you from the login to the initial results of the self-assessment. (Source: Jungmeier et al., 2005)

More details about the functionalities of the Toolbox are available online in the final report at the following URL: http://www.ipam.info/index.php/plain/results/final_project_reports/final_report_transnational_results

7_2 THE TOOLBOX – NEW FEATURES FOR NETWORKING

The focus of PANet on networks of PAs is reflected by two extensions to the existing IPAM Toolbox:

- the Networking Self-Assessment feature (NSA), and
- the Find-a-Partner platform (FaP).

The general purpose of both tools is to help PA managers join existing networks, or to improve their role in the networks they already belong to.
Furthermore, two enhancements were implemented in the Toolbox with the aim of improving the exchange of experiences and perspectives between users to offer another way to promote networking between PA managers. These enhancements are

- the voting system, and
- the user comments blog.

The enhancement will be explained in the next few sub-chapters, followed by a detailed explanation of the new features.

Figure 63: Building networks.
Having the right instruments to work with can facilitate the establishment of proper networks. The web-based Networking Self-Assessment feature and the Find-a-Partner platform were developed to assist users in finding the right partners to build a network with.

7_2_1 EXAMPLE OF IMPROVEMENT: THE VOTING SYSTEM

The voting system allows a user to express his/her opinion of an entry in the knowledge base. Users may assign a rating on a 1 – 5 scale to each reference in the knowledge base. The voting tool is available in the detailed view of each knowledge base entry.

The number of votes that a knowledge base entry receives and the average score are available to all users in the search results list. Votes are anonymous, and the number of votes itself is also a useful indicator of the popularity of a knowledge base entry.
The voting tool will help new users find objects that have been rated useful by others.

Figure 64: Voting results.
When a user performs a search in the knowledge base, the results will also present the voting statistics. For every entry, the number of votes and the average score are displayed.

7_2_2 EXAMPLE OF IMPROVEMENT: THE USER COMMENTS BLOG

In addition to votes, a user may also include his/her comments in a blog.
The commenting tool is available as well in the detailed view of each knowledge base entry, and the user has the option of including his/her e-mail address in case other users would like to give direct feedback or establish contact.
The user of the knowledge base is therefore able to add his/her personal experience with this content in a text field either in a positive or negative sense.
The commenting blog also supports the addition of external links.

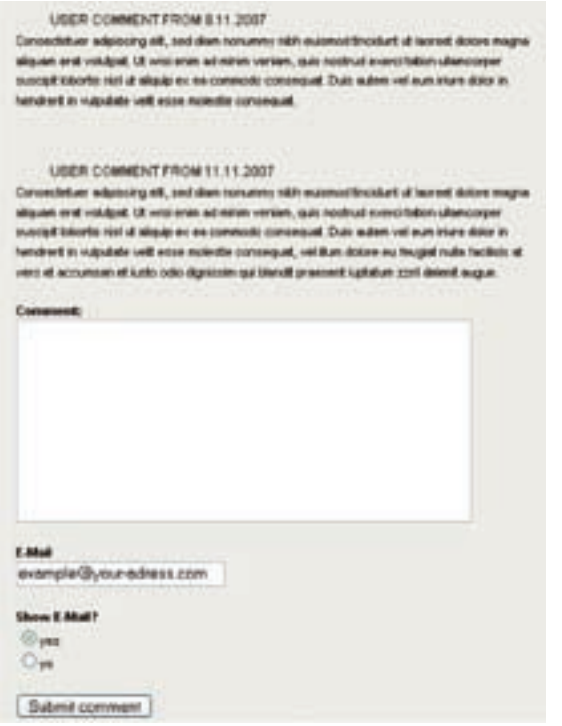

Figure 65: User comments blog.
Each registered user may add personal comments on knowledge base entries. Users are also able to see other users' replies to their posts. Direct contact with the author via e-mail is possible.

7_3 THE TOOLBOX - THE NETWORKING SELF-ASSESSMENT TOOL (NSA)

7_3_1 NSA – EXTENDING MANAGERS' VIEW ON NETWORKING ISSUES

The self-assessment tool is essentially a checklist of requirements to be fulfilled by PA managers for the sound planning and management of PAs.
In the existing toolbox, PA management is divided into the four phases of pre-phase, basic planning, detailed planning, and implementation. Each phase includes several fields of activity.
These fields of activity each contain several subjects, which can be assigned with the following values: completed, started, and not started. If a subject is evaluated as completed, its progress status is rated as 100 per cent.
In the extended toolbox, the same approach will be used by the same target group (PA managers) to assess a new phase called networking.

Figure 66: Networking extension in the self-assessment tool.
By providing an additional phase in the life cycle of a PA, attention is directed towards the importance of networking. By performing the assessment on networking, managers will gain information of the current networking situation in their PAs.

7_3_2 NSA – HELPING UNDERSTAND THE ROLES OF NETWORKS

One of the main objectives of the Networking Self-Assessment tool is to help a PA manager answer the underlying question of "what role (should) a network node have?".

The implementation of the new set of sub-subjects in this new phase was based on preceding inquiries, best practices, and theories developed within PANet (e.g., methodological considerations about PANA – Protected Area Network Assessment). The phase is divided into four fields of activity that are briefly described below:

- FoA 0 – Preparation for networking: The PA manager is asked to evaluate the preparedness of his/her PA in the general context of networking. The FoA is divided into 3 subject areas:
  - Assessment of the current situation
  - Assessment of the potential to improve the network and/or its efficiency
  - Effectiveness, drafting an action plan to optimise networking

- FoA 1 – Economic dimension of networking: The PA manager is asked to evaluate the economic component of networking with other PAs or with other nodes in his/her network. This includes the assessment of activities to secure new resources and mechanisms to leverage and promote the existing ones.
- FoA 2 – Ecological dimension of networking: The PA manager is asked to evaluate the ecological component of networking with other PAs or with other nodes in his/her network. This field emphasises the standardisation of data to facilitate an exchange of information between Pas, as well as the sharing of experiences and/or joint activities to better manage the natural resources.
- FoA 3 – Social dimension of networking: The PA manager is asked to evaluate the social component of networking with other PAs or with other nodes in his/her network.

Figure 67: Networking Self-Assessment report.
The user is able to visualise the degree of fulfillment in the new networking phase.

7_3_3 NSA – PROVIDING RECOMMENDATIONS

After the evaluation of networking performance, specific expert knowledge will be provided in order to provide suggestions for enhancement.
The recommendations are linked to the subjects in each field of activity. Their function is to offer advice, examples, and hints to the PA manager to help him/her accomplish one of the various tasks listed in the self-assessment feature.
The Toolbox design was changed to provide a direct link from the questions to the related recommendations. This enables the user to refer directly to information that may help him/her in the process.

7_4 THE FIND-A-PARTNER PLATFORM (FAP) – A TOOL TO EXPAND THE COMMUNITY OF NETWORKING PARTNERS

Building on the results of the Networking Self-Assessment process, the Find-a-Partner platform is a tool to help all interested PAs fill the gap and get in touch with possible partners that engage in similar activities or have similar problems or interests. The PAs are able to provide selected information to the database, which can be accessed by other partners. To become a member of the platform, the PA manager must send an e-mail to the following e-mail address: office@panet2010.info. After this, he/she will receive an e-mail with an access key to the platform.

7_4_1 FAP STEP 1– CREATING A PROFILE

The first step in joining the platform is to create a profile for the PA (attributes of a PA).

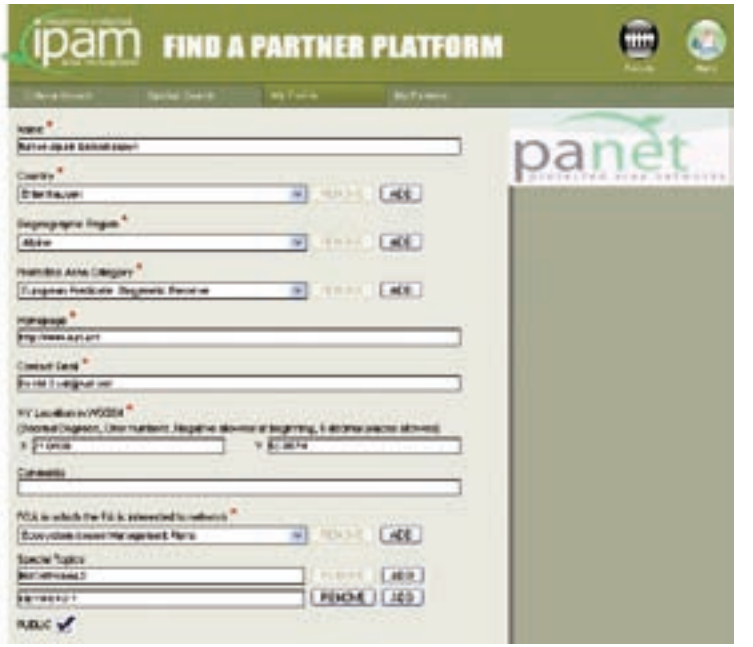

Figure 68: Find-a-Partner platform – creating a profile
In step 1, the user is asked to provide relevant information about their PA. This information is needed in order to perform a needs-oriented search.

7_4_2 FAP STEP 2– SEARCH FOR POSSIBLE PARTNERS

The second step is the criteria-based search for PAs. The search can be performed for one or several criteria according to the profile each PA provides (see step 1).

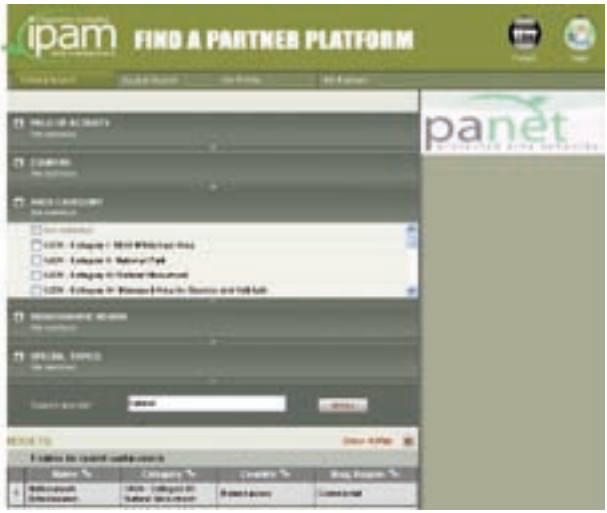

Figure 69: Find-a-Partner platform – search for possible partners
I step 2, partners can be searched according to the information submitted in step 1. The results of the criteria search are listed at the bottom of the window. After clicking on one of the PA entries, you are shown the complete information on the relevant site, and you are able to add this PA to your list of favorite PAs (My Partners).

In addition to the criteria search, partners can be searched according to spatial criteria (spatial search). All selected PAs are shown as dots on a map. The results from the criteria search are then marked in a different colour.

7_4_3 FAP STEP 3 – SHOW MY PARTNERS

All PAs marked as favorite partners can be listed and shown on the map. Selecting one of the PAs from the list or in the map displays the complete information on the relevant site.

Figure 70: Find-a-Partner platform – show my partners.
In step 3, all partners can be displayed on a map. Further information on these partners can be accessed by clicking on either the map or the list.

8 PROTECTED AREA NETWORKS: LITERATURE

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