Report of Project Question 3

Protected Areas

Can large protected areas be instruments of sustainable development and at the same time suitable instruments for protecting natural diversity?

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CIPRA Future in the Alps

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1 PREFACE

Nature conservation in the 20th century was undoubtedly a story of success. From the first awareness of environmental issues in the late 19th century a persisting movement formed and finally lead to global action plans, international conventions, a tremendous variety of logistic instruments and organisations and last, but not least protected areas. However, nowadays each 10th square meter of the Earth's surface and each 5th square meter in Europe is managed due to conservation requirements. In the Alps even each 4th square meter is designated as a protected area. Asking for the "future in the Alps" is therefore also the question for the future of protected areas.

In this report, performed by an international and interdisciplinary team, we try to draw a picture of the most recent state and developments, identify the gap of knowledge and want to baseline some future perspectives. Specifically we want to respond to the emerging demand of creating and communicating benefits of protected areas, since they are important tools of shaping the future of the Alpine bow.

We want to thank CIPRA for addressing the issue, launching the project and managing it not only with competence, but also with a spirit of friendship and hospitality.

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Chambery, Klagenfurt, München, May 2006

2 PROTECTED AREAS AS "LANDSCAPES OF HOPE"

2.1 PARADIGMS IN CHANGE

Mose (2006) states that protected areas are socially constructed "landscapes of hope". As society is changing permanently also the concepts of protected areas have evolved.

Figure 1: Protected areas as "homeland" for endangered species, knightly protected by a strong hand.

Sociologists have detected a large change in paradigms, bringing protected areas from the "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 instead of separating nature conservation and economic development
- Protection of spaces and processes instead of mainly species and habitats
- Steering the areas by management instead of non-management strategies

This understanding has led to new concepts of protected areas:

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

So the main aim of this report is to answer the question: Under what circumstances do large protected areas represent instruments of sustainable development? Can they at

the same time prove to be suitable instruments for protecting natural diversity? Can protected areas in the Alps show up with projects that do take into consideration both, the regional development *and* biodiversity conservation (…at the same time…)?

Following the core aim mentioned above, the tasks are

1. to analyse how protected areas contribute to regional development (see chapter 5).
2. and to analyse the benefits of large-scale protected areas and their networking in preserving biodiversity (see chapter 6).

By collecting and analysing examples of good practice we try to highlight the conditions under which protected areas can contribute to regional value added. At the focal point are cross-sector co-operation projects by the protected area management with tourism, agriculture, commercial enterprises, and other regional value-added sources. By collating and processing projects and examples we try to determine the contribution which protected areas and large-scale protected areas in particular – and their networking through ecological channels – can make to preserving biodiversity.

2.2 SUSTAINABLE REGIONAL DEVELOPMENT

In approaching the topic we refer to a definition that outlines **regional development** as a „holistic process whereby the natural and physical environmental, economic, social and cultural resources of a region are harnessed for the betterment of people in ways that reflect the comparative advantage offered by the inherent and geographically different characteristics of the area" (http://www.ird.uwa.edu.au/about/definition). Furthermore we take into consideration the definition of **sustainability** as laid down in the Brundtland report: "Development that meets the needs of the presents without compromising the ability of the future generations to meet their own needs".

As defined above, regional development is complex and comprehensive. In terms of protected areas, however, two very important aspects are to be highlighted: On the one hand, regional development means to raise added values. Initiatives, strategies, programmes, projects, actions with effects on economic added values represent the "economic character" of regional development. On the other hand, it refers to the "welfare character" aiming at raising the quality of life. Regional development practitioners and service providers are found in the community, in industry and business, in the trade unions and in the different spheres of government. The activities undertaken as an integral part of regional development encompass:

- Sustainable tourism and recreation
- Water resource provision and management
- Land use planning and environmental management

- Agricultural, fisheries, minerals and energy developments
- Labour market research and employment generation
- Education, training and professional development
- Industry policy and industrial relations
- Transport and communications
- Trade, business and industry promotion and support
- Provision of infrastructure and community services
- Co-operation and added-value chains
- Participation methods

Effects of different actions on the regional development within protected areas are currently a quite young field of research. So far, the focus is laid on the evaluation of the effects of protected areas on regional development as a whole (Job, Harrer, Metzler & Hajizadeh-Alamdary 2005; Job, Metzler, & Vogt, 2003; Getzner, Jost & Jungmeier 2002; Küpfer 2000). This pursues a national economy approach accumulating the effects of single strategies, initiatives, programmes aso. to an integrated total. However, Mose (2006) states protected areas to have become "model landscapes" for regional development with the following elements:

- Use of endogenous ressources
- Cross-sectoral approach
- Decentralisation of powers
- Area-based approach
- Working in networks of state, private and civic actors
- Participative planning
- Animation and capacity-building

Mose (2006, referring to Hammer) points out a range of different functions that protected areas may have:

- Incentive for regional development, an additional stimulus
- Motor of regional development, a driving force
- Instrument of regional development, an applied tool

2.3 VALUE OF BIODIVERSITY

We refer to the definition of the German Bundesamt für Naturschutz considering **biodiversity** to be a "Generic term including the diversity of ecosystems, of animal and plant communities, of species and of genetic variation within species" (www.bfn.de). The biological diversity, or biodiversity, describes the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and ecological complexes in which they are part, according to the definition of the

Convention on Biological Diversity (CBD).

With regard to spatial entities biodiversity can be classified as follows:

- The diversity within a uniform habitat (α diversity). In this case the biodiversity is influenced by resources. The use of the soil by humans can deeply affect this sort of biodiversity.
- The diversity in a whole landscape that contains more habitats (the between habitats diversity or β diversity). These measures depend on the variability of habitats present in the landscape.
- The diversity in a biogeographic region (γ diversity). The repopulation or the extinction of species influence the biodiversity at this scale.

The biodiversity is a complex concept and thus it is difficult to measure, indeed. Indicators exist which can give an idea of the status of the biological diversity in a chosen area. The following indicators have been adopted by the European Union and can give an idea of biodiversity (EASAC 2005):

- Measure of population trend (for example the Wild Bird Indicator)
- Measure of habitat extent
- Measure of changes in threatened species (for example the Red List Index)
- Measure of the coverage of protected areas

The values of the biological diversity are multiple, they range from ethical and aesthetical values to the services that species and ecosystems provide. The classification of ecosystem services provided by biodiversity is listed by the Millennium Ecosystems Assessment (MA 2003):

- Provisioning services: Food, materials, fresh water, genetic resources, aso. (of course, only partly relevant in the context of protected areas)
- Regulating services: climate regulation, disease regulation, water regulation, pollination
- Cultural services: spiritual and religious, recreation and ecotourism, aesthetic, inspirational, educational, sense of place, cultural heritage
- Supporting services: soil formation, nutrient cycling, primary production

All these services would be affected by a loss of biodiversity. In the last years efforts were undertaken to "monetarise" the value of biodiversity. One study has calculated the commercial value of 17 ecosystem services to be at a scale of USD 16-54 trillion (Constanza et al 1997). More detailed studies focus on the value of single services in a given area: e.g. the pollination services of the cultivated zone by forestal insects in Costa Rica (Ricketts et al 2004) or the money saved by New York city through acquisition and management of a forest in a watershed area (Salzmann et al. 2001).

In the Alps the biodiversity is high, due to the altitudinal gradient, the relief and the extreme variety of climatic situations in a reduced spatial scale. The large variety of

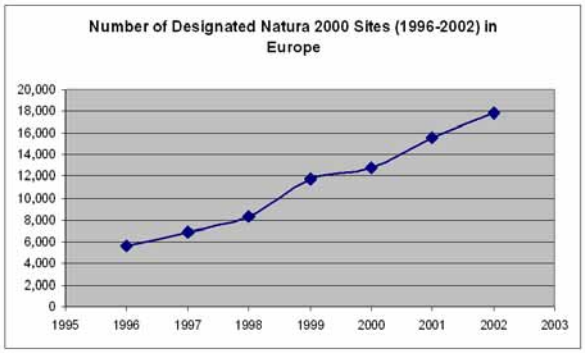
traditional landuses and landuse patterns multiplies with the natural givens and is therefore also an important parameter for this variety. The alpine biogeographic region hosts more than a third of the European plant species. Almost 400 species of plants are endemic in the Alps. The alpine fauna may reach up to 30'000 species.

For more than a century, the biological diversity in the Alps has decreased. There are many reasons for this, but the impact of changing land use patterns on biodiversity loss is most essential (Chemini & Rizzoli 2003, Cernusca et al. 1992, Tscharke & Greiler 1995).

2.4 PROTECTED AREAS IN GROWTH

Referring 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."

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



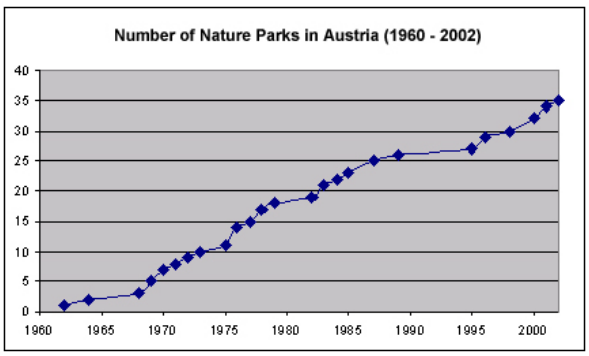


Figure 2: Development of protected areas (exemplified by Nature Parks in Austria and Natura 2000 sites in Europe) (source: official figures).

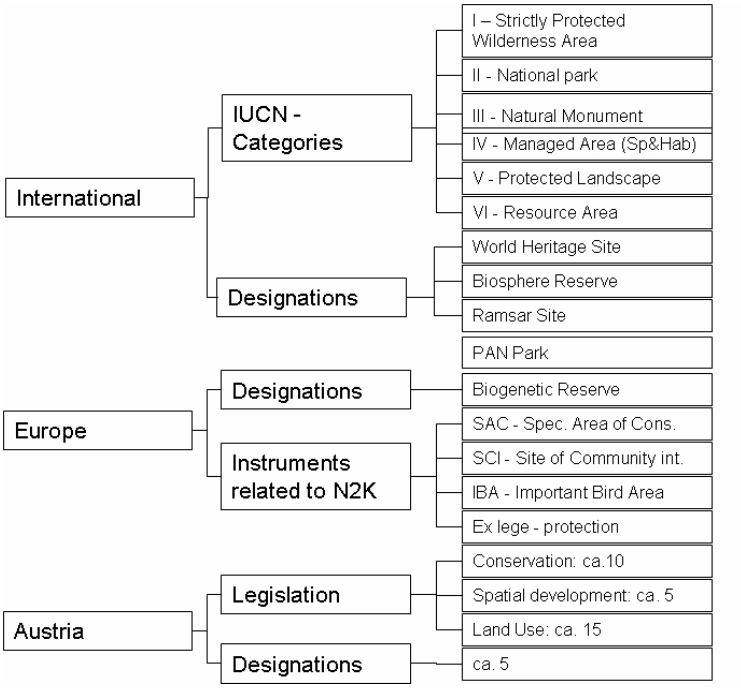


Figure 3: Different categories of protected areas – overview (source: Jungmeier, unpubl.).

On the one hand, the variety of different types of protected areas sometimes leads to confusion. On the other hand, this variety offers many possibilities of categorising sites to match regional, national or international requirements. The good practice examples mentioned in this report refer mainly to the categories of the IUCN and the MAB programme of the UNESCO.

With regards to this diversity the management of protected areas has become a challenge for nature conservation and regional planning policies. For example, within EC-Europe an average of 23% of the land surface is under some type of legal protection. With regards to the acreage, planning a protected area has become one of the most extensive planning processes in any modern society. In this process, all three dimensions of sustainability play an important role.

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

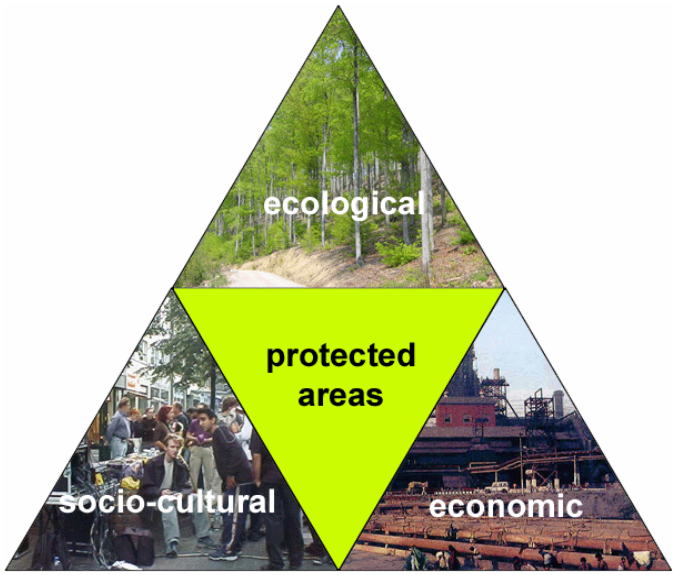


Figure 4: The Integration of three dimensions of sustainability in managing protected areas (The Klagenfurt Approach on managing protected areas).

Since planning and managing protected areas involve many different legal, administrative and technical realities, the experts in charge have to face an 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
- Permanent lack of resources

In this complex environment, the persons in charge of the protected area are under constant pressure to decide, communicate, market, finance and – last but not least – to create benefits.

This is why the demand for highly skilled and highly motivated people has steadily increased over the past few years. Implementing a protected area is always a big challenge. Different interest groups such as farmers, land owners, hunters or the wood industry, are often afraid of the changes brought by a protected area. Typical fears are the loss of decision-making ability, the dictate of land use, economic disadvantages, or the loss of personal freedom.

The main challenge in advance of the implementation of a large protected area is the communication of its benefits and needs to all citizens and interest groups which are concerned. Beside ecological benefits (regarding the original idea of protected areas) it is important to state out socio-economic advantages as well.

2.5 INTEGRATING REGIONAL DEVELOPMENT AND BIODIVERSITY

Figure 5: Economy and ecology – two faces of the same coin? (Austrian Eurocent-coin).

The challenge of integrating biodiversity issues into sustainable regional development concepts and strategies is one of the questions posed by and in the 21st century. The project team is aware of three different "relations" between both aspects:

- Conflicting: "Traditionally" economic development and conservation were principally understood to be contradictory constraints. By recognising that many types of biotopes and habitats are closely related to different kinds of landuse and the emerging demand of creating benefits in and by protected areas led to a more differentiated picture. Nevertheless, many protected areas are threatened by economic activities, they may be called sustainable or not. Besides a lack of communication many of the conflicts derive from instringent policies, differing expectations, infrastructure-based understanding of development or just incompetence of management or administrative bodies. As indicated in Figure 6 the resultant energy in such situations equals zero.
- Parallel: Many sucessfully managed protected areas developed and found ways of implementing these issues in parallel. On the one hand, measures for conserving and developing biodiversity are implemented. On the other hand, activities for economic development (mostly in services, partly in production) are set. As indicated in Figure 6, there are little synergies between both matters, but they succeed individually.
- Integrated: Integrated approaches are focused on the synergies between conservation of biodiversity and the regional development. This is examplified instructivly by the Nature Park Pöllauer Valley in this report. One of the most important targets for conservation is the maintenance of orchards in the region, specifically the variety of traditional breeds of pear

("Hirschbirne"). The restauration of the orchards was embedded into efforts of developing, branding and distributing new products from these orchards (mainly schnappses, but also others). As indicated in Figure 6, substantial synergies can be obtained by such efforts.

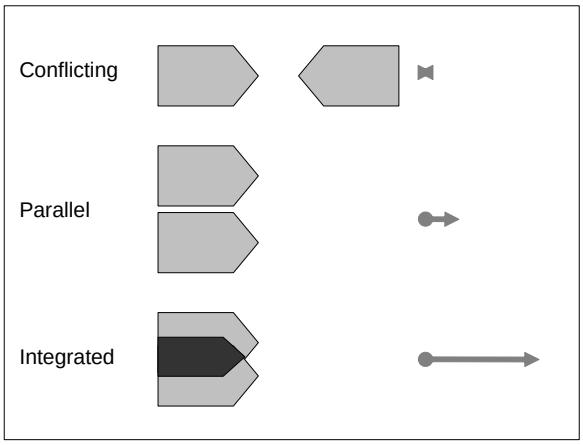


Figure 6: Indication of different interrelationships between biodiversity and regional development (schematically). Arrows on the right symbolise the resulting synergy.

3 WORKING PROGRAMME AND METHODS

3.1 MEETING-PROGRAMME AND WORK PROGRESS

- 7.7.05: 1st group meeting Chur/Switzerland: Kickoff - start of work, identification of the objectives and tasks, communication procedure, working programme and time schedule.
- 16.9.05: 2nd group meeting Kaprun/Austria: Presentation of the good practice screening, discussion and provisional selection of relevant examples for further investigation, discussion on indicators for project description, aspects of project management; experience exchange on database records.
- 26.9.05: telephone conference: Discussion about good practice examples and final selection, improvement of indicator set, first identification of success factors.
- 25.10.05: 3rd group meeting Bregenz/Austria: Evaluation of the report draft, open questions and tasks, exchange with other question teams.
- 17.11.05: 1st draft of final report as basis for discussion.
- 25.11.05: Report and database filling in completed.
- 16.12.05: Diverse feedback and comments.
- 8.3.06: 4th group meeting in Chur /Switzerland: intensive feedback by scientific evaluator, preparation of final redaction; exchange with other question teams.
- 24.4.06: 2nd draft of final report and intensive feedback by scientific evaluator
- 20.5.06: 3rd draft of final report
- 1.6.06: Final report delivered

3.2 WORKING PHASES, METHODS AND APPROACHES

3.2.1 Overview

The project is structured in three phases:

- Phase 1: Research for materials, data and (good practice) examples
- Phase 2: Analysis of examples by expert appraisal

- Phase 3: Synthesis and Reporting

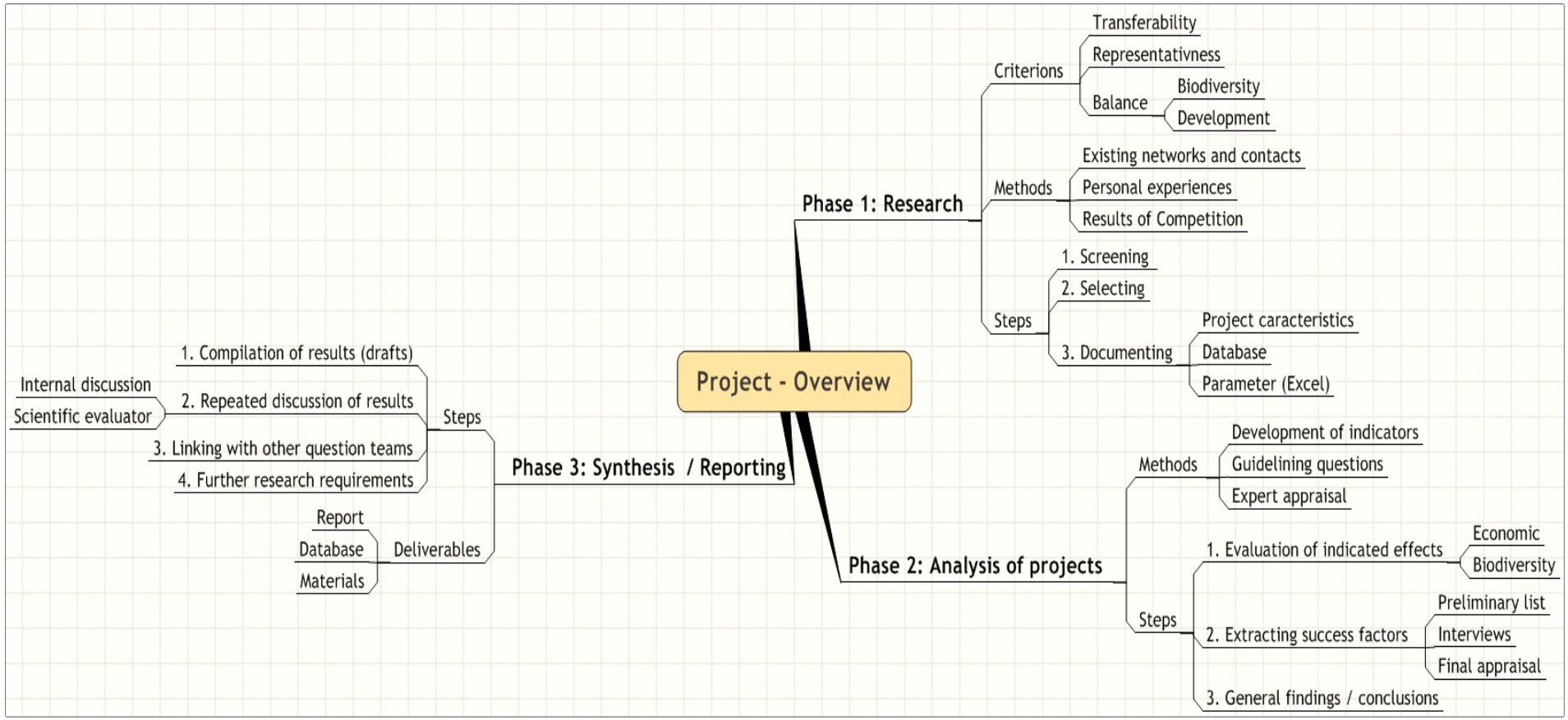


Figure 7: Overview of phases, steps and applied methods.

3.2.2 Phase 1: Research for materials, data and (good practice) examples

In a first step, the required information was collected:

- Materials (literature, links, contacts, institutions, ..)
- Data (biodiversity, regional development, protected areas)
- (Good practice) examples

For the collection of information we referred to our / CIPRA's existing networks and contacts, our personal experiences and – last, but not least – to the results of the competition that was launched in the frame of the project "Future in the Alps". For selecting good practice examples we followed the criteria:

- Transferability
- Representativeness
- Balance between biodiversity and regional development issues

Specific attention was given to a balanced presentation of the different alpine countries.

The findings were documented preliminarily in the CIPRA database (good practice examples, publications), described in project's characteristics (cf annex of this report) and documented in detail in a table with standardised information (Excel).

The question team 3 has always been aware of the fact that the selection of information is not comprehensive and complete, but draws a picture by exemplifying and highlighting specific issues.

3.2.3 Phase 2: Analysis of good practice examples by expert appraisal

Based on the results of the first phase 17 good practice examples were chosen and analysed in detail. The following methods were applied:

- Guiding questions: In a workshop situation a checklist of questions was developed and "finetuned" in an internet-based debate. These questions were used to systemise the expert appraisal. They were focusing on both components, the biodiversity issue as well as the regional development issue. The questions are outlined below.
- Expert appraisal: The appraisal was performed in steps. First, the project material was screened, if it gave sufficient information to the diverse issues. Further information was acquired as far as possible in expert interviews. The relevance of the project from the points of view of regional development and biodiversity were described qualitatively (cf. annexes), but were also brought in form of tables. Finally, the projects were screened

to what extend the success factor could be identified in the projects flow. The question team has always been aware of the fact that expert appraisals are – of course – subjective and that opinions may differ. But the variety of approaches and expertise within the team was considered to be broad enough to cover a sufficient range of opinions. The expert appraisal focused on three components:

- Evaluation of indicated effects
- Extracting success factors
- General findings and conclusions

As mentioned above, the approach bases on a predefined set of guiding questions to describe and clearly sketch each of the good practice examples/projects.

Impact on biodiversity:

- Maintenance of nature and environment, general: Did or does the project contribute to preserving or improving nature and environment in general?
- Quantification of general effects: Can this impact be quantified? Is there any data available to indicate these effects?
- Preservation of species or habitats, general: Are genetic resources, species, habitats directly in focus? Can they/it be quantified? Are there defined targets concerning biodiversity or nature in general?
- Preservation of species and habitats, specific: Is there a focus on specific species and habitats and therefore a direct effect on biodiversity?
- Preservation of landscape: Is there a focus on landscape in general and therefore an indirect impact on biodiversity?
- Stabilisation of ecosystems: Is there a focus on ecosystems in general and therefore an indirect impact on biodiversity?
- Sustainable use of resources: Is there a focus on sustainable use of resources in general and therefore an indirect impact on biodiversity?
- Area(s) involved: Which area is involved and influenced (% of the total protected area, partly/disperse/widespread)? Does the project have a longterm perspective for these areas?
- Exceed boundaries: Does the influence of the project exceed the boundaries of the protected area?
- Contribution to arwareness about biodiversity: Did or does the project contribute to broader understanding about biodiversity, to the importance of biodiversity in terms of use and conservation or to the conservation of biodiversity?
- Ecological orientation of businesses: Does the project lead to an ecological orientation of businesses?

Impact on regional development:

- Economic value added: What sort of economic value added (gross turnover, tax revenue, aso.) did or does the project provide? Can this value added be quantified?
- Creation of infrastructure: Did the project lead to a helpful, necessary infrastructure?
- Visitor expenses: Did the project intend / succeed in increasing money spent by visitors?
- Local income: Did the project contribute to a longterm effect on local income?
- New working places: Can the number of existing jobs be increased by the project? Can the quality of jobs be increased by the project?
- Tax revenue: Does the project contribute to tax revenue ?
- Keeping people in the region: Does the project contribute to keeping people in the region? Does the project contribute to diminishing "braindrain" and commuting? Does it help to make the region attractive to "newcomers"?
- Cross sector co-operation: Are there cross-sector co-operations? Are there multiplier effects to other economic branches in the region?
- Other economic impacts: Are there any other economic impacts for the region? In what way is the project innovative and what are innovative elements?
- Impacts in other regions: Is there an economic impact in other regions or countries (e.g. possibility to open new markets)? Did the project transfer experience to other sectors and to other regions?
- Gender and generation interests: How did or does the project succeed in ensuring that the interest of both genders and different generations are taken into consideration? What sort of favourable impact on society and culture did or does the project provide?

The impact of each analysed good practice example/project with regard to the above mentioned guiding questions is depicted in chapter 5.3 and 6.3. A detailed description of the projects relevance on regional development and biodiversity is given in annex 2.

The main focus of the study was to identify **success factors** showing under what circumstances projects are likely to be effective. For this reason we searched each of the practice examples for circumstances and criteria leading to their success, e.g. implementation of guidelines, definition of objectives, or quality concept. We listed all criteria that were found in at least one of the good practice examples and checked if the other projects also considered these criteria. The result is a checklist of a widespread set of indicators (chapter 7.3.4) in which some criteria apply more often than others. Those criteria which could be found in most of the project examples could be declared as important and mandatory for a successful project development.

3.2.4 Phase 3: Synthesis and Reporting

In this phase all deliverables were prepared:

- Report
- Database
- Materials

The following steps were to be taken into account:

- Compilation and discussion of results: The (necessary) discussion was based on a serial of drafts. Here all findings were compiled. The results were debated internally in the question team and also with the scientific evaluator.
- Linking with themes of other question teams
- Defining further research requirements

3.3 GOOD PRACTICE EXAMPLES

The following good practice examples were chosen and analysed.

Table 1: List of analysed good practice examples and the according type of protected area.

Project	Protected Area
Cultural landscape programme NP Hohe Tauern, A	National Park
Cultural landscape programme Nature Park Poellauer Valley, A	Nature Park
Regional Marketing Nature Park Poellauer Valley, A	Nature Park
Specialities of Nature Parks – Naturparkspezialitäten, A	Nature Park
Ecomodel Nature Park Grebenzen, A	Nature Park
"Bergholz" and "Walserstolz", Biosphere Reserve Großes Walsertal, A	Biosphere Reserve
Open door farms of the Biosphere Reserve „Großes Walsertal", A	Biosphere Reserve
EMAS-implementation Biosphere Reserve "Großes Walsertal", A	Biosphere Reserve
"Gîtes Panda", F	Regional Park
The EU Eco-Management and Audit Scheme (EMAS) in the Nature Park Mont Avic; I	Regional Nature Park
Réseau Ecologique Départemental de l'Isère (REDI), F	No specific site
Programme for the diversification of the vegetal production in the Regional Nature Park Queyras, F	Regional Nature Park
Maintenance and restoration of the characteristic hedge row network landscape of the Champsaur and Valgaudemar Valleys, F	National Park
Partner businesses of the biosphere park Rhön – Partnerbetriebe im Biosphärenreservat Rhön, G	Biosphere Reserve
Regional brand „Regionalmarke Eifel" in the Eifel National Park, G	National Park
National Park Hosts in the Eifel National Park, G	National Park
Lamb from the Nature Park Altmühltal, G	Nature Park

4 PROTECTED AREAS IN THE ALPS – AN OVERVIEW

4.1 VARIETY OF CATEGORIES

Protected areas in the Alps differ in size, goals, capacity and categories. These different categories of protected areas are dedicated to the different conservation objectives, but also have different economic potential. For instance, the categories Biosphere Reserve or Regional / Nature Park (IUCN V) have a conceptional focus on regional development, Ramsar Sites are dedicated to principles of "wise use", whereas Natura 2000 primarily emphasises on the protection of species and habitats. The variety of different categories has to be taken into account when the questions of QT3 are to be answered on a general level.

Practically spoken the large variety of different categories offers the possibility to choose the most sufficient "vehicle" for the individual requirements in a country or a region. ("Find the type of protected areas that matches your demand in a large "portfolio".)

The following tables give an overview of the most important protected area categories in the Alps (Pichler-Koban et al. 2005). In the overview of the categories sites by national legislation are not considered.

CATEGORY Ia: Strict Nature Reserve				
objective: protected area managed mainly for science				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

CATEGORY Ib: Wilderness Area				
objective: protected area managed mainly for wilderness protection				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: conservation of unmodified or slightly modified land, retaining its

natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

CATEGORY II: National Park				
objective: protected area managed mainly for ecosystem protection and recreation				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of land designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area, and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities.

CATEGORY III: Natural Monument				
objective: protected area managed mainly for conservation of specific natural features				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: long-term conservation of a natural/cultural feature of outstanding or unique value.

CATEGORY IV: Habitat / Species Management Area				
objective: protected area managed mainly for conservation through management intervention				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of land which is subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

CATEGORY V: Protected Landscape / Seascape				
objective: protected area managed mainly for landscape/seascape conservation and recreation				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of the cultural landscape, including aesthetic, ecological and cultural aspects. Objective is protection by sustainable use.

CATEGORY VI: Managed Resource Protected Area				
objective: protected area managed mainly for the sustainable use of natural ecosystems				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of an area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

International predicate: Ramsar Site				
objective: conservation and wise use of wetlands and their resources				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: the international conservation goal is protection and "wise use" of natural or subnatural wetlands.

International predicate: PAN Park				
objective: improve nature conservation through sustainable tourism development				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: combination of conservation management and sustainable development. Protection of representative species for the European natural heritage. Panparks is a trademark for nature and tourism facilities, balanced with the needs of wilderness protection and community development.

European predicate: Biogenetic Reserve				
objective: conserve natural or near-natural habitats or ecosystems				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation of habitats and ecosystems. Protection of species and biotopes which are unique and characteristic, rare or endangered in Europe

European protected area: Natura 2000 Site				
objective: conservation of natural habitats and the habitats of wild fauna and flora				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: conservation of areas that contain unique and threatened European species and habitats. The protection of habitats of certain species should ensure the diversity in Europe.

International predicate: Biosphere Reserve				
objective: combine conservation and sustainable use of natural resources				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: the conservation includes three main objectives: ecological protection, social and economic development and research respectively education.

National protected area: Nature Park/ Regional Park				
objective: conservation of cultural landscape				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: the conservation includes four main objectives: ecological protection, social and economic development, education and recreation. The sustainable use offers the ecological protection and regional development.

International predicate: World Heritage Site				
objective: sites of outstanding importance, either cultural or natural				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: objective is to catalogue, name, and preserve sites of outstanding cultural or natural importance to the common heritage of humankind.

European predicate: European Cultural Landscape				
objective: protection of landscapes under consideration of culture and tradition				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: Conservation and development of landscape considering culture and traditions.

European predicate: European Diploma				
objective: conservation of landscapeunder consideration of culture, aesthetics and recreation				
Recreation				
Education				
Regional development				
Research				
	low			strong

Conservation goals: the Diploma is awarded to already existing protected areas because of their outstanding scientific, cultural or aesthetic qualities. But they must also be the subject of a suitable conservation scheme.

4.2 VARIETY OF NATIONAL SYSTEMS

In the glossary of Future in the Alps we find the following definition for large-scale protected area: "New and traditional types of large protected areas (National Parks, Regional Nature Parks, Biosphere Reserves, Protected Landscapes IUCN category V, Managed Resource Protected Areas IUCN category VI, aso.) incorporating resident human populations and their socio-economic structures as an essential element. Management objectives include both environmental conservation and sustainable regional development".

There is no reference to the scale in this definition. Nevertheless, the size of a protected area bases its potential for conservation. The individuals of each species have a home range that is in general proportional to their dimensions. So a large protected area has the potential to include more individuals, more species and a bigger biotope diversity than a small protected area. All this depends also on the "amount of biodiversity" in the territory of protected area. Sometimes, e.g. small protected areas may domicile a large biodiversity (the moors for example), but its populations may be too small to survive on a long-term perspective. According to several other studies on alpine protected areas (UICN, Broggi 2005), a protected area is considered as large-scale when its surface is bigger than 1'000 ha. The location of protected areas in the Alps is presented in Figure 8 (according to the ALPARC provisions protected areas are taken into account which exceed 100 ha).

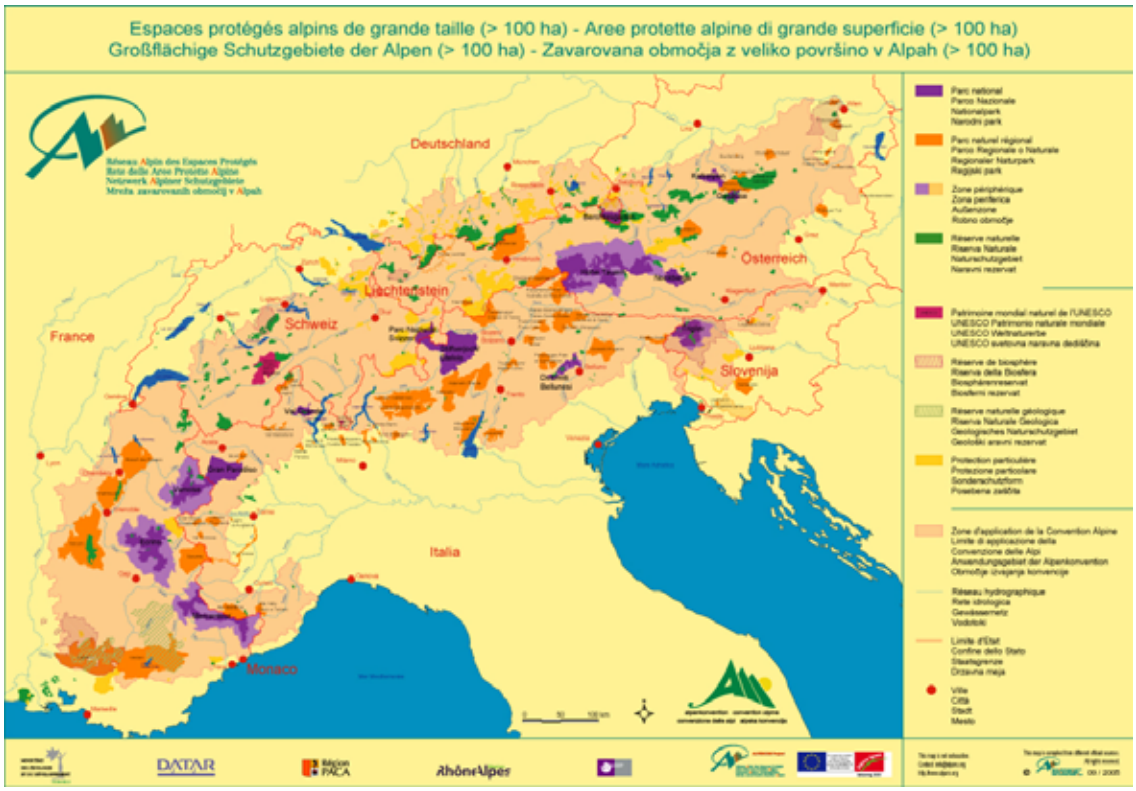


Figure 8: Alpine protected areas (source: ALPARC).

The protected areas are very different due to their policy basis and to the regional and particular decisions. The preservation of the biodiversity is not included in the aims of many categories of protected areas, but that does not mean that there are no projects on the conservation of biodiversity in these areas. Long-term conservation is, however, facilitated by a legal basis.

As a matter of fact protected areas cover a substantial proportion of the Alps. But protected areas in the Alps mostly cover the high altitudes and regions of peaks and "wasteland" whereas the most important threats for biodiversity and most intensive pressure occur in the valley floors and basins.

To provide an overview and to go further in the definition of protected areas, the following chapter presents a quick screening of some main types of protected areas in the alpine countries in relation to biodiversity.

In Figure 8 only the National and Regional or Nature Parks are put in a distinct category, the other protected areas are included in the "particular protection" category. Only the protected areas within the borders of the Alpine Convention are described.

4.2.1 Size and distribution

The protected areas in the Alps cover a surface of more than 4'350 ha. This is some 23% of the whole Alpine bow. (The statistic basis for this analysis is inconsistent due to

overlaps and inconsistencies in categories, but provides a sufficient picture of the situation). Details are indicated in Figure 9.

Protected Areas of the Alps - an overview (ha)

Country / Category****	National Park*	Regional Park / Nature Park	Natural Reserve	Biosphere Reserve	Total	Percentage of Alps**	Percentage of PA in the Alps***
Germany	20.667	0	111.262	46.740	178.669	0,95%	4,10%
France	677.483	736.224	75.746	252.743	1.742.196	9,26%	39,95%
Italy	240.880	579.384	42.132	0	862.396	4,58%	19,77%
Liechtenstein	0	0	108	0	108	0,00%	0,00%
Austria	483.918	271.019	277.302	23.138	1.055.377	5,61%	24,20%
Slovenia	83.815	68.280	6.329	195.744	354.168	1,88%	8,12%
Switzerland	16.375	0	96.243	55.822	168.440	0,90%	3,86%
Total	1.523.138	1.654.907	609.122	574.187	4.361.354	23,18%	100,00%
Percentage of Alps**	8,09%	8,79%	3,24%	30,50%	23,18%		
Percentage of PA in the Alps***	34,92%	37,94%	13,97%	13,17%	100,00%		

Notes
* incl. bufferzone
** permieter of Alpine Convention
*** (4.361.354 ha)
**** categories may overlap

Figure 9: Protected areas in the Alps by size (source: Alparc).

Comparing and visualising the altitudinal distribution (cf.

Figure 10) of the protected areas in the Alps it is obvious that the protected areas in the Central Alps cover mainly and specifically the high altitudes and very rarely "reach" the valley floors and river basins. Only in the "lateral" regions of the Alps the protected areas, specifically Nature Parks and Regional Parks, are in the lower areas. This is an important fact for evaluating the contribution of the protected areas to the preservation of biodiversity (cf. chapter 6).

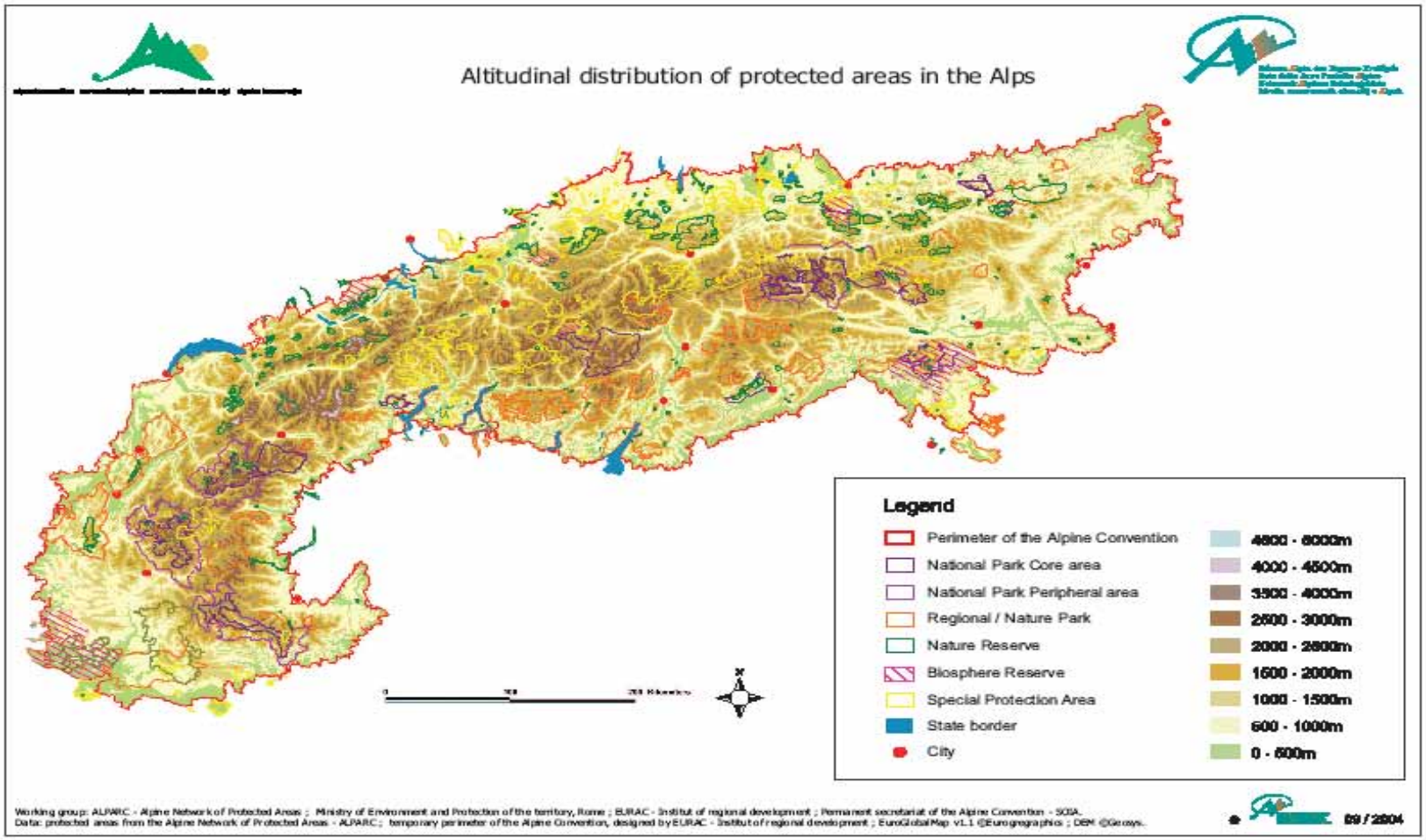


Figure 10: Protected areas in Alps by altitudinal distribution (source: AlpParc)

4.2.2 Austria

The nature protection is a competence of the nine Austrian "Länder" (Federal States), there is (still) no national framework law for nature protection. A detailed documentation of the Austrian situation is provided by www.umweltbundesamt.at.

- National Parks (Nationalparke): There are 4 National Parks in the Austrian Alps; the aims of these parks are nature protection, scientific research and they all have basically a recreation and educative function. The area of a National Park is divided into a core zone (no or restricted human influence, focus on nature conservation) and a buffer zone (focus on maintenance of cultural landscapes).
- Natural Reserve (Naturschutzgebiete): Besides the National Parks, these sites have the strongest state protection. The overall objective is to preserve ecosystems that are rich in biodiversity. These territories have an important ecological and natural value.
- Landscape Reserve (Landschaftsschutzgebiete): These big territories have a natural, recreational or landscape value. In these areas, the landscapes which are preserved are mostly cultural landscapes. Contemporary forms of agricultural and forestrial landuse are allowed, new activities, specifically construction and buildings must be in harmony with the protected landscape.
- Nature Parks (Naturparke): Nature Parks aim at the coequal development of nature conservation, recreation, education and regional development (the "4-pillar-model"). Nature Park is a predicate for landscapes, which are legally protected areas (mostly Landscape Reserve or Natural Reserve) and favour conditions to fullfill the specific aims of the Nature Parks' philosophy. The 37 Nature Parks in Austria, most of them located in the Alpine bow, are organised in the "association of the Austrian Nature Parks" (VNÖ).
- Biosphere Reserves (Biosphärenparks): These reserves are connected to the UNESCO´s "Man and the Biosphere programme" (MAB). The main functions of these areas are the conservation of biogenetic resources, sustainable land use and regional development, education, research and monitoring, and the linking in a global network. Currently there are 6 Biosphere Reserves in Austria, 4 of them are within the Alpine range. The recently established Biosphere Reserves in the Austrian Alps (Wienerwald, Großes Walsertal) are managed according to the Seville Strategy, whereas the "old" Biosphere Reserves (Gossenköller See, Gurgler Hauptkamm)

focus on research.

- Natura 2000 Sites: The European nature conservation network aims at protecting threatened species and rare habitats on an European scale. As a member of the European Union, Austria is obliged to carry out the according international directives. Currently, there are about 160 Natura 2000 Sites in Austria, primarily located within existing protected areas.
- Ramsar Sites: There are 19 Ramsar Sites in Austria managed according to the Ramsar Convention on internationally important wetlands. Most of the Ramsar Sites are located in the Austrian Alps, in terms of the total area, however, the focal point is outside the Alps.
- Protected landscape section (Geschützer Landschaftsteil): These protected areas have the same aim as the Landscape Reserves, but are smaller.

Beside these categories there are others which are specific for the "Länder" (e.g. the "Ruhegebiet" in Tirol and Vorarlberg).

4.2.3 France

- National Parks (Parc national): There are 3 National Parks in the French Alps. They are managed by a public organisation. The main aims are the conservation of natural space (landscape and biodiversity) and the reception of the public. There is a central zone, which is not inhabited and a peripheral zone, where there is the possibility to have many human activities.
- Regional Nature Parks (Parc naturel régional): 6 Regional Parks are located in the French Alps. These protected areas are created on regional initiative, a label is delivered to these parks. They are based on an own "Charta" decided in a "bottom-up" procedure. These areas have the regional economic development, the reception, information and education of the public as main objectives. The territories of the parks are often populated.
- Natural Reserve (Réserve naturelle): The aim of these areas is the preservation of important natural habitats. Their surface is quite small. The management plan is the most important document in this case.
- Other protected areas: there are many other protected areas in France, e.g. the protected biotopes.

4.2.4 Germany

- Natural Reserve (Naturschutzgebiete): In these protected areas the protection of nature and landscape are very strong. The aim of these protected areas is the protection of nature, landscape or biotopes. The

responsibility for the creation and the management of these areas is in the competence of the "Länder". No new human activities are allowed. However, it is not a total protection because the activities that already exist can continue.

- National Parks: These parks are large territories that include at least an area that fullfills the prerequisite of a Natural reserve and areas not influenced by human activities. The aim of the German National Parks is to preserve and to study the undisturbed natural ecological communities and to provide ecological education for the public. The National Park Berchtesgaden is the only alpine German National Park. Its principal activity is nature conservation and research; all economic activities are considered as secondary. Nevertheless, there are many human activities in the transition area, mostly due to the big touristic attraction of the region.
- Landscape Reserve (Landschaftsschutzgebiete): The aim of these large protected areas is the protection of a particular landscape. The main role of these areas is recreation. They are guidelined by management plans by the "Länder" (federal states).
- Nature Park (Naturparke): These are large areas with important nature, landscape and recreational value. The aim of these parks is to link the protection and the use of the nature and landscape and to develop sustainable activities such as tourism. There are no Nature Parks in the German Alps.

4.2.5 Italy

In Italy there is a big heterogeneity of protected areas, because their management belongs to the region or the "provincia".

- National Parks (Parchi nazionali): There are 4 National Parks in the Italian Alps, which depend on the central power (Ministry) that develops the plan of the park. Their major aim is the preservation of large natural areas. Human activities are more or less admitted and sometimes reach a high amount and density.
- Regional Parks (Parchi regionali): There are many large Regional Parks in the Italian alpine space and their managements are various. They can possess national or regional importance. In general, we can say that these protected areas encourage the development of the regional economic activities, the protection of nature and landscape, the education and recreation of the public. The parks are in many cases populated, and the regions dedicated to the protection of the nature are smaller than the park´s total area. This is not the case in the regions Piemont, Friuli – Venezia Giulia

and the "provincia" of Bozen-Südtirol and Trient, where the parks are only sparsely populated.

- Natural reserve (Riserve naturali): The role of these often very small reserves is the preservation of habitats and of their biodiversity.
- Other protected areas: in the "provincia" of Südtirol-Bozen there are the "Ruhezonen" und "Naturschutzgebiete". We can cite also the biogenetic reserves.

4.2.6 Switzerland

- National Park (Nationalpark): There is only one National Park currently in Switzerland. There are no human activities in this area, aside from tourism. Furthermore this activity is very restricted, only hikers are admitted and they must keep to the hiking trails ("Wegegebot"). The protection of the nature plays a very important rule in this area.
- Natural Reserves (Naturschutzgebiete): These often small sites may be managed by private or public institutions and are dedicated to the protection of the fauna and flora.
- Inventories: There are many inventories for the protection of nature and landscapes. In general there are some inventories that are more binding and others that are more or less binding according to the policy of the different cantons. The more binding inventories are linked to the moors. The *Moors of National Importance* are very strongly protected (no human disturbance allowed), but they represent very little surfaces. The inventory of *Moor Landscapes* protects larger surfaces in comparison, but these areas are small related to the other protected areas of the Alps. The "slightly" protected inventories are the *Landscapes of National Importance* for example. These areas are quite extended and represent the 20% of the national surface, but only the landscape is protected and not from all the human disturbances.

There are many "bottom-up" projects of new types of parks (national, regional and peri-urban parks). The new law has been launched already and in the next years the projects shall be ranked and by hitting the criteria, they can receive the label of a *Park of National Importance.*

4.2.7 Slovenia

- National Park: In the only Slovenian National Park the central zone is strictly protected and dedicated to nature conservation. In the peripheral zone traditional activities and tourism are allowed.
- Regional Parks: There is one Regional Park in the Slovenian Alps and one

more nearby the alpine space. Some Parks are to be planned most recently. The regional development and the protection of nature are the main aim of these areas.

- Biosphere Reserve: These reserves originate in the "Man and Biosphere" (MAB) programme. The main functions of these areas are the conservation of biogenetic resources, sustainable development and resource use and the linking in a global network.
- European Important Bird Areas: the aim of these areas is to protect the important sites for birds in Europe.

5 PROTECTED AREAS - THEIR CONTRIBUTION TO REGIONAL DEVELOPMENT (TASK 1)

5.1 GLOBALISATION - REGIONALISATION

Societies develop in antagonistic subsystems of trends and countertrends. As neoliberalism and globalisation emerge, also the countertrend of regionalising economies occurs. "Homeless" capital, global distribution of goods and services as well as the consumption of "everything everywhere at any time" seem to create demands for services, goods and experiences that are specifically located and linked to time, culture and locations.

Therefore protected areas are not only a success of national and global environmental activities. Protected areas have become a substantial and trend-setting element for regional economies. The "developed" Central European economies are characterised by a shift of industry, production and excavation, the alpine regions also by a shift of primary production. A lot of space has become available for "alternative" use, in Europe in general and in the Alps in particular. It is interesting that often only the tertiary sector could remain in the areas. The protected areas match quite well with the needs of the public with regard to recreation, leisure activities, aso.

Protected areas as "cornerstones of sustainable development" (IUCN) can provide:

- A backbone for specifically located services and production (regional tourism, regional products, regional cultural activities, aso.). Therefore they are able to offer a tremendous variety to the more and more homogeneous global consumption patterns.
- A network of similar institutions that are linked to regional contexts, but at the same time act globally accorded (at least more and more).
- A (sometimes unique) platform of and for diverse actors, stakeholders and institutions, that have to perform in accordance to each other.

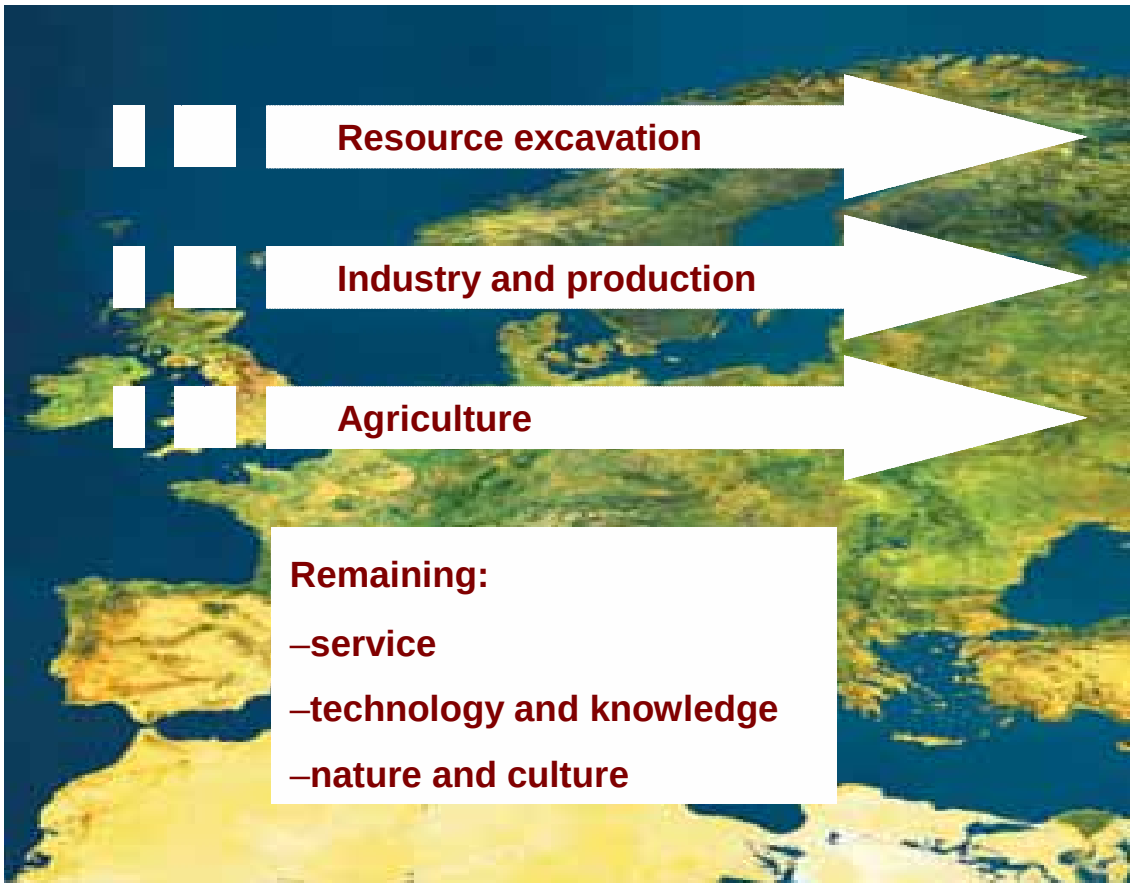


Figure 11: Movement of the primary and secondary sector on a European scale (source: Jungmeier, unpubl.).

5.2 INDICATING ECONOMIC EFFECTS

Generally speaking, the economic input and output of a protected area's region can be understood as indicated in Figure 12: Like any other regional activity, a protected area changes the input / output ratio in the "regional wallet". A protected area may lead to positive inputs, such as:

- New, additional funding opportunities
- New income by entrance fees or merchandising
- New services and products that are provided
- Added value by regional brands (tourism, products, services)
- Increased compatibility by improvement of "soft factors": network, inter- and intraregional co-operation, knowledge, aso.

On the other hand a loss of value added may result from:

- "Import" of products and services that cannot be provided in the region (typical example: expertise and consultancy)
- Lowered investment: protected areas may – of course – prevent large scale

investment, as a matter of fact a loss of investment cannot be compensated

- Lowered production: protected areas may also lead to a lowered production (e.g. in agriculture, forestry or in other sectors); usually this loss gets compensated

These changes relative to the existing situations can be measured or estimated much easier than absolute values.

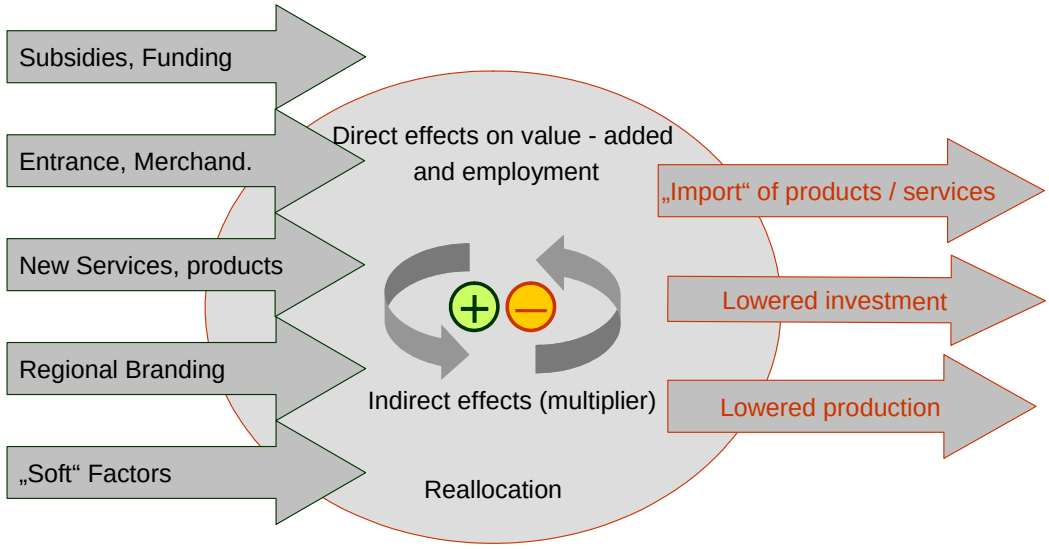


Figure 12: Scheme of the “regional wallet” (source: Getzner & Jungmeier, unpubl.).

There are three ways of assessing these changes:

- Quantitative
- Qualitative
- And: a combination of both

These macro-economic methods are well established and often used, but only rarely in the context of protected areas. An Austrian study calculated the effects on the regional development of protected / designated Natura 2000 areas using a negative and positive scenario (Getzner & Jungmeier, 2001). In that case (cf. Figure 13), Natura 2000 areas have shown predominantly positive influence on regional development. The impact on agriculture and forestry is more or less a “black zero”. In negative scenario “Steinfeld” the insecure situation of investment for the local industry lead to a negative result.

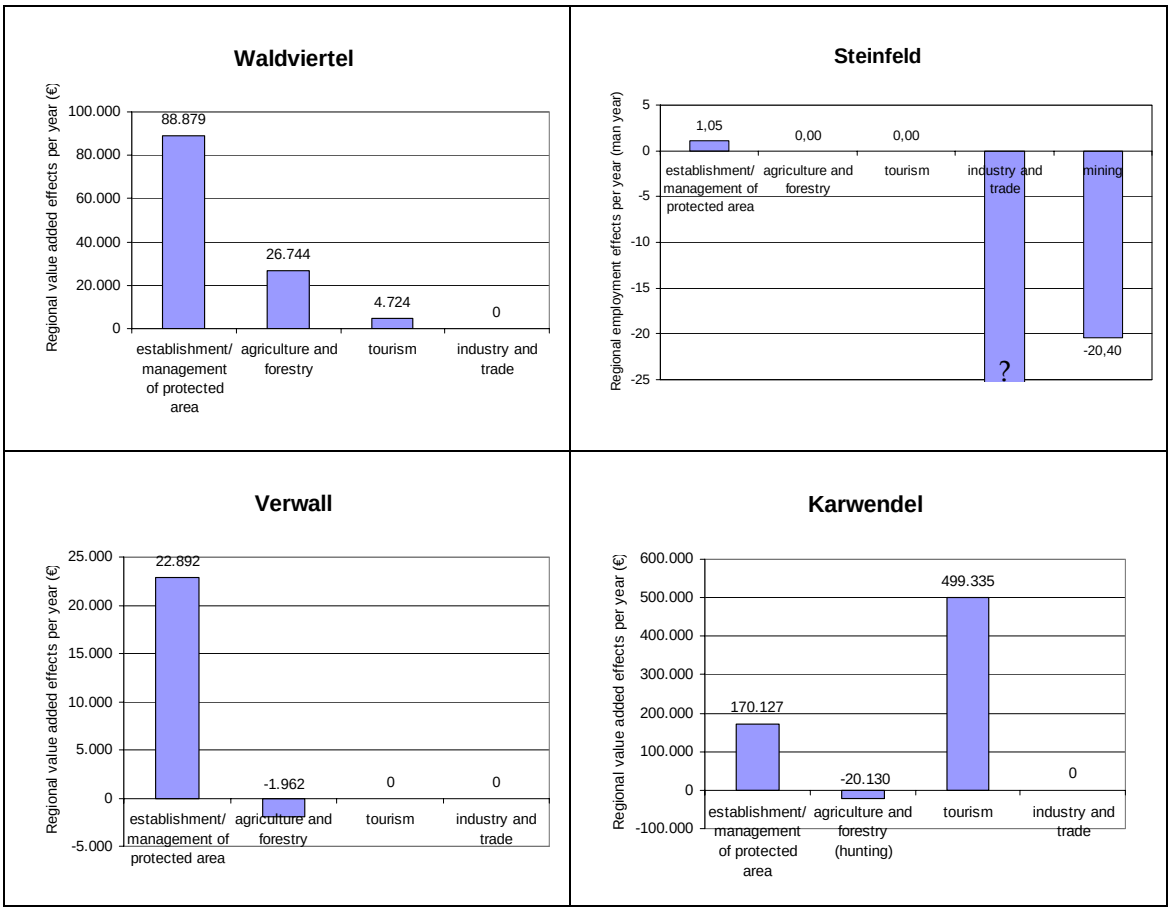


Figure 13: Effects of Natura 2000 on the regional economy (example: Austria, negative scenario) (source: Getzner, Jost & Jungmeier, 2002).

A case study on Austrian Nature Parks (Jungmeier, 2003) used qualitative approaches to categorise and estimate the economic effects. In this case a chance and risk analysis was used for an appraisal by both, experts and stakeholders. As shown in Figure 14 the main findings are:

- Nature Parks offer many chances for "activation of money flows": The instrument is capable to attract additional subsidies (specifically EC structural funds) and also to set impulses for additional demand. Both aspects don't bear risks. The question of investment is assessed to bear as well chances and risks. In Nature Parks investments might be increased (smallscale, "soft" investment) or decreased (largescale, "hard" investment into infrastructures and industries).
- Nature Parks provide to most economic sectors mainly chances: Only largescale industrials activities (powerplants, production, aso.) as well as mining might be effected in negative way by the overall activities and constraints of a Nature Park (in Austria: legally a protected landscape). There might also be risks for largescale touristic activities and infrastrucutres (golf areas, ski ressorts, aso.). Definitely no risk, but a lot of chances could be detected for all other economic sectors: agriculture,

forestry, services, tourism, aso.

- For the development of "soft" factors of economic development, Nature Parks only show up with chances, but no risks. Many "soft" factors, like development of regional identity, new forms of co-operation, adapted forms of governance, transfer of know-how and networks, may substantially support and enhance regional economic development.

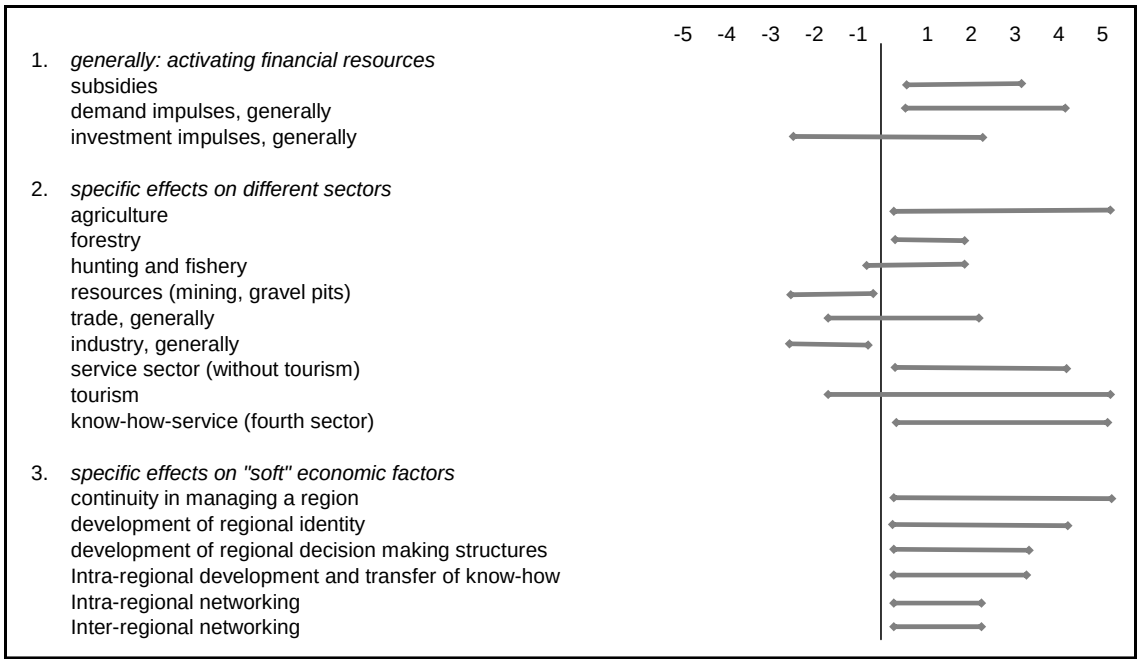


Figure 14: Chances – risks analysis for economic effects of Nature Parks in Austria (Jungmeier, 2003).

Another possible way to proof the positive effects of protected areas on regional development is the consideration of demand. Different surveys in Germany and Austria (Jungmeier & Dulling 2003; Mose, Weixlbaumer 2002; Vesely 2000; Schönbäck, Kosz& Madreiter 1997) found that protected areas awake positive thoughts such as attractiveness of the landscape, nature and naturalness, health, and high environmental quality. Thus, people have an overall positive impression of protected areas.

The acceptance of National Parks is generally high. In Austria 83% consider the implementation and maintenance of National Parks as very important, in Germany 65%. Three-fourths of Austrians think National Parks are economically useful, 95% think they enhance tourism.

"Nature" is a popular topic. According to a survey by the F.U.R. (German Research Institute: "Forschungsgruppe Urlaub und Reisen") nature and environment are one of the most important holiday reasons. 78% of all Germans regard the experience of nature during their vacation as important or very important. 50% prefer holiday destinations where the environment is intact. The second most favourite holiday activity for Germans is hiking.

German protected areas have 318 Mio visitors a year. Most of them visit Nature Parks (260 Mio), followed by biosphere parks (35 Mio) and National Parks (23 Mio). Regarding these issues it is obvious that large protected areas provide good conditions for business activities. Nevertheless they do not automatically evoke economic growth.

5.3 ANALYSIS OF GOOD PRACTICE EXAMPLES

For this report seventeen different projects of large protected areas in Austria, Italy, France and Germany were analysed (Table 2). Most of the projects are located within the alpine bow, others within the low mountain range. The projects differ in age, duration and their major objectives.

The project team is aware of the fact that these projects do not allow a stringent and quantifiable analysis of economic effects of protected areas.

- Little data, specifically quantified "hard" data is available. In most of the good practice examples the direct effects on regional development have not been monitored.
- If quantified data is available and effects are measured, it is not easy to proof what figures and developments are directly connected to or caused by the project / by the protected area
- A lot of important aspects are principally difficult to quantify (network, identity, co-operation, aso.)

By ranking the effects the projects show up with the following results:

- Local income (15/17): The projects, mainly focusing on economic impulses, could mostly contribute to raising local income.
- Economic value added (turnover) (12/17): Closely connected to the impact on local income, also the value added could be raised in the project.
- Cross-sector co-operation (11/17): The cross-sector co-operation is an important benefit of the good practice examples.

Furthermore the creation of infrastructure, effects on visitor's expenses and new jobs could be detected in the good practice examples. Only little effects could be found in the field of tax revenue, keeping people in the region and other economic effects. No effects are found that are connected to impacts on other regions / nations or gender and generation interests.

Table 2: Checklist of indicated effects of the analysed practice examples on regional development

	Practice examples																
Effects on regional development **+ = indicated** **- = not indicated**	Cultural Landscape Programme National Park Hohe Tauern	Cultural Landscape Programme Poellauer Valley	Regional Marketing Nature Park Poellauer Valley	Specialities of Nature Parks	Ecomodel Nature Park Grebenzen	Bergholz and Walserstolz, Biosphere Reserve Großes Walsertal	Open door farms of the Biosphere Reserve Großes Walsertal	EMAS-implemented Biosphese Reserve Großes Walsertal	Gites Panda	EU Eco-Management and Audit Scheme (EMAS) in the Nature Park Mont Avic	Réseau Ecologique Département de l'isère (REDI)	Diversification of the vegal production in the Regional Nature Park Queyras	Maintenance, restoration of hedgerow network landscape Champsur and Valgaudemar	Partner businesses of the biosphere park Rhoen	Regional brand Eifel in the Eifel National Park	National Park Hosts in the Eifel National Park	Lamb from the Nature Park Altmuehltal
Economic value added (Turnover)	+	+	+	+	+	+	+	-	-	-	-	+	-	+	+	+	+
Creation of infrastructure	-	-	+	+	+	+	-	-	+	-	-	+	-	-	-	-	-
Visitor expenses	-	-	+	+	-	+	+	+	-	+	+	-	-	-	-	+	+
Local income	+	+	+	+	+	+	+	-	+	-	+	+	+	+	+	+	+
New working places (job creation)	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+
Tax revenue	-	-	+	+	-	+	-	-	-	-	-	-	-	-	+	-	+
Keeping people in the region	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-
Cross sector co-operations	-	-	+	+	-	+	+	+	-	+	-	+	-	+	+	+	+
Other economic impacts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Impacts in other regions, nations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gender and generation interests	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

6 PROTECTED AREAS – THEIR CONTRIBUTION TO PRESERVING BIODIVERSITY (TASK 2)

6.1 GLOBAL GOALS – REGIONAL RESULTS

In situ conservation of species and populations is widely recognised as a fundamental requirement for the conservation of biodiversity. Therefore, the Fourth World Congress on National Parks and protected areas in Caracas (1992) addressed a global goal: at least ten percent of any biome should be protected by a legal instrument of protection. The stimulating goal was reached within ten years only, today some 11,5% of the planet's surface are under protection. In the Alpine bow meanwhile some 23 % of the surface are protected.

In 2004 a global analysis (Brooks et al.) showed up with a striking result: By comparing distribution pattern of mammals, amphibians, reptiles and plants with "distribution pattern" of protected areas, the network of protected areas was proven to be substantially insufficient. Any (fictional) random distribution of protected areas on the Earth surface showed up with better results that the existing one. Anyway, it is not only the quantity of protected areas that preserves biodiversity, it is specifically their quality:

- Distribution: Are the protected areas where they are needed (biodiversity high and threatened) ?
- Category: Is the category matching the conservation targets ?
- Management: Are the measures matching the demand, do they focus on the right issues, are they effective in terms of conservation?
- Surrounding: How are protected areas embedded into their surroundings? Are there buffer zones, linkages and corridors to the next protected site?

Due to substantial lacks of data, these questions cannot be answered sufficiently for the Alps. Substantial improvement might be needed especially on the following issues:

- Distribution: Most Alpine protected areas cover the high altitudes whereas the highest pressures occur in the rapidly developing basins and valleys, specifically in peri-urban areas. These issues could be covered in a gap analysis.
- Category: A study in Austria (Umweltdachverband, 2005) indicates that there is no clear understanding of the variety of categories in Austria: The designation to specific categories rather seems to follow short term trends

than proper selection criteria. An example may be the concept of Biosphere Reserves: after creating the label, some areas were designated in the 1970ies mainly for research aims. During the following 20 years no further Biosphere Reserves were designated until the Seville Strategy in 1995 based a second "boom". Additionally, the study indicates that protected areas seem to "collect" different labels for their existing sites. These multicategorial sites have to face conflicting goals that are not clearly stated. Presumably, these findings can be transferred to the Alpine space.

- Management: The targeted and effective management of the sites is an issue of substantial importance. Many efforts have been addressed to this question: The IUCN – website receives 100.000 hits per month on questions of "management effectiveness". The project AlpenCom focuses on the question on an Alpine level. Anyway, a proper evaluation of the effectiveness of management with regards to biodiversity has to be based on a proper indication of biodiversity. The potential instruments are outlined in the next chapter.
- Surroundings: Sufficient protection beyond the borders of protected sites is substantial. The Network Alparc has raised this issue recently.

These facts may indicate that steps towards a substantial improvement with regard to the monitoring and documentation of biodiversity are necessary and required in protected areas.

6.2 INDICATING EFFECTS ON BIODIVERSITY

The question of evaluating and "measuring" biodiversity has become an important task in conservation. In the Alps many different activities and approaches have been developed and most of them refer to regional demands and understanding. There are three major conceptions that may allow a more general understanding of evaluating biodiversity, specifically of the contribution of protected areas to the conservation of biodiversity.

6.2.1 Site-based individual monitoring

Following a worldwide survey, 96% of protected areas have initiated or are planning monitoring activities with regard to biodiversity, only 4 % have no intention (NP Hohe Tauern 2001). Considering the protected areas of the Alps only, the result is assumed to be similar.

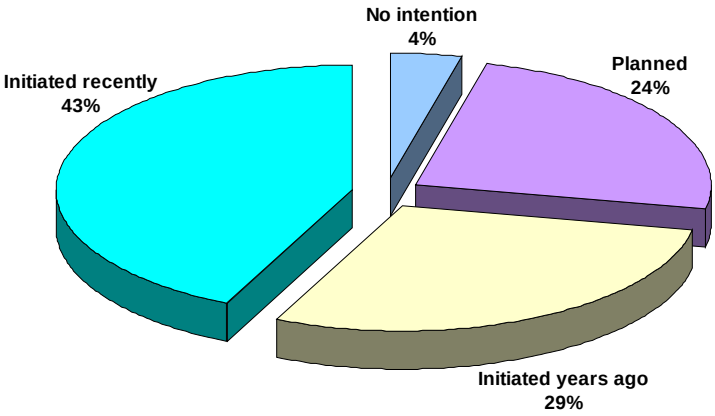


Figure 15: Monitoring projects in protected areas and their state of implementation resulting from an international inquiry amongst 160 protected areas (Jungmeier 1996)

The site based monitoring is usually:

- Connected to specific measures, habitats or species
- Variable with regard to the applied methods, approaches and instruments and therefore lacking comparability
- Rather small scale projects run by individual institutions or even persons and therefore lacking continuity

Nevertheless, some Alpine Parks (cf. Swiss National Park) have well-known expertise and appreciated tradition in monitoring sites and are involved in large scale projects (e.g. GLORIA, the Global Observation Research in Alpine Environments) or MRI (Mountain Research Initiative).

6.2.2 Natura 2000

Natura 2000 is a European network of areas of high value related to natural habitats and species of plants and animals which are rare, endangered or vulnerable in the European Community. The Natura 2000 approach focuses on scientific standards, long-term monitoring and reporting mechanisms. Natura 2000 is based on a stringent concept, but it is insufficient for many problems of Alpine conservation. For instance, most of the Alpine endemisms are not represented and the species and habitats have little indicative value for the main Alpine problems. Nevertheless the standard data from the Alpine Biogeographic Region represents an important overview. Since the first reporting procedure is carried out in 2006, the question "what do the sites contribute to the conservation of biodiversity" cannot be answered referring to these data yet.

6.2.3 Flagship Species

The flagship species are threatened species that have high indicative value and are well

known to public. The monitoring of these species produces well communicable results, but the Flagship Species approach is not suitable to give detailed and quantified information about biodiversity in general. For example, the Network of Alpine protected areas emphasised very much on selected birds of prey, like Golden Eagle or Bearded Volture. A monitoring for the whole Alps, involving a lot of volunteers proved the activities of managing and reintroducing to be successful. But these results can only be transferred or extrapolated to other species to a very small extent.

6.2.4 Biosphere Reserve Integrated Monitoring (BRIM)

The Biosphere Reserve Integrated Monitoring (BRIM) approach comprises non-biotic, biodiversity, socio-economic and integrated monitoring in the World Network of Biosphere Reserves. The objective is to provide a platform for the integration of the resulting information/data, thus contributing to a better understanding of the changes that take place in the areas being studied and of the factors triggering these changes. This approach is a very comprehensive concept, but has got lacks in implementation so far.

6.2.5 „Missing links“

The four approaches described demonstrate exemplarily that there are concepts to face the question “what do protected areas contribute to conservation of biodiversity”. However, at the moment there are no tools to get sufficient answers to this question on the Alpine level. Further research activities are necessary to develop a feasible biodiversity index for the Alps:

- Standardised indicators referring to the Alpine situation
- Adequate methodologies (“proper, but simple”)
- Centralised documentation and analysis

Together with five National Parks within the Alps, the National Park Hohe Tauern has developed a stringent methodology for a long-term monitoring of Alpine protected areas. The concept “MONAP 2100” integrates all requirements and is based on the most recent technologies. So far, no funding could be attracted for the concept that mainly focuses on:

- Standardisation and harmonisation
- Interdisciplinary interfaces
- Long-term data management and maintenance
- Method design over time
- Implementation into the management of protected areas
- Practical test runs of the methodological inventory
- Long-term objectivity
- Focus on processes

- Integration of old data, recent methods and long-term monitoring

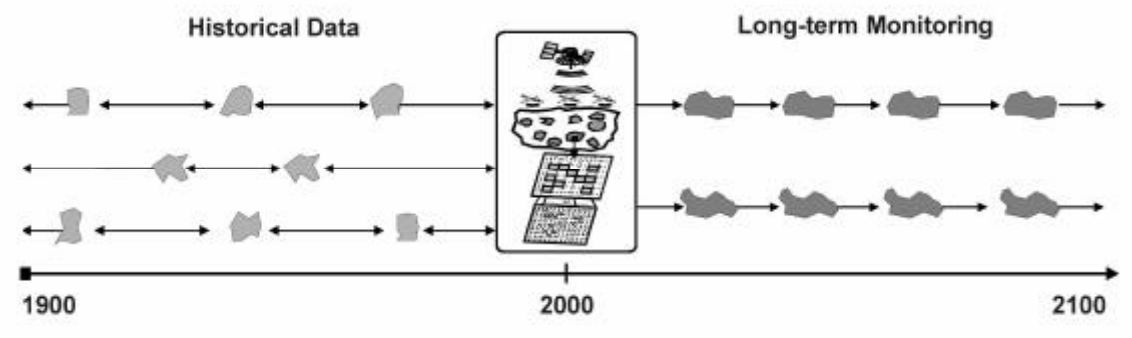


Figure 16: Basic concept of MONAP 2100 (Nationalpark Hohe Tauern 2001).

Using appropriate technologies the monitoring should focus on three levels: species and populations, habitats and landscapes. By integrating historical data the validity of the results can be extrapolated to some decades.

6.3 ANALYSIS OF GOOD PRACTICE EXAMPLES

Our examples arise from different types of protected areas; but the Nature and Regional Parks are well represented even if the biological diversity conservation is often not their first objective.

Although the conservation or the increase of biodiversity is not a clear or main objective in most of the project examples, the biological diversity is "indirectly" promoted in many cases. The only project which states the preservation of biodiversity as principal aim is the "Réseau écologique départemental de l'Isère". The other programmes potentially have a big impact on biodiversity, due to the advantageous land use linked to the traditional and biological agriculture (Table 3).

Potential effects on the different scales of biodiversity

The good practice examples have several types of effects on biodiversity. First, there are the programmes that enclose a management of the landscape and its typical elements (maintenance and restoration of the characteristic hedgerow network landscape of the Champsaur and Valgaudemar Valleys). These projects have a potential effect on the habitat diversity (between-habitats diversity: β diversity), because they maintain a varied landscape consisting of different habitats.

There are projects that focus on a single habitat; this is the case with the biological agriculture programmes (Regional Marketing Nature Park Poellauer Valley, Regional brand "Regionalmarke Eifel" in the Eifel National Park). The effects of the measures linked to these projects are concentrated on a specific habitat affecting the within-

habitat diversity (α diversity).

The programmes of rural landscape conservation, which work on the base of contracts with farmers (Lamb from the Nature Park Altmühltal, Cultural Landscape Programme NP Hohe Tauern, Cultural Landscape Programme Poellauer Valley) have an effect on within-habitat diversity due to the extensive use of the soil and at the same time they have an effect on the between-habitat diversity, due to the maintenance of a varied landscape.

The ecological management programmes of protected areas (EMAS certifications) have a general effect on their ecological efficiency. Areas which take part in this programme can achieve and control their aims in a better way and have diffuse effects on biodiversity.

The programmes which aim at regional development often address areas that are sometimes more extended than the parks. The only project of our examples that has such a scale is the ecological network of Isère. The γ biodiversity (diversity in a biogeographic region) can be influenced by such a big project that encompasses several protected areas.

Geographical scale

The scale is very important for biodiversity. Every individual of a species needs a space to live according to its ecology. For example the large territories for some carnivore species (wolf, lynx) and the differing summer and winter habitats for amphibians and reptiles (frogs, vipers). This space is the home range of an individual. To be stable a population needs enough individuals, and genetic exchanges with other populations. This permits to ensure gene flow between populations, to maintain the genetic diversity within them and therefore prevent inbreeding. A diverse population is more resilient to illness and to environmental changes. In addition, the more a species is spread geographically the less it has the probability to loose a big part of its individuals in case of a catastrophe. Some best practice examples have a limited geographical range or cover a large territory but conduct only punctual actions (Gîtes Panda). This can be useful for species which need specific habitats (especially rare species), but not very efficient for other more common species. The programmes with an influence on both alpha and beta biodiversity (Lamb from the Nature Park Altmühltal, Cultural Landscape Programme NP Hohe Tauern, Cultural Landscape Programme Poellauer Valley) have a bigger potential of conservation of biodiversity. They have an impact on habitat diversity and on the "quality" of these habitats and therefore are useful for rare species and for more common species needing more space and different types of habitat. The programmes of conservation of the rural landscape (Maintenance and restoration of the characteristic hedgerow network landscape of the Champsaur and Valgaudemar Valleys) have an impact on a large area. For this reason they are very important for

conserving biodiversity and can even be more efficient when coupled with “within – habitat” diversity projects.

The ecological network programme has a very large scale of action. It is important that habitats that are linked show a "within” and “between” habitat diversity to ensure a substantial effect on biodiversity.

Time scale

The evolution of biodiversity is often submitted to complex mechanisms and it is very difficult to establish a cause – effect relationship between certain measures and biodiversity. For the same reason, the time needed to reveal an effect on biodiversity can be long. Thus, it is important that the projects which aim at biodiversity conservation are set up to last for a long period of time. Short-term actions often prove ineffective.

Monitoring and follow-up

The follow-up of biodiversity related to a project is difficult and the projects are often too recent to observe any changes. In order to assess the role of a project it is most efficient to establish a well designed biodiversity monitoring for larger regions and assess the state of biodiversity at a global level. This is for example the case for several protected areas (see chapter 5.1) and on a national scale in Switzerland (Biodiversity Monitoring Switzerland (BDM) FOEN). These approaches would allow a global assessment of biodiversity based on common indicators and the conclusion if the regions with a large number of projects referring to biodiversity are those that have a positive effect on biological diversity.

In general, the projects that have the most important potential impact on biodiversity are those that have an influence on more than one scale of biodiversity (α and β diversity) and that can be carried out for a long period of time. To go to the further level (γ diversity), it is necessary that the protected areas co-operate in a network or under the conduction of a bigger instance (region, state).

The protected areas are a laboratory of sustainable development, it is thus in these areas where innovative projects which combine preservation and promotion of biodiversity, monitoring and added value of the biological diversity services should take place. The long term conservation of biodiversity beyond the protected areas with this specific ambition (central zone of some National Parks, some Natural Reserve, …) is only possible with projects which have a specific aim, a long term diversity monitoring and which try to quantify the benefits that biodiversity can bring.

The most important surfaces of natural and rural landscape of the Alps are located in protected areas. The study carried out by WWF, ALPARC, CIPRA and ISCAR with the issue of “Conservation priority areas in the Alps”, indicates the areas with the highest

biodiversity value in the Alps on the basis of expert evaluation. The large-scale protected areas cover 59% of the conservation priority areas (WWF, ISCAR, CIPRA, ALPARC 2004).

Our best practice examples are not representative of the total contribution of protected areas in terms of biodiversity. We could observe many actions in our examples but it is important to make more general observations to have a complete view of the situation.

Table 3: Checklist of indicated effects of the analysed practice examples on biodiversity.

Effects on biodiversity + = indicated - = not indicated	Practice examples																
	Cultural Landscape Programme National Park Hohe Tauern	Cultural Landscape Programme Poellauer Valley	Regional Marketing Nature Park Poellauer Valley	Specialities of Nature Parks	Ecomodel Nature Park Grebenzen	Bergholz and Walserstolz, Biosphere Reserve Großes Walsertal	Open door farms of the Biosphere Reserve Großes Walsertal	EMAS-implemented Biosphese Reserve Großes Walsertal	Gites Panda	EU Eco-Management and Audit Scheme (EMAS) in the Nature Park Mont Avic	Réseau Ecologique Département de l'isère (REDI)	Diversification of the vegal production in the Regional Nature Park Queyras	Maintenance, restoration of hedgerow network landscape Champsur and Valgaudemar	Partner businesses of the biosphere park Rhoen	Regional brand Eifel in the Eifel National Park	National Park Hosts in the Eifel National Park	Lamb from the Nature Park Altmuehltal
Maintenance of nature and environment, general	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Quantification of general effects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservation of species or habitats, general	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Preservation of species and habitats, specific	+	+	-	-	-	-	+	-	+	+	+	+	+	-	-	-	-
Preservation of landscape	+	+	+	+	+	+	+	-	+	-	-	+	+	-	-	-	-
Stabilisation of ecosystems	+	+	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-
Sustainable use of resources	+	+	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-
Area(s) involved	+	-	-	+	+	-	-	-	+	-	-	+	+	-	-	-	-
Exceed boundaries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Contribution to awareness about biodiversity	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ecological orientation of businesses	+	+	+	+	+	+	+	+	+	+	-	+	-	-	-	-	-

7 PROTECTED AREAS – IMPROVING INTEGRATED MANAGEMENT

As indicated in the introduction, approaches that try to integrate biodiversity issues and regional development efforts can provide substantial synergies. Therefore some important aspects are highlighted in the following chapter:

- Integrating biodiversity and development issues
- An overview of success factors
- An instrument to assess and develop integrated tools in the management of protected areas (IPAM Toolbox)
- An overview of educational offers in the field

7.1 INTEGRATING BIODIVERSITY AND DEVELOPMENT ISSUES

As synthesis a ranking of the good practice examples was prepared and interpreted by expert appraisal (cf.

Figure 17, Annex 2).

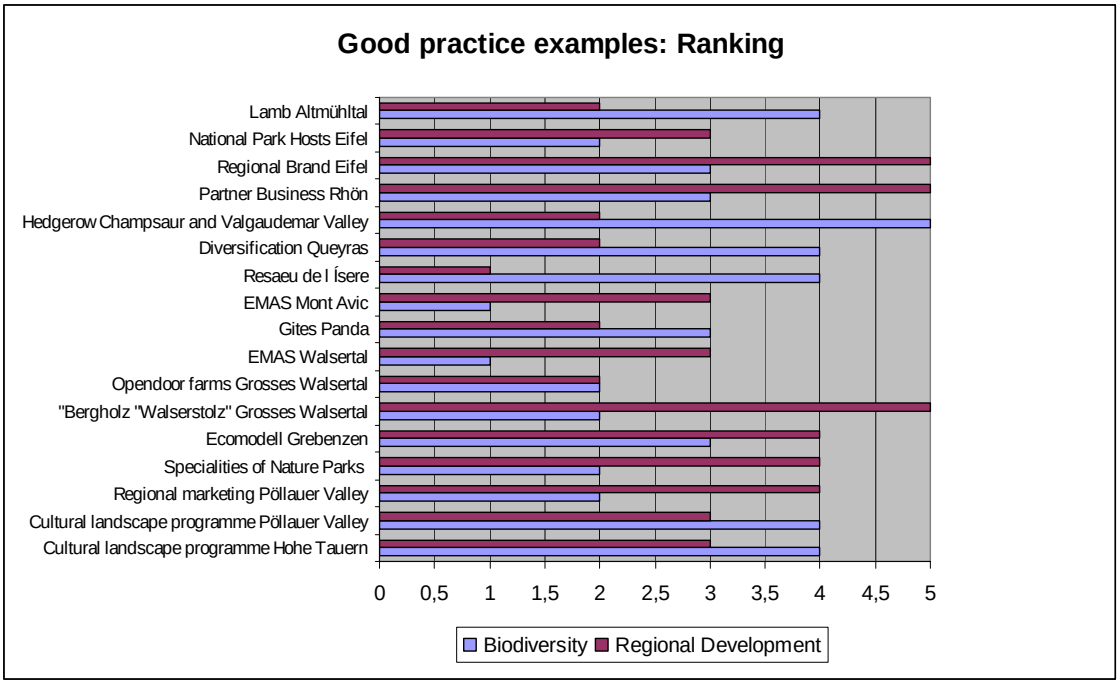


Figure 17: Ranking of good practice examples with regard to regional development and biodiversity.

Aggregated results of the expert appraisal lead to the following conclusions:

- The good practice examples show that activities in a protected area can have positive effects on both, regional development and biodiversity.
- The projects primarily focus on one of the issues, either on regional development or on biodiversity. They mainly contribute to one issue, and have at the same time a low effect on the other. Nevertheless, the less important issue is somehow being "co-transported" with the important one.
- Only very few projects show high positive effects on both aspects at the same time. These are projects that focus on "new" services and "new" products which are strongly linked to biodiversity. For future success of protected areas these kind of projects are of substantial importance (e.g. Cultural landscape programme Pöllauer Valley and Hohe Tauern, Ecomodell Grebenzen, Regional Brand Eifel, Partner Business Rhön).

By analysing these examples the project team revealed an interesting aspect of the spatial distribution of the activities. Regional development activities seem mainly to focus on lower areas, conservation activities seem to focus on areas at higher altitude. Further data is needed to verify this hypothesis.

7.2 SUCCESS FACTORS – THE ANALYSIS OF THE BEST PRACTICE

In this chapter projects were analysed with regard to the circumstances for their success. A wide amount of criteria could be identified which are listed in Table 4 and depicted in detail in chapter 7.3 and annex 2 as well.

It is noticeable, that the success factors either refer to the human resources, the concept or the process of the good practice examples. Thus, human resources, concept and process flow can be regarded as the three main pillars for successful projects and activities within a large protected area. In Table 4 the success factors are structured according to these three categories. In addition to the factors that were found in the project examples, several other factors which are generally relevant for the success of development processes are taken into account as well.

Table 4: Success factors found in the practice examples related to human resources, concept and process flow.

Success factors of the project examples +++ = strong correlation + = weak correlation 0 = no information		Cultural Landscape Programme National Park Hohe Tauern	Cultural Landscape Programme Poellauer Valley	Regional Marketing Nature Park Poellauer Valley	Specialities of Nature Parks	Ecomodel Nature Park Grebenzen	Bergholz and Walserstolz, Biosphere Reserve Großes Walsertal	Open door farms of the Biosphere Reserve Großes Walsertal	EMAS-implemented Biosphese Reserve Großes Walsertal	Gites Panda	EU Eco-Management and Audit Scheme (EMAS) in the Nature Park Mont Avic	Réseau Ecologique Département de l'isère (REDI)	Diversification of the vegal production in the Regional Nature Park Queyras	Maintenance, restoration of hedgerow network landscape Champsur and Valgaudemar	Partner businesses of the biosphere park Rhoen	Regional brand Eifel in the Eifel National Park	National Park Hosts in the Eifel National Park	Lamb from the Nature Park Altmuehltal
Human resources	Partner and participants	+++	+++	++	+	++	+++	++	+	+++	++	++	++	+++	+	+++	+	+
	Person in charge, supporters and moderators	+++	+++	+	+	+	+	+	+	++	++	+	+	++	+	+++	+	+
	Decision maker in politics and administration	+	+++	+	+	-	++	+	+	+	++	+++	+	+++	+	++	+	+
	Clubs, associations, scientific institutions	+	+	+	++	-	+	+	+	+++	-	+	-	+++	+	+	+	+
	Citizens	+	+	+	+	+	+	-	-	-	-	-	+	++	+	+++	+	+
	Promoters and opponents	+	+	+	+	-	+	+	-	-	+	-	+	-	+	++	+	-
Concept	Regional concept	+	-	-	-	-	-	-	-	-	-	-	-	+++	-	+	+	+
	Regional analysis	+++	+	+++	-	-	-	+	++	+	+	++	+	+	+	+	+	-
	Objectives for regional development	+++	+	++	-	-	-	-	-	+	-	-	++	-	+	++	+	+
	Strategies	+++	-	+++	+++	++	+++	+	+++	++	+++	++	+	-	+	+++	+	+
	Projects and areas of action	+++	-	+	-	-	-	-	-	+	-	+	-	++	+	+	+	+

	Monitoring and evaluation	+	+	-	-	-	-	-	+++	++	+++	+	-	+	+	+	-	+
	Concept formulation and implementation	+	+++	+++	++	+	++	++	+++	++	++	++	++	+	+	+++	+	+
Process flow	Organisational structure	+++	++	++	++	-	++	+	+	+	++	+	+	-	+	++	+	+
	Regional development agency	+	++	-	+	-	+	-	-	+	+	-	+	-	+	+	+	+
	Operational structure	+	++	++	++	+	++	++	+	-	+	+	+	-	+	++	+	+
	Communications, information and public relation	+++	+++	+++	++	++	+++	+	+	++	+	-	+	+	+	+++	+	+
	Training and qualification	++	+	+++	-	-	+	++	-	+	-	-	+	+	+	+++	+	+
	Motivation	+++	+++	++	+	+	-	+++	+	+++	++	++	++	+++	+	++	+	+
	Conflicts	+	-	-	-	-	-	-	-	-	-	-	-	+++	+	+	+	-
	Costs and financing	+++	+++	+	-	+	-	-	-	++	-	+	-	-	+	+++	+	+
	Monitoring and evaluation	+	+	-	-	-	++	-	-	+++	+	-	-	+	+	+++	+	+

Table 4 shows that large protected areas only gain sustainable development when they are implemented by a co-operative regional development process in which all interest groups participate. Otherwise the acceptance declines among citizens, economic and political partners or other relevant interest groups and they will not support the project as needed. Thus, for all projects within large protected areas important rules for a regional co-operation development process have to be considered.

7.3 SUCCESS FACTORS IN DETAIL

7.3.1 Success factor Human Resources

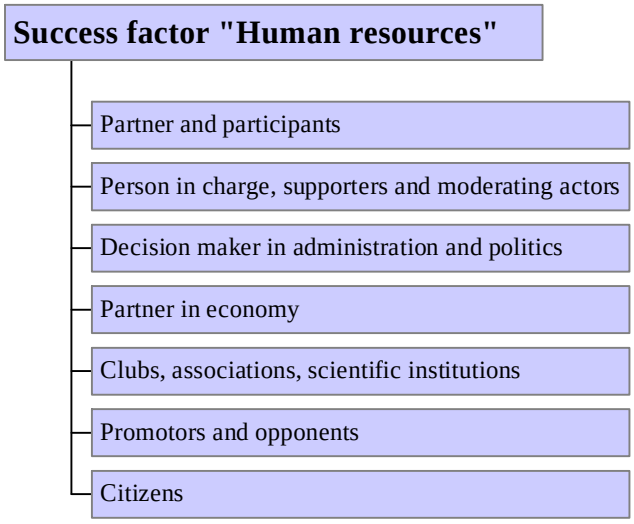


Figure 18: Success factor "Human resources"

Responsible persons

Regional development co-operation within and around large protected areas depends on people initiating it. Actors engaged in regional networking need to represent key interests and key institutions, such as municipalities, regional administrations and economy.

In particular partnership is important with

- Persons who are highly interested in the targeted developments
- Persons with high reputation who enjoy trust and respect within the regional society
- Persons predestined for conflict mediation
- Partners showing initiative and ready to take risks
- Persons with experience in regional projects and partnerships

Regional networking might be undermined by gaps in the expectations and problem orientation of different actors. Different material interests and the struggle for political and personal prestige represent obstacles towards a smooth regional communication. This is why persons involved in such networks need to have key qualifications like social competence and fundamental knowledge of their professional fields. Furthermore they need to have a strong orientation towards problem solving and a positive attitude towards learning in a changing world.

Regional co-operation within large protected areas requires persons to take responsibility for the process – even in difficult situations. Therefore a defined circle of core players needs to form a process management and coordination team. Personnel continuity is of advantage in order to preserve professional knowledge and experience.

Partners and other relevant actors

Regional development depends on the acceptance and co-operation of politically legitimised local and regional governments. Administrations and politicians contributing resources to the process need to be sufficiently convinced of regional projects. Relevant decision makers need to be involved but over politicisation of regional development should be avoided.

The quality of life and regional identity is closely related to the economic power of regions. Close co-operation with companies and their organisations and representatives is a key factor determining the success of regional projects. Economic players however are frequently preoccupied with the fear of over regulation and competitive disadvantage if they bind themselves to project standards. On the other hand public sector, NGOs and citizens do often not easily accept the economic concerns and views of companies.

Therefore communication is important as is a clear idea of economic interests and social and environmental concerns of all the participating groups and actors to become a homogenous vision for regional development within large protected areas. This can well work to the advantage of the participating companies. Most factors for production and services have a strong relationship with regional development: Traffic, infrastructure and land use planning are classical factors for firm development, while general quality of life and environmental standards become important for high income population structure and for certain firms to attract highly educated labour to their enterprises. These factors have an impact as well on the biodiversity as well as on the services that the biodiversity provide to the population.

Important partners in economy for networks and co-operation

- Agriculture and forestry

- Producing industries like handicrafts and food processing industries besides others
- High-tech industries
- Organisations and Co-operatives like unions and chambers of commerce.
- Improved relationship between regional producers and markets
- Co-operation between firms and other regional actors
- Improved culture of co-operation through training schemes and model projects
- Co-operatives for regional production (regional typical products)
- Regional service centres for economic supportive services
- Promotion and support for innovation and technology
- Tourism organisations, Provider of touristic services

Interests of clubs and associations may match those of regional development. Highly motivated and educated members and the organisational structure of such organisations do form valuable resources for regional networking, participate planning and multiplying of knowledge. It is therefore important to identify relevant organisations like sports clubs, cultural clubs, churches and environmental associations aso. and to find appropriate ways to integrate them in the process.

The implementation of influential intercedes (promoters) with high reputation and authority, knowledge and political power is important for the success of a project within large protected areas. Just as well it is important to deal with critics (opponents) at an early stage of the project. You should search the dialogue with critics, involve an intermediator, evoke a win-win-situation where both sides benefit, and transfer liability to opponents for a better involvement.

Normally successful regional development is impossible without the involvement of citizens. Creativity, experience and knowledge of citizens are important in order to find solutions which are finally supported by the population. Particularly when people are asked to change their lifestyle and consumption habits in order to save resources and support regional economic circuits the involvement of citizens is obligatory.

It is important to make an effort of communication to show the direct link between biodiversity and quality of life. The communication over the services that biodiversity provides to the human population is important. The beauty of wild life is a good channel of communication too.

7.3.2 Success Factor Concept

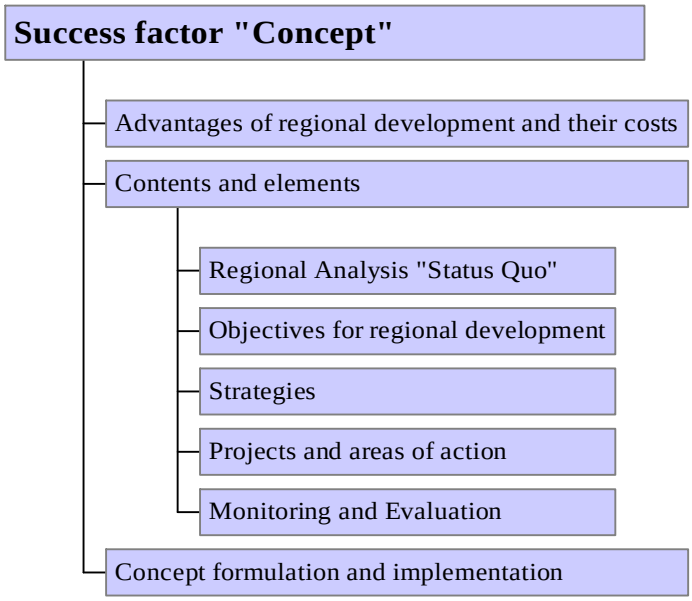


Figure 19: Success factor “concept”.

Advantages of regional concepts and their costs

Successful regional development within and around large protected areas is based on holistic approaches. It is not sufficient to promote single projects. However it seems necessary to promote long term sustainable development based on regional tradition, culture and identity. Such long term strategies provide orientation for single projects in regions and large protected areas.

Regional concepts have the following characteristics

- They are informal and voluntary instruments without legal power
- They are open and flexible and tailored to the actual needs and problems of regions
- They are practically oriented – and sternly involve endogenous potentials in the form of regional actors and their resources
- They integrate different economic sectors and administrative and political levels and thereby try to generate synergies for regional development

The concept provides the point of departure for the development process in the region of the large protected area and it gives orientation towards the development targets. Inevitably regional actors need to communicate, to discuss and plan to formulate their concept. This process of co-operative planning is important to create regional identity. In detail regional concepts and their formulation comprise the following: They

- activate regional players

- create consciousness about regional facts and problems
- help to establish regional identity
- create common target objectives and help to avoid conflicts
- help to formulate priorities
- integrate singular projects and help to create synergies among them
- help to co-ordinate and monitor the regional development process

Towards outsiders regional concepts document the development targets. For higher political and administrational levels they assist when deciding about financial support from national or European funds. Regional concepts might provide proof of high efficiency in project management and implementation and therefore help to raise funds from above mentioned programs – they even could be a prerequisite for EU financial support at all as it is the case with LEADER or INTERREG.

Regional concepts are flexible and can be amended if necessary. But this should be done with care since the networking process depends on transparency and reliability with all the actors involved. The costs for drawing a regional concept depend on the following aspects:

- The thematic range
- The depth of analysis and planning
- The methodology
- Extent of endogenous contributions, requirement for external expertise
- Print costs

Contents and elements

Regional concepts comprise of a set of analytical and planning statements and assumptions. Besides common regional key data the analysis and the views and wishes of regional actors need to be analysed and formulated into it. A range of instruments for analysis and participatory planning is at hand to formulate the elements of a regional concept.

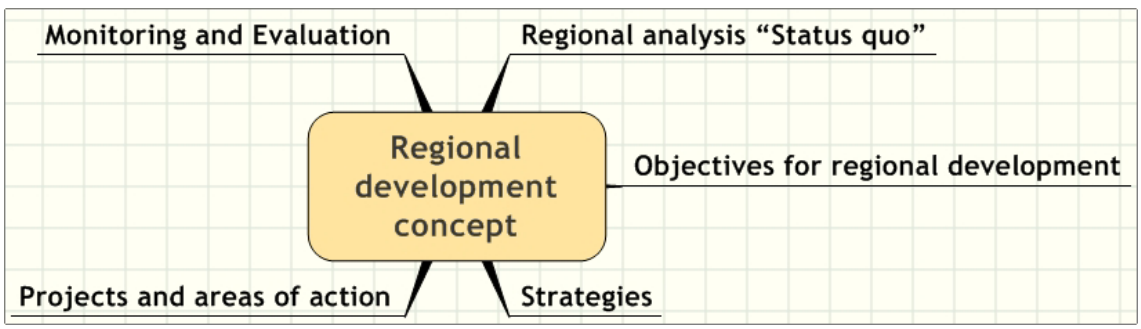


Figure 20: Elements of a regional development concept.

The Regional Analysis comprises of an analysis of

- Natural and environmental resources
- Culture and identity
- Infrastructure
- Human resources, Qualification structure
- Economic key data, firms and markets, image of the region, financial resources
- Grade of self organisation, autonomy

The links between these aspects need to be clarified. Existing studies and reports will be integrated. Projects already planned and/or under implementation need to be mentioned. The failure or success of important projects in the past will be examined.

For the biodiversity it is important to know the potential of the region. The chosen region must have the possibility to host a high amount of biodiversity. It is therefore important to base the project on expert evaluations or on past studies. These information are often more complete in the protected areas than in the other regions.

Objectives for regional development

To formulate the future objectives for a region the following questions are helpful:

- Where do we come from?
- Who are we?
- Where do we go?

From these questions the Strategy of the three "I" can be derived: Identity, Innovation and Initiative. It is important to formulate targets which suit the region and it's people and which seem to be realistic and inspiring and encouraging. This should be always kept in mind and should provide a thread within project formulation – a slogan or a motto could be helpful to support and encourage the newly found regional identity.

Besides common and sectional targets it requires concrete targets and projects. This helps the common orientation and to find the right measures in even complicated situations. Concrete targets appropriately should be measurable in their outcome by indicators within a known time frame. To avoid the destructive effect of target conflicts on the development process, clear priorities should be formulated.

Strategies

Starting from targets and objectives, strategies for regional development can be formulated putting a focus on important economic sectors. It is recommendable to build development on one's strength rather than to try and eliminate weaknesses with a high input of resources. Creativity and innovation are most important in particular when they create synergies among different sectors.

Pillars for regional strategies are, e.g.:

- Diversification of production in sectors like agriculture, tourism or food processing
- Networking amongst Companies within certain value chains, Producers and consumers, networking amongst different sectors
- Reanimation of traditions and cultural heritage
- Win-win strategies help to resolve long standing conflicts and to open up opportunities for complementary co-operation
- Qualification
- Marketing strategies

Projects and areas of action

The strategies formulated need to be specified in areas of action to finally become concrete projects. These could cover a wide range of co-operations and themes but could also focus on specific competences and problems. It is important to consider the requirements of national and European programs when designing the content of projects. The main objective of this element is to formulate a targeted bundle of measures. Planning should comprise:

- Short term and complex long term projects which significantly improve the regional development status
- Integrated approaches which combine and coordinate measures from different sectors and project holders
- Projects should be related to "master projects" as to provide links between the single projects
- Development concepts should relate to themes like sustainability, renewable energies and raw materials, recycling, soft mobility, sustainable land use planning
- Projects with innovative solutions, projects which provide a model for related areas and thereby function as multiplier projects

Action should be described and specified as much as possible. This includes to mention the reasons for choosing the project and to rank it in its priority against other projects. Further more the project should be specified in details like place, time, measures and responsibilities as should be mentioned the matters for financing it (cost, profits, funding sources). Organisational matters like a time frame and mile stones are also important.

The following table is a measure that has been used successfully within a few of the analysed example projects. Being implemented from the beginning of a project, all partners and participants know which measure has to be done by whom since when. Because the priorities of measures are clearly defined and generally excepted, target

conflicts can be avoided. Furthermore this is a good measure for controlling the process.

No.	What?	Who?	Financing?	Priority? A, B, C	Maturity? S, M, L	Deadline?	OK?	Action?
1.								
2.								
...								

Figure 11: Catalogue of Measures

Monitoring and Evaluation

Regional concepts bear risks – as do all plans operating with partly unknown factors. It is therefore important to monitor the implementation process against the programs and schedules drawn to gain information for regional decision making. It is therefore helpful to formulate indicators and mile stones to measure progress in development.

Large protected areas often need to justify their right to exist of politics and public. The need of preserving biodiversity is in most cases not a sufficient argument for fundraising. Therefore it is important to know about the economic effects of large protected areas. Economic effects can be displayed by economic factors such as income and employment. The problem is that it is hard to determine the origin of these effects. Regional income through large protected areas can be calculated.

7.3.3 Success Factor Process flow

Figure 21: Success factor “process flow”.

The structures, techniques and the project management are important factors for the regional development process. In particular the following requirements are to be mentioned:

- The necessary organisational structures need to be established (regional agency, round tables, etc,)
- A workable time schedule secures project implementation
- The necessary communication has to be structured and facilitated, information flow within the project but also towards the public is supported by the positive attitude towards communication and structural agents (PR – officer, reporting systems, etc)
- Conflicts are recognised and solved at an early stage
- Regional actors are motivated and convinced (e.g. through external promoters)
- Personal and financial resources are available

Regional networking is frequently monitored and evaluated so to correct or change development policy if necessary

Organisational structure

Regional co-operation within large protected areas relies on people and their personal networks. The more persons and institutions involved, the more complex the projects and tasks within the process, the more difficult it becomes to coordinate the process as a whole. It is therefore recommendable to provide a clear organisational structure from the beginning. It should reflect on the actual network active in the region. This structure can be seen as the back bone of regional networking. It has to cope with all requirements for regional co-operation and has to be strongly oriented towards practical action and concrete projects.

- The structure needs to be transparent for network members and outsiders alike and it has to provide contact persons and clear responsibilities for the tasks to be carried out
- It needs to facilitate efficiency and professionality
- It secures decision making competence
- It ensures financial and personal sustainability
- The organisational structure provides for co-ordination- and management capacity

Some points should be kept in mind when designing an organisational structure. It has to provide for the following:

- Functions and tasks can be fulfilled within

- It hosts all organisational sub-units needed in the process (groups, round tables, administrative bodies, networks, etc)
- It considers the competences and functions of its sub-units, their personal composition and workflow

The organisational structure with a steering committee as the decision making body needs to be efficient and has to maintain efficiency in the process by learning and flexible adjustment towards changing environments. As the organisation needs to represent regional interests it sometimes deems necessary to open another organisational level for participation. This happens as plenum or regional conferences or within similar communication instruments.

Tasks, competences and responsibilities are often given to sub-committees within the regional organisation. It is important to clarify competences of sub-committees against other bodies and within the organisation. Are they free to choose their topics, subjects and solutions as they like? Before founding a new sub-committee it should be clear what it is responsible for and how decisions should be taken:

- Who shall decide? Shall all partners vote directly in them or are they represented by a member?
- Is the management body/steering committee assigned to work professionally and has it got a strong position or is work done on a voluntary basis?

A clear definition of tasks and competences is necessary and it is crucial to draw borders against already existing organisational units like administrative and political bodies.

It is most important to choose the right persons and institutions for such committees. The sizes of groups are flexible. The more tasks have to be carried out and the more frequent the group meets, the smaller is the optimum size of the group.

It is also important to have a good composition of committee members. Homogenous groups often work efficiently because they facilitate team building. On the other hand heterogeneous groups make sure, that all ideas and solutions and views for regional development are represented.

Co-operation within and amongst committees need to be organised. Who chairs meetings? Who is the spokesman/woman? Who takes the minutes and also who is responsible for liaison with other groups?

Operational structure

It is important to be aware of the phases of the co-operation process.

- Initial phase (characterised by the desire for change and progress)

- Thematic and personal development (core partnership formation and project planning)
- Project implementation
- Finalising the process or change it into a durable process

Co-operation takes time. To counterbalance the enormous pressure from expectations that lasts on regional co-operation a conscious time management is helpful.

Planning has to consider realistic time frames for both, the regional development process at large and for particular projects to be implemented. Three to five years seem to be a realistic time frame for most regional projects. However it is impossible to fix exact dates and time lines for the process to be finalised. Time frames depend on various factors:

- How complex are problems identified and solutions planned?
- Availability of financial and human resources
- Consensus building capacity within the region

It has shown useful to draw yearly plans. This helps to become aware of progress and problems within the project but also towards outsiders. It further is an important tool for project coordination. The yearly plan should comprise of:

- Milestones (important section within the project time frame characterised by the necessity for further decisions)
- Presentation of results towards the public (openings, festivals)
- Regional highlights (events, conferences, festivities, signing of contracts, aso.)
- Important meetings
- Continuos PR-work
- Deadlines for external funding and applications

Frequent and regular interaction stabilises co-operations. Therefore it is important to meet regularly in committees and groups. Also regional conferences (e.g. once in a year) have proven helpful for reliable communication and legitimisation. Such conferences also provide a good chance to present the process and its achievements to the public.

To avoid frustrations and disappointment the dynamics of regional development should be visible in the region of the large protected area and participants and citizens should be able to experience the changes and achievements and for most the process of co-operation itself. Regional events, "touchable" projects which are designed towards different target groups might serve for experiencing regional co-operation in this way.

Participants of committees have to be regularly present to ensure continuity of works. To bind members of groups and committees to their commitment it is advisable to:

- Delegate certain responsibilities to single members
- Have regular meetings at fixed days and day times
- Keep the number of committees and meetings low
- Assign "vice functions": in case a member can not take part he or she has a counterpart
- Formulate sanctions for breaking the rules

How should the decision-making process take place in groups and committees? There are two possibilities: Top-down or bottom-up. A third method would be the "down-up" process whereby framework decisions are made by a leading "top" but lower levels are free to elaborate their individual solutions within the frame given.

Rules and regulations for interaction facilitate co-operation. Rules and regulations need to be laid down in written. They have to be accepted by all project members and participants to become binding. Rules can help to regulate issues like:

- Reflect on strategic aims and development philosophy
- Membership and end of membership
- Decision making procedures
- Leadership and steering functions
- Conflict resolution and disputes on varying interest

It belongs to the responsibilities within process organisation that decisions once they are made become implemented.

Communication, information and public relation

Communication tasks are manyfold: Explore, inform, present, dispute, moderate, co-ordinate, participate in, initiate. There are two fields for communication which are

- Internal communication (internal marketing) means communication among the participants
- External communication (external marketing) deals with the presentation of the project towards outsiders

Examples for communication models and tools found in the analysed projects are working groups, professional groups, co-operative discourse, mediation, planning cells, round tables, future conference, future workshop. All of these models have their particular potentials – from initiating creative and visionary planning to conflict resolution or professional technical planning… it depends on the project phase and problems and participants which model can be used to facilitate fruitful communication.

Responsibilities for communication need to be assigned. For instance there must be someone responsible for communication with the press and other public media. In particular for public relations the following points need to be considered:

- Continuity and actuality
- Communication technique and media (target groups, press, TV, radio)
- Infrastructure for communication (central information pool, information office)
- Routines need to be developed (regular press information, newsletter, info meetings)
- Create occasions for communication
- Enhance creativity (brainstorming, mind mapping)
- Create a common label and design (logo)

Generally for all communication the AIDA technique can be deemed helpful:

- Attention (eyecatcher)
- Interest (making people curious, interested in the topic)
- Desire (create a wish to learn more about the theme, to participate in an action …)
- Action (give clues how to fulfil these wishes, how to participate …)

Means and elements for successful public relations work: Depending on the definition and analysis of the target group, choice of media, financial resources and other factors the means for public relations work are e.g. prospects and flyers, brochures and posters, newsletters, fairs, seminars and workshops.

Press notes and press information are the major components for all work with the press. In case there is need for more detailed information the press information case will serve the "hungry" journalist and the regional manager alike. Only on the occasion of important events a press conference will take place.

Training and qualification

Developing integrated concepts in participative processes is a demanding job for highly skilled and highly motivated personalities. The important aspects of education, training and capacity building are documented in the following chapter.

Motivation

Co-operative regional development is based on voluntary action. The motivation to engage oneself for the region is a prerequisite for a developmental process. A change of long standing world views and thinking habits is also necessary. A change from risk thinking towards appreciation of chances, a change from egoism towards co-operative thinking – all this is unthinkable without a motivation for change and a positive attitude towards change. Co-operations have to be kept alive. Motivation is a key resource during all project phases.

Important motivators are:

- Process leaders
- Moderators
- A backing group
- The network

There are different types of motivation:

- Motivation through suffering – without the recognition of regional problems co-operations would seldom start off
- Motivation by themes and development issues – specific regional topics often lead to identification with the co-operation process
- Motivation through personal interest – personal advantages in form of business opportunities, qualification, reputation, aso. are a "natural" phenomenon and a most important source for motivation
- Motivation through co-operative culture and good leadership – open dialogue, trust and sympathy help to motivate for co-operation since these provide for positive experience and quality of life
- Motivation through incentives – personal recognition of co-operative behaviour, official thanking and financial incentives support motivation
- Motivation through competition

Conflicts

Generally conflicts are seen as obstacles for development - But they could well serve as the opposite: Conflicts are chances. Chances to get known to each other, chances to get a deeper understanding of different interests, chances to overcome difficult situations… Conflicts occur on different levels and around different issues:

- Values
- Targets
- Process
- Professional level
- Personal relations
- Distributive level (matters of just distribution of resources, incentives and burdens)

In large protected areas specific conflicts can occur. Different interest groups fear the loss of independence and liberty when a new protected area is created. Farmers and hunters may fear constraints in the use of the territory. Citizens of the "Biosphärenreservat Rhön" for example feared to be regarded as "Indians" in sight of potential visitors.

How to overcome conflicts? Most problems and conflicts can be solved, even if solu-

tions are not obvious at first sight. Some important strategies to deal with conflicts are:

- To address conflicts at an early stage and to take them serious
- Provide positive group dynamics – e.g. by allowing for discursive space for group members needs, feelings and opinions
- Choose topics for the beginning with low conflict potential
- Search for win-win strategies
- Allow for a referee to take part in the conflict solution
- Address conflicts early on the political level

Costs and financing

It belongs to the tasks of the project managers to calculate for the costs of the co-operation and to draw up a yearly financial plan. The financial plan is part of a yearly project report. In this report an input – output analysis should be included whereby not only monetary output should be considered but also improvements in terms of knowledge, networking, efficiency of co-operation and increased private initiative.

There are different types of costs:

- Personnel
- Equipment, logistics and maintenance, PR, hospitality costs…
- Planning costs (external expertise, fees for official recognition of land use plans, aso.)
- Project costs
- Organisational costs

Sources for financing

- Project funds from members – members contributions
- Public funds
- Credits
- Sponsoring
- Profits from commercial activities and other income

Monitoring and evaluation

The term evaluation means: control of results, securing results, securing quality, quality management, benchmarking, controlling, supervision, reflection. Evaluation is useful and necessary for the co-operative process. The topics and issues for evaluation are:

- The entire process of building regional co-operation
- The regional development agency
- Networks
- Projects
- Single events
- Committees and advisory functions

- Targets
- Contents of programs

Evaluations can be done in various forms. Some common types and techniques for evaluation are:

- Studies
- Progress reports, work reports
- Regional development concepts as strategic instruments for controlling (including a sustainability report)
- Development of a regional sustainability reporting system
- Evaluation conference
- Supervising, coaching
- Quality management
- Benchmarking
- Indicator based evaluation
- Dialogue with other groups

The choice of methods for evaluation depends on the topic and the object for evaluation:

- Efficiency control
- Strength-weaknesses-analysis SWOT
- Questionnaires
- Interviews
- Restriction analysis

To evaluate a process or a project it needs a measurement against which the findings can be judged. Such measurement can take place against the:

- Elements and ideas from the agenda process
- Quantitative and qualitative targets
- Common quality standards for co-operative processes and planning
- Sustainability indicators
- Comparable projects (benchmarking)
- Region specific targets
- Documented decisions and agreements
- The monitoring of a project that must improve the biological diversity is difficult. Biodiversity is hard to measure; it is important to target the good indicators and to have a very strong knowledge of the flora and fauna of the area at the start of the project. This knowledge is more often available in the protected areas than elsewhere. Another problem for the monitoring of biodiversity is time, it takes often long to observe a significant augmentation of the biological diversity.

7.3.4 Checklists of success factors for implementing new projects

The following check list might be helpful to identify relevant actors:

- Who needs to be involved into the process of co-operative regional development within a protected area?
- Which part do the respective actors take in the process?
- Persons, institutions and organisations to take responsibility for the process?
- Whom to involve besides?
- Identify and define roles of the political apparatus, administration, economy and social institutions
- Do all participants comply with the need for certain competences mentioned before?
- ...

The following check list helps to identify relevant aspects of economic integration:

- Which companies and sectors are regionally relevant for the protected area?
- How could these contribute towards regional development?
- Pros and cons for companies and organisations in and around the protected area to participate in regional networking?
- Conflicts between company targets, regional development and the targets of the protected area?
- On which levels and in which organisational structures of the protected area the economy needs to be represented?
- ...

The design of an organisational structure depends on the organisational levels to be included, and which actors to be represented in it. It also depends on the tasks it has to fulfil:

- Who decides on strategies, concepts and projects of the protected area?
- Who shall participate?
- Who is going to implement the projects?
- Who is managing and co-ordinating the range of projects planned?
- Who is financing them?
- Who provides extension and evaluation?
- ...

What are the possible tasks for a regional development in a protected area and its surrounding? Mainly these are:

- Coordination

- Information and public relations (media contact, aso.)
- Networking (initiate and facilitate communication between different actors and networks in and around a protected area)
- Financial management (administration of funds, fund raising)
- Extension (professional expertise, external expertise, pooling of competence)
- Project development
- Project implementation
- Conception work
- Controlling and evaluation

The core functions of a regional agency within a protected area can be characterised as

- Secretariat (technical and logistical support)
- Agency (extension, project development and implementation)
- Coordination (maintenance of networks, moderation)
- Motor function (initiating, formulation of visions)

7.4 THE IPAM TOOLBOX

The toolbox was developed in a large-scale Interreg III CADSES – project, involving partners from Middle and Eastern Europe. The project IPAM Toolbox (Integrative Protected Area Management by Example of the Alps - Adriatic Region) focuses on the evaluation, harmonisation and development of methods, instruments and infrastructures for planning and managing protected areas.

The internet-based expert system shall support planners, managers and consulters of protected areas by a system of self assessment, focused recommendations and a comprehensive knowledge base. The interactive toolbox provides substantial information on integrative management of protected areas by means of new information technologies. The interactive system is free of charge and is open to everybody on the homepage "www.ipam.info". Developed in co-operation with international partners and organisations this expert system aims to be an important backbone for the future development of protected areas in Middle and Eastern Europe.

The expert system consists of three components, a self assessment, a set of standardised recommendations and a knowledge base. The three components aim to provide any information that is necessary to develop a certain protected area. The self assessment is an interactive checklist of questions. They help to identify and focus the problem and the most recent state of the development of the protected area. The structure of the self assessment follows the "life cycle" of the protected area (pre-phase, planning, ongoing management) and crosschecks 25 fields of activity. However, the self assessment finally leads to a progress report that points out the deficits in planning and managing the protected area and to standardised recommendations. The knowledge base, as continuative tool, provides additional materials: Reports, projects, organisations, persons, best practice and so on are compiled in a broad database. Materials may also be added and uploaded by the visitor.

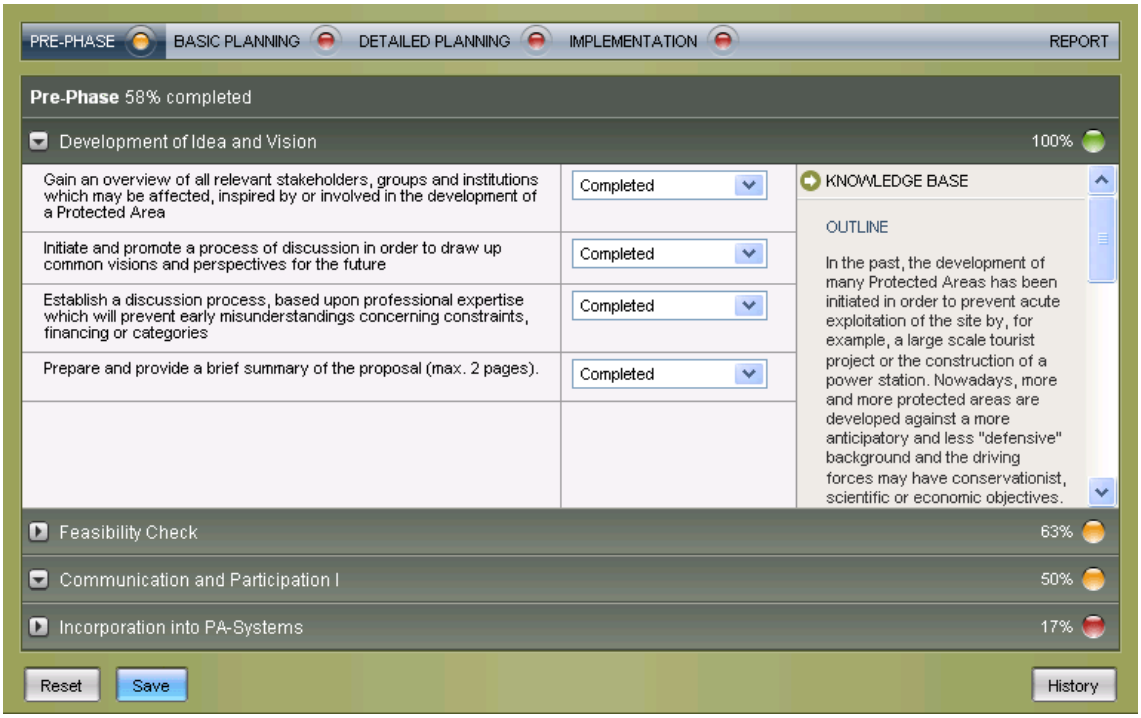


Figure 22: The interactive surface of the self-assessment (www.ipam.info).

The toolbox interface (Figure 22) shows the pre-phase in progress (yellow light). The other phases have not started yet (red light). All actions of the field of activity Development of Idea and Vision are completed.

In the domain of planning and management the development of biodiversity and economy should be merged.

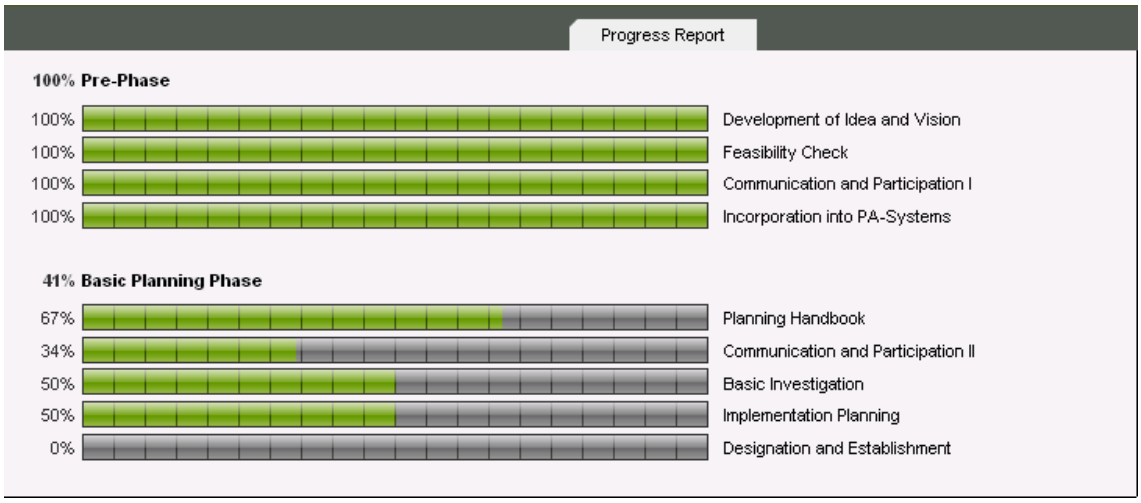


Figure 23: Progress Report of the IPAM-Toolbox (www.ipam.info).

This reporting feature (Figure 23) gives an overview of all activities (phases and fields of activity). Their status is displayed by a bar graph and a percentage value. If all actions of a field of activity are completed the bar graph gets a percentage value of 100%.

7.5 EDUCATION, TRAINING AND CAPACITY BUILDING

Managing a protected area is a hard job. This is partly due to the "biography" of a protected area, which requires tailored approaches and methods. So training and qualification is to be seen in the light of different development phases and the main fields of activities taking place:

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 24: Typical development phases of protected areas, as developed by international experts in the project IPAM (www.ipam.info).

In order to manage a protected area "appropriately", there are some learning goals to be considered. These are:

- An excellent and comprehensive understanding of the aims and roles of protected areas in relation to the conservation of biodiversity and

(integrated) regional development.

- Detailed knowledge in applying the full range of tools available for the management of protected areas so that they can effectively fulfill their aims.
- An ability to analyse and solve problems encountered when establishing, planning and managing protected areas, to conduct inter- and transdisciplinary dialogues with all stakeholders and to develop and implement appropriate integrated solutions.
- The development of hard and soft skills to create mutual benefits of nature conservation on the one hand, and for the local population on the other hand, particularly in peripheral regions as well as in developing countries with the aim of sustainable regional development.

Co-operative regional development within and around large protected areas does not only demand for professional knowledge but for experience and knowledge about the work with citizens. Communication skills and methods and knowledge about process matters are also helpful. To know the region and its potentials are further requirements in particular for regional process managers.

The range of professional knowledge in demand for regional development comprises:

- Ecological farming
- Direct marketing
- Regional marketing
- Regional value chains
- Renewable energies
- Cultural landscape heritage and its development
- Environmental protection
- Soft tourism
- Agenda 21
- Telematics
- Regional and landscape planning

Professional knowledge listed above frequently can be found within the group of regional actors. The need for further training is therefore more acute in communication and project planning methods and in process matters. This knowledge is helpful for the following functions and issues:

- Drawing up development visions
- Strategy development
- Process- and project management
- Coordinating functions
- Moderation
- Conflict solving

- Social competence
- Team leading
- Mobilising the population
- Presentation
- Organisation development
- Project management
- Extension for company founders
- Fund raising, acquisition
- Lobbying
- PR-works and marketing
- Changing information into knowledge

How to evaluate the need for training? It is advisable to know which skills and knowledge are needed in future. This analysis has to be checked against the potentials available at institutions, groups and other regional actors. Possible options for further training are provided through:

- Exchange of experience from similar projects and model projects
- Group work
- Presentations
- Seminars and professional conferences
- Conventional teaching
- E-learning
- Training at the work place
- Apprenticeships and voluntaries
- Excursions
- Coaching

Tailor made or standard seminars provided by external experts and institutions are frequently used to upgrade team members knowledge in most of the above mentioned fields. Coaching is the most intensive form of training and only used upon to solve important issues – mostly with leading functions. It has shown helpful to establish co-operation with NGOs and public sector institutions which are involved in training.

There are three types of educational offers that help to qualify planners, managers and staff of protected areas.

- Individual training courses and programmes performed by individual parks or national systems
- Training programmes by inter- or transnational organisations, e.g IUCN or specifically addressed to Alpine iusses Alparc (Project AlpenCom)
- Academic education
    - University Madrid: Master en Espacios Protegidos:

www.uam.es/departamentos/ciencias/ecologia/folletored.htm

- University Klagenfurt: MSc "Management of Protected Areas": www.mpa_uni-klu.ac.at
- University Ljublijana: MSc "Natural Heritage Protection": (http://www.bf.uni-lj.si/univerzal/podiplom11.htm#238)
- University Munich: Msc "Sustainable Ressource Management": www.forst.tu-muenchen.de/htdocs/srm_index.php
- University London: MSc "Environmental Management (protected areas management)"; Diploma in "Countryside Management": www.bbk.ac.uk/fce

8 SYNTHESIS, CONCLUSIONS AND PERSPECTIVES

8.1 CONCLUSION TASK 1 – REGIONAL ECONOMIC DEVELOPMENT

Based on the research of literature, the expert appraisal of selected good practice examples and the discussions within the project team we would like to draw the following conclusions.

- A new understanding of the role of protected areas can be detected. In recent materials and examples, protected areas are seen as supportive tools for regional development and vice versa.
- There are sufficient methods available to predict, evaluate or at least estimate the impacts protected areas have on regional development. Not one of these approaches is standardised or well established. Also the data and information available differs from region to region. So at this moment it is impossible to give a general overview of the situation in the Alps.
- The good practice examples demonstrate the important and interesting linkage between objectives and activities of protected areas and regional value added. But it has to be considered that "hard" data and facts are rarely available.
- The demand for further research is obvious. It should focus on standardising methodologies, calculating effects on a general Alpine level and developing "proper but simple" methods to quantify impacts of individual sites or projects.

8.2 CONCLUSION TASK 2 – PRESERVATION OF BIODIVERSITY

For an efficient preservation it is important to care for biodiversity at different spatial scales. To maintain and enhance the diversity in an entire biogeographic region, protected areas are often too small, but they are the most important element to achieve an ecological continuum (by the constitution of an ecological network) at a large scale. In general, the distribution of protected areas is representative for different ecological regions of the Alps, although most of the protected areas with a high degree of nature protection are located at a high altitude. The collaboration of the protected areas within ecological networking projects is essential to maintain the biodiversity in the Alps. The ongoing project of CIPRA, WWF, ISCAR and ALPARC points in this direction and aims at the creation of an ecological network between protected areas in the Alps.

The impact that projects can have on the preservation of biodiversity is related to their geographic dimension and their time scale. Programmes focussing on small and geographically separated areas fail to preserve biodiversity due to isolation. In addition the reactivity of biodiversity in a region is often slow. In general the programmes must count on continuity in time to sort an effect. Due to this, the geographic and temporal continuum is a fundamental factor for the preservation of biodiversity. However, the relation between projects and biodiversity is difficult to quantify, and action-specific programmes of monitoring are rare. Monitoring often covers the whole territory of a protected area (for example in the Hohe Tauern National Park) and can not directly be related to a single measure taken.

In general, protected areas have brought benefits to biodiversity in a direct and in an indirect way. The first direct benefit for biodiversity is the protection of rare biotopes and species from extinction due to human's activities and the preservation of natural habitats. This protection affects the "within-habitat diversity" and is the aim of several of the good practices depicted in this report. This "insular" conservation allows to some rare and endangered species to find a suitable habitat and to persist till nowadays. Another effect of the protected areas is the preservation of varied landscapes. These territories contain a big habitat diversity which coupled with a high diversity within these habitats can promote high biodiversity. This is the case for most of the protected areas in the Alps that have carried out protection programmes since several decades. Environmental contracts with farmers are a good example of the action of protected areas (we have many examples of this procedure in our good practices). These programmes started in the parks and spread in the surrounding regions afterwards. The contribution to the in situ biodiversity conservation of protected area is very important.

The protected areas have brought many “indirect” benefits to the biodiversity as well. First of all the communication work of these organisms has permitted to raise the interest on the theme "biodiversity" and its benefits among the public, the local stakeholders and the politicians. This knowledge and awareness not only effects the every day behaviour but also fosters the development and acceptance of new environmental policies. These benefits are present in many of our best practices examples, as the Gîtes Panda for example. Another indirect benefit is the showing fact that conservation of biodiversity not only costs money, but that it permits to have an economic added value too.

Other very important benefits are represented by the research work on biodiversity and the launch of innovative projects that the protected areas carry out since several years. The knowledge of the biological diversity and of the methods to measure it, have often been developed in protected areas. These areas are a laboratory for further development of techniques and territorial planning that will protect and enhance biodiversity.

8.3 CONCLUSION ON THE SUCCESS FACTORS FOR INTEGRATED MANAGEMENT

The analyses of good practice examples have shown that large protected areas represent instruments of sustainable regional development, if human resources are comprehensively considered, if a proper management concept is adopted and if a well organised process is accomplished.

The success of a project is strongly related to a leading key person or a leading team enjoying a good reputation and who inspires and motivates the participants and partners during the process. Only a strong leader is capable of integrating promoters with influence in politics and economy in a project as well as inhabitants who are committed to the project. Large protected areas which lack a strong leading person should train their management personnel in motivation and mediation in order to gain support of politics, economy and public.

Furthermore a proper management concept should be adopted which promotes long-term sustainable development. Successful concepts are based on regional tradition, culture and identity in order to allow for an identification process of promoters and inhabitants with the project. With regard to the management concept it is mandatory to define and communicate clear objectives. Large protected areas which have integrated all interest groups right from the beginning have been able to establish common goals

and quantifiable objectives concerning economic, ecological and social issues. Unfortunately, in most cases either economic or ecological objectives are defined very generally (e.g. "improving the economic situation" or "increasing biodiversity") and especially objectives referring to biodiversity are imprecisely formulated.

Once the objectives are clearly and precisely defined the next step is to design a strategy and measures in order to achieve these objectives. Innovation and cross-sectoral co-operations (e.g. agriculture, gastronomy and trade) are important key factors influencing the successful implementation of a strategy (e.g. Gîtes Panda in France). Therefore, measures which create a win-win situation among different stakeholders are most successful. Synergies and win-win situations need to be quantified and communicated to all participants and interest groups. Large protected areas which measure and monitor their effects on environment and economy tend to have a better reputation in politics and economy than those without a monitoring. Hardly ever both, economic and ecological effects are measured. Consequently, only part of the stakeholders recognise their benefit from a particular project.

For future protected areas we recommend the periodical evaluation and monitoring of ecological, social, *and* economic effects as an important measure to keep the motivation, the positive attitude, and the support of all stakeholders towards the project.

Protected areas have the opportunity to get funds for specific projects that are not accessible to other organisations or institutions. E.g. funds are available in the frame of the INTEREG or LEADER programme for projects which contribute to the development of long-term structures that only need seed money and are self-supporting in the future. An example for such a project is the described project of the Regional Nature Park Queyras: with European funds from a Leader+ programme a network of local enterprises and manufacturers (restaurant owners, accommodation owners, other manufacturers) could be created. It can insure the long term marketing of the new agricultural products which have been tested in the frame of this project. The protected area plays an important role as first initiator and driving force of the project, as manager and co-ordinator in a first phase but also as funding institution for the initiative.

The role of the protected areas to reorient their visitors and clients is also important. Protected areas attract visitors. Through co-operation between protected areas and other enterprises (traders selling local products, museums, accommodations, aso.) both parties can take benefit. The example of the Gîtes Panda in France shows, how such co-operation can be successful: the protected areas orient their visitors who are looking for an accommodation to the Gîtes (on their internet homepage for example) and the owners of the Gîtes inform their guests about the protected area. The protected areas have a function as a facilitator and a promoter for local enterprises.

Protected areas can also be examples or pioneers for innovative ideas and processes. The EMAS registration of the Nature Park Mont Avic is a model of a process engaged by a protected area which would increase the awareness of other local enterprises and institutions about environmental management concerns. Different enterprises have already shown their interest in this procedure, what means that this strategy can be successful.

Protected areas should establish co-operations with research institutions in order to promote specific research and monitoring projects, which focus on the objectives of the particular protected area. The gain of knowledge can be used to constantly adapt management processes and evaluate the effects of the protected areas in a region (e.g. National Park les Ecrins, Swiss National Park).

8.4 LINKING UP WITH "FUTURE IN THE ALPS"

Synergy potentials between the outcome of this research paper and the other questions within the project Future in the Alps exist as follows.

In regard to **Issue 1 - Regional value added**, we can state out, that large protected areas can have positive effects on the regional income and employment. Nevertheless these effects are not evaluated, quantified and monitored in most cases. Only direct measurable effects such as job places within the administration or maintenance of the large protected areas are displayed. Obviously it is very hard to detect indirect effects on the regional economy. For example, is a job place at a bakery more related to the visitors of the protected area or to the demand of the local people? Since these effects are not directly measurable they have to be calculated as explained in chapter 3.2.2.5 Monitoring and Evaluation.

Beside direct and indirect effects on income and employment, large protected areas can contribute towards regional value added by advancing the image of a particular region. Positive images can higher publicity and recognition among tourists but also among citizens. Especially for rural areas this is an important factor to stop migration and brain drain. As migration is prevented and more tourists are attracted by the good image of the particular region the cash flow automatically rises. Thus, large protected areas can also higher life standards within peripheral regions.

This is also relevant for **Issue 2 – Governance capacity**. Different life standards and job opportunities are the main reasons that make people migrate from rural areas. Other reasons which are relevant for this question are immaterial aspects such as image, personal attitudes, personal roots and identification. Large protected areas can have a sig-

nificant impact on many of these aspects. For a growing number of people good environmental conditions are more and more important. While large protected areas prevent mono cultures, for example, they contribute towards attractive diversified scenery. For sure this is not enough to make people stay in a region. Other aspects have to be fulfilled. Another possibility to gain higher regional behaviour and identification is the implementation of regional brands and products. As the example "Regionalmarke Eifel" shows, this can have an impact on local employment and income and therefore on migration processes.

In most alpine regions traffic is a major problem. **Issue 4 - Leisure, tourism and commuter mobility** is looking for solutions. Large protected areas have different impacts on this issue. On the one hand protected areas can reduce commuter mobility as they support regional development and improve local job situations. On the other hand protected areas attract a higher amount of tourists for the region which increases leisure and tourism mobility. Due to an increasing volume of traffic it is important to look for sustainable solutions in which the needs of the citizens as well as the needs of tourists are accounted. Citizens suffer from traffic jam, noise and smell while tourists want to travel individually and independently.

One possible solution is the implementation of an intelligent visitor and capacity management. This might include different kind of bus systems for winter tourists as well as for summer tourists, or honey pot systems which encourage visitors not to stay all at once in the same place. Other alternatives for overcrowded regions might be found in alternative traffic such as hiking, trekking, or cycling. For example the Nature Park "Naturpark Altmühltal" has a very good infrastructure for alternative traffic such as biking, hiking and canoeing which encourages the visitors to leave their car at home.

Regarding **Issue 5 - New forms of decision making,** this paper points out the importance of participation processes. In chapter 3.1 human resources are mentioned as a very important factor for the success of large protected areas. Following the bottom up principal, participation of all interest groups in any kind of regional development process is recommended. Thereby it is possible to gain development which is supported by all lobbies and is sustainable at last.

In respect to **Issue 6 - Impact and further development of policies and instruments,** this paper points out different instruments which are important for the economic efficiency and regional development within protected areas. One instrument that has been used successfully in some of the practice examples is branding and labelling. The "Regionalmarke Eifel" shows how brands not only rise quality and save jobs, but also contribute towards regional behaviour and regional identity.

8.5 FUTURE PROSPECTS

8.5.1 Overview

In the frame of the project „Future in the Alps“, the future shall not be forecasted but shaped. From the findings of our analysis we want to provide perspectives for:

- Future research
- Future demands
- Future steps

These aspects are outlined in the following chapter.

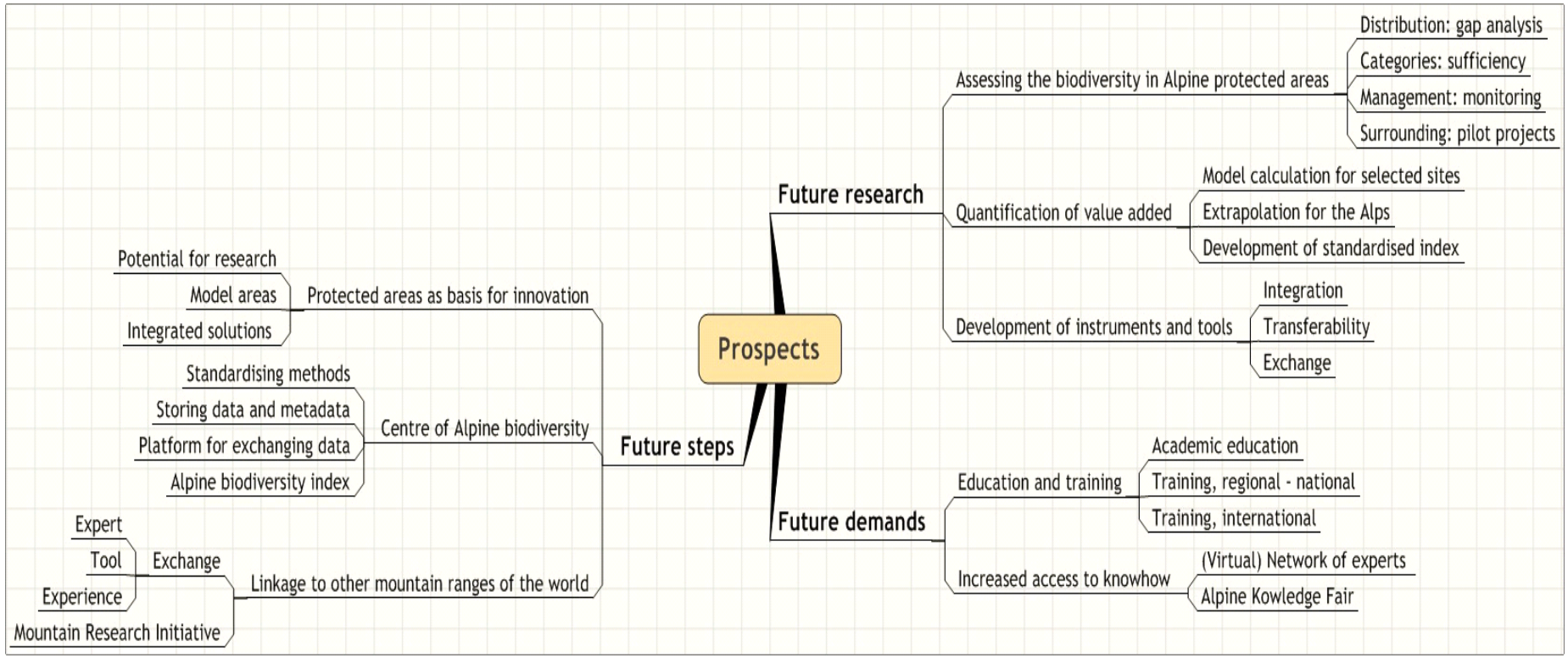


Figure 25: Future prospects.

8.5.2 Future research

Assessing the biodiversity in Alpine protected areas

- Distribution – gap analysis: The sufficiency of the protected areas´ network in the Alps should primarily be assessed by means of a gap analysis. The "hotspots" for Alpine conservation, as already drawn up by previous studies are to be connected to parameters like landuses, threats, aso. The resulting priority areas for conservation are to be compared to the existing network of protected areas.
- Categories – sufficiency: With regard to the priority areas and the priority requirements for conservation the sufficiency of the existing (multiple, overlapping, aso.) categories should be assessed on the Alpine level. The large portfolio of different categories could be used as additional potential for conservation. For both steps, gap analysis and category check, the existing data about protected areas in the Alps should be reviewed.
- Management – monitoring: Proper, but simple monitoring systems (standardised, site-oriented, goal-oriented, technology-based) should be implemented. Monitoring systems are the only possibility to prove success and improve management on a long-term perspective. As the study reveals, there is very scarce information available on the effects of the projects/programmes/actions on biodiversity. Reasons can be seen in the lack of according targets, the lack of agreed monitoring concepts and methods, existing philosophical differences, the topical complexity, lack of financing options, lack of awareness, high time investments aso. The adequate evaluation of biodiversity on different levels (concerning biodiversity as well as the different levels of action) provides a very vast field for research.
- Surroundings – pilot projects: Of course, protected areas shall be embedded into buffer zones for sustainable development, integrated into corridors and networks and last, but not least- managed in a transboundary manner. Pilot projects should be developed, performed and communicated.

Quantification of value added

As the study reveals, there is a need for concrete data about added value caused by protected areas in respect to regional development.

Model calculations for selected areas could help by showing in which part of the local/regional economy protected areas produce a positive effect. Especially the so-called

indirect impacts could play an important role. Research should encompass all parts of a regional economy (tourism, products, services).

With the development of a standardised and more detailed index system based on the one developed in this study (turnover, creation of infrastructure, visitors expenses, local income, new working places, tax revenue, keeping people in the region, cross sector co-operations e.g.) transferring know-how to other Alpine regions will be possible. The obtained figures would be useful for the planning processes of new areas as well as for the management of existing protected areas.

Development of tools and instruments

There is a need for transferable procedures and integrative approaches in the "still conflicting" fields of biodiversity and regional development. The investigations undertaken in this study clearly show that all projects use individual procedural structures. Exchange of knowledge, co-ordination and documentation of the different phases of a process can promote future development.

8.5.3 Future demands

Education and training

Managing protected areas may be described as an ongoing process of permanent regional change management. The persons in charge of facilitating this process have to relay on their personal skills and substantial "technical" understanding and know-how. There is a growing demand for permanent and ongoing education and training on the issues of integrated management of protected areas. Existing programmes should be extended, specifically targeted to Alpine requirements and combined to a "portfolio of future competencies".

- Individual training courses and programmes performed by individual parks or national systems, mainly focussing on the personel skill and the practical demands.
- Training programmes by inter- or transnational organisations, e.g IUCN or specifically addressed to Alpine issues Alparc (e.g. Project AlpenCom), mainly focussing on technical aspects and exchange of transferable "tools" instruments and procedures.
- Academic education possibilities should be provided in an extensive manner and therefore also rise a theoretically well based understanding of integrated management of protected area and sound concepts of advanced research.

Increased access to know-how

The discussion in the frame of "Future in the Alps" showed quite clearly that future development of this mountain range in general and of protected areas in particular will need a permanent up-grade and exchange of know-how (= knowledge + skills). Thus, the access to know-how must be facilitated. We suggest to develop a know-how-pool on two levels:

- A homepage as central technical backbone and platform, maybe developed out of the homepage "Future in the Alps"
- A regular meeting of people to personally exchange know-how, maybe also a followup activity of "Future in the Alps" (alpPerformance), a yearly "fair" or "market place", a "boulevard of experience" or something similar.

8.5.4 Future steps

Finally, the project team wants to highlight some further steps.

Seeing protected areas as basis for innovation

Protected areas prove to have an enormous potential for innovations. Compared to many other areas they have easier access to networks, know-how and international developments. But also conflicts and problems concentrate in protected areas and require integrated and acceptable solutions. Therefore Alpine protected areas are to be seen as model areas for solving Alpine problems.

Establishing a Centre of Alpine biodiversity

This study made obvious that the Alpine institutions substantially lack overall, standardised information on biodiversity of the mountain range. A Centre of Alpine biodiversity may technically support the long-term development of the Alps in general and of the protected areas in particular, e.g. by:

- Standardising methods to detect and evaluate biodiversity
- Storing data and metadata
- Providing a platform for exchanging data
- Creating an Alpine biodiverstiy index

Linking with other mountain ranges of the world

Many problems and solutions the project teams was facing also might be of interest for other mountain ranges of the world. We suggest an increased exchange with other mountainous regions and to get involved with the Mountain Research Initiative (http://mri.scnatweb.ch).

ANNEX 1: LITERATURE

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ANNEX 2: LIST OF GOOD PRACTICE EXAMPLES FILLED IN THE ONLINE-DATABASE

The good practice examples listed below are differentiated according to the type of categories by the IUCN as depicted in chapter 3.1. and the UNESCO men and biosphere programme (MAB). Each box contains a short description of the project, a short statement on the project's relevance for biodiversity and regional development, a list of the most relevant success factors and difficulties.

1. Cultural landscape programme NP Hohe Tauern

Culture landscape programme National Park Hohe Tauern	Hohe Tauern, Carinthia	Austria
National Park Hohe Tauern (IUCN II)	~100.000-150.000 € per year	1991-1997

National Park, area: 6000 ha in the surrounding of the National Park, running time: 1991-today, objective: Evaluation and compensation payments for landscape conservation in low-intensity used areas. The evaluation of the investigation area was mapped by land register (cultural landscape investigation). This was in the beginning of the 90s a very new concept. A management plan and an approach were developed. The implementation was done by a regional organization. In 1995 this organization was replaced by the OEPUL program (program for ecological agriculture).

Relevance for biodiversity:	**Relevance for regional development:**
Management of all valuable biotopes and habitats in a specified area, spatial extension quite high, long-term programme. programme targets and measures include biodiversity issues Overall relevance rather high (4)	Subsidies/ additional incomes for landowners, shaping of environmental awareness, support of local employment in the agricultural sector, intensified communication, only one sector involved, depending on external financing (general problems with (external) subsidies) Overall relevance medium (3)

Circumstances and success factors:

Success factor "concept":

Concept formulation and implementation: Direct communication with the landowners, mostly farmers. In general this was done by a visit on the concerned ground (Communication). Quantification and valuation of rural achievement. Local organisations were charged to carry out the project. These organisations were more accepted (execution by local organisations). The project and objectives were created in co-operation with the farmers (participative and transparent management).

Contents and elements: The farmers got compensation payments. This was based on contracts (lucrative incentive system). The farmers were allowed to use their land under certain restrictions (protection by low intensity use). This was the first time that the grounds were exactly mapped by land register. The protection of the land by low-intensity use was ensured by contracts with the farmers (protection by contract).

Success factor "human resources":

Person in charge: Co-operation and communication between the protected area management and landowners. The planning was done with the farmers (close contact between stakeholders).

Difficulties:

The main difficulty was to convince the stakeholders of this new idea. The solution was the financial incentive.

2. Cultural landscape programme Nature Park Poellauer Valley		
Nature Park Poellauer Valley	Poellauer Valley, Styria	Austria
Nature Park Poellauer Valley (UICN V)	~ 73.000 €	1999-2001
Nature Park; area: 12.500 ha; Running time: 1999-2001, Objective: Conservation of the traditional cultural landscape. Valuation and compensation payments for farmers by OEPUL for low-intensity agriculture. A management plan was developed on the basis of the land register. The participation is 90%. The programme included creation of ecological awareness and a scenario of consequences for the landscape and biodiversity in case of intensive agriculture. The change of the landscape and the biodiversity between 1822, today and 2022 was illustrated.		
Relevance for biodiversity:	**Relevance for regional development:**	
Conservation of the regional cultural landscape and biodiversity. Plant exchange market with an extensive offer of rare plants. High spatial distribution (90% of all landowners took part). Long-term effects. Overall relevance rather high (4)	Improvement of the economic situation of the farmers. Creation of a second income possibility. Support of local employment in the agricultural sector. Only one sector involved. General problems with (external) subsidies. Shaping of environmental awareness through close co-operation. Overall relevance medium (3)	
Circumstances and success factors: **Success factor "concept":** Contents and elements: The landowners got compensation payments for participating in the programme (financial incentive). The farmers were allowed to use their land under certain restrictions (protection by low-intensity use). Concept formulation and implementation: Integration of the project in a protected area management plan, which permits a front end financing by the OEPUL programme (utilization of synergies). Direct communication with the landowners (communication). **Success factor "people":** Partner and participants: The municipalities supported intensively the project. Person in charge: Co-operation and communication between the protected area management and landowners (close contact between stakeholders). **Success factor "process flow":** In the region existed a high need for action.		
Difficulties: To convince farmers. The solutions were compensation payments.		

3. Regional Marketing Nature Park Poellauer Valley		
Nature Park Poellauer Valley	Poellauer Valley, Styria	Austria
Nature Park Poellauer valley (IUCN V)	~ 73.000 €	2002-2006
Nature Park; area: 12.500 ha; Running time: 1999-2001, Objective: Regional marketing, revival of regional land use. Formation of a syndicate (70 members). First a market survey was done, after that the development of infrastructure and a product range. The products were constantly on the basis of experiences improved (6500 different products in the own shop).		

Relevance for biodiversity:	**Relevance for regional development:**
Strengthening of the biological agriculture, protection and stabilization of the regional sort of pear ("Hirschbirne") and the typical cultural landscape. Biodiversity indirectly influenced. Overall relevance rather low (2)	Strengthening of the regional agriculture. 85% of the gross income results by the regional market of the Nature Park, 90% are regular customers. The association has 70 suppliers. Two working places were created by an own shop (2003). Overall relevance rather high (4)

Circumstances and success factors:

Success factor "concept":

Contents and elements: clear framework, development of an infrastructure and logistics, proximity to customer, event shopping

Concept formulation and implementation: participative and well working co-operation's reliability, observance of delivery dates, strong marketing (distinct product design, tasting, aso.) intelligent pricing, tasting of innovative and excellent products, consistent and constant implementation

Success factor "people":

Partner in economy: co-operation with tourist-association

Success factor "process flow ":

Further training and qualification: Further training to ensure a high quality standard.

Communications, information and public relation: publicity and documentation of food production

Difficulties:

Few experiences, few products, product design and composition, legal framework and conditions, logistics.

4. Specialities of Nature Parks – Naturparkspezialitäten		
Nature Parks of Austria	Austria	Austria
The Association of Austrian Nature Parks / Verband der Naturparke Österreichs (IUCN V)	278 000 €	2004-2006

The Austrian Nature Parks represent characteristic cultural landscapes. The beauty and the attraction resulted usually from the fact that farmers produced and still produce their products in a traditional way. 15 Nature Parks took part at the project to support farmers. In the project "Austrian Nature Park specialities" criteria for Nature Park products, a common design and marketing strategies were developed. The objective of the association is the realisation of common marketing projects.

Relevance for biodiversity:	**Relevance for regional development:**
Biodiversity influenced indirectly. Supports specific traditional land use systems by selling selected products. Overall relevance rather low (2)	Improvement of the economic situation of the farmers. Creation of a second income possibility. Own Nature Park shops are creating new jobs. Project is also a communication strategy. Overall relevance rather high (4)

Circumstances and success factors:

Regional marketing in Austrian Nature Parks is a common praxis. The idea of this project is to offer the products of the different Nature Parks with one label. The consumer has a large variety to choose on excellent products of different regions. Furthermore it is a possibility to increase the sales.

Success factor “concept”:

Contents and elements: one label for all Nature Parks (composition of products of different regions with the same Labelling)

Concept formulation and implementation: common appearance, corporate design, production variety

Difficulties:

Difficulties resulted particularly from the large number of participants. Compared to a big company the process and decisions, e. g. the common design, should not be imposed from the management. The farmers had to be convinced that the compliance with the criteria and the participation in common activities give them benefit. The coordination can be difficult, because of the different progress of participants.

<table>
<tr><td colspan="3">5. Nature Park Grebenzen – Ecomodel</td></tr>
<tr><td>Nature Park Grebenzen (IUCN V)</td><td>Styria</td><td>Austria</td></tr>
<tr><td>Ecomodel</td><td>~200 000 € per year</td><td>Since 2000</td></tr>
<tr><td colspan="3">Nature Park, area: 9200 ha, running time: continuous since 2000. Objective: The "Ecomodel Nature Park Grebenzen" is to develop a network between all existing agricultural activities on all levels. Including direct marketing projects and co-operation projects between agriculture, tourism and gastronomy. Furthermore all protected area projects are integrated, in order to realize a nature protection-conformal agriculture. The concept is carried out by individual projects. Examples for this: Nature Park restaurants, new old crop species (promotion of sparse orchard), participation in the project Nature Park specialities.</td></tr>
<tr><td colspan="2">Relevance for biodiversity:</td><td>Relevance for regional development:</td></tr>
<tr><td colspan="2">Nature conservation by contracts with farmers; ecological consultation; creation of ecological awareness; indirect influences

Overall relevance rather low (3)</td><td>Regional marketing, networking between farmers, consumers and gastronomy. Construction of a zoological park and wellness centre. Co-operation with regional guesthouses. Assignment of regional enterprises. Many sectors involved.

Overall relevance rather high (4)</td></tr>
<tr><td colspan="3">Circumstances and success factors:

Success factor „concept“:

Contents and elements: Proximity by regional and direct marketing. The farmers were allowed to use their land under certain restrictions (protection by low-intensity use).

Success factor „people“:

Partner and participants: Integration of opinion leaders.

Success factor “process flow ”:

communications, information and public relation: A lot of communication with the stakeholders, especially farmers. The integration, participation, co-operation and direct contact resulted in a high identification, acceptance and extensive network.</td></tr>
<tr><td colspan="3">Difficulties:

Only small financial funds. Too less to create a professional management.</td></tr>
</table>

6. "Bergholz" and "Walserstolz", Biosphere Reserve Großes Walsertal		
Biosphere Reserve Großes Walsertal (UNESCO MAB)	Vorarlberg	Austria
"Bergholz" and "Walserstolz" – Biosphere Reserve Großes Walsertal		Since 2002 (Bergholz)

The Biosphere Reserve „Großes Walsertal" has an extension of 19.200 ha. The objective is to conserve the cultural landscape by sustainable use. Two distinct products were developed – cheese and wood. The project "Walserstolz" is an amalgamation of alpine dairies with a production of several different types of cheese. The marketing of the cheese is done with an own unique logo. The project "Bergholz" is an amalgamation of cabinet makings, sawmills, carpenters, municipalities, manufacturers of ovens and foresters. The objective is to build wooden houses, items for houses and furnishing with regional wood on a high level of quality. The forestry and pasturing is done in a sustainable manner.

Relevance for biodiversity:	**Relevance for regional development:**
Existing targets and measures on sustainable land use; influences indirectly, but with high spatial extension, Overall relevance rather low (2)	Enhancement of local co-operation and networking, improved incomes through direct marketing or new added-value chains, different sectors involved, supports local employment, Overall relevance very high (5)

Circumstances and success factors:

Success factor „concept":

Contents and elements: Proximity by regional and direct marketing; Production of high quality products; Certification and label.

Success factor „people":

Partner and participants: Integration of enterprises of the whole production chain.

Success factor "process flow ":

Communications with customers and continuous optimisation.

Difficulties:

Walserstolz: To unite the different alpine dairy co-operatives to one umbrella association.

Bergholz: One to two leaders are enforcing the project. The enthusiasm and identification of the other participants are not so strong.

7. Open door farms of the Biosphere Reserve „Großes Walsertal”		
Biosphere Reserve “Großes Walsertal” (UNESCO MAB)	Vorarlberg	Austria
Nature conservation programme and open door farms of the Biosphere Reserve „Großes Walsertal”		

The Biosphere Reserve „Großes Walsertal“ has an extension of 19.200 ha. The objective of the programme “open door farms” is to conserve the cultural landscape, to intensify ecological agriculture and creation of ecological consciousness. For 28 alpine farms nature management plans were developed. In workshops and excursions knowledge and cultivation advices were distributed and different types of pastures explained. An own brochure of the vegetation and animals of all farms was created. Ecological farms have to follow certain guidelines, which are closed to the approach of the Biosphere Reserve. For the participation the farms get subsidies. Nine farms are participating at the open door programme and are trained to receive visitors to provide them an insight into farm life.

Relevance for biodiversity:	**Relevance for regional development:**
Shaping environmental and ecological awareness, advanced training on sustainable meadow management. Overall relevance low (2)	Chance of a second income, service for tourism, one sector involved. Overall relevance rather low (2)

Circumstances and success factors:

Success factor “concept”

Contents and elements: shaping of ecological awareness

Success factor “people”:

High motivation, commitment and proud; Regional consciousness

Difficulties:

No noteworthy difficulties.

8. EMAS-implementation Biosphere Reserve "Großes Walsertal"		
Biosphere Reserve "Großes Walsertal"	Vorarlberg	Austria
EMAS-programme "Großes Walsertal" (UNESCO MAB)		Since 2001

The Biosphere Reserve "Großes Walsertal" is a model region for sustainable development in the alpine area of Austria. The "Großes Walsertal" was certified as UNESCO Biosphere Reserve according to the Man and Biosphere Programme in 2000. In 2000 "Großes Walsertal" was made one of the first Biosphere Reserves in Austria according to the Seville Strategy. To that extent the project is the logical continuation of initiatives taken in recent years in the field of sustainable regional development (policy document development with citizen participation, environmental orientation in agriculture, external marketing and regional use of local biomass, combined tourism/agriculture etc). The focus of this project is accordingly to provide an integrated platform for existing and future measures and model components for a defined territorial unit. The Biosphere Reserve has an extension of 19.200 ha. The objective is the implementation of an eco-management and audit scheme (EMAS). For a sustainable regional development several indicators and criteria were developed for the different sectors. Included is the evaluation of biodiversity (key figures of areas of ecological interest, protected areas). The EMAS-certification is a useful control instrument for the regional development and biodiversity.

Relevance for biodiversity:	**Relevance for regional development:**
Further and approved indicators for monitoring necessary. Overall relevance low (1)	No direct influence, but instrument for controlling/ evaluating (and steering) regional development; many indicators. Overall relevance rather high (3)

Circumstances and success factors:

Success factor "concept"

Contents and elements: Requirement to continuously improve the sustainable performance; Subsidies from the EU were an incentive

Difficulties:

Investigations in the different communities were difficult; no obligations were possible; development of a classification system was difficult; the success depends from activity of the mayors and volunteers.

9. "Gîtes Panda"		
Regional Nature Parks (IUCN V)	France	France
WWF France, Federation of the French Regional nature Parks		1999-ongoing

The "Gîtes Panda" are accommodations that are labelled by the WWF France. They relay on an adherence to the "Gîtes de France", a big French holiday accommodation provider. They have to be located in a Regional Nature Park or in a National Park. The brand name "Gîte Panda" is reserved to accommodations corresponding to certain quality criteria (minimum quality criteria for the adhesion to the "Gîtes de France", plus the environmental criteria of the "Gîtes Panda"). The accommodation is chosen because of the engagement of their managers in nature protection.

The owner of the "Gîte Panda" plays a role as ambassador between his clients and nature. He has to carry out a special ecological action on his property (maintenance of natural sites, biological agriculture, renewable energies). In a convention between the owner, the WWF and the protected area, he engages himself to preserve nature on his own ground and to help protect the environment of his surroundings.

Relevance for biodiversity:	**Relevance for regional development:**
Every manager of a "Gîte panda" brings his own contribution to nature preservation and insures the environmental education and awareness raising of his guests. Overall relevance high (3)	Overall relevance medium (2)

Circumstances and success factors:

Success factor "human resources":

An important success factor is the motivation of each of the accommodation owners to contribute at their level to environmental protection and to awareness raising for environmental issues of their guests. This project offers them a possibility to join their motivation in a common network.

Success factor "concept":

The co-operation of different institutions guarantees a high quality product in accordance to environmental criteria. The institutions stand with their name and through their strict control for the quality of the network members.

Difficulties:

No noteworthy difficulties.

10. EMAS Audit Scheme in the Nature Park Mont Avic

Nature Park Mont Avic	Region Aosta	Italy
Nature Park Mont Avic (IUCN V)		Certification ISO 14 001 in February 2003, EMAS registration in May 2003

The Eco-Management and Audit Scheme (EMAS) is the EU voluntary instrument which acknowledges organisations that improve their environmental performance on a continuous basis. EMAS registered organisations are legally compliant, run an environment management system and report on their environmental performance through the publication of an independently verified environmental statement. The Nature Park Mont Avic registered EMAS in May 2003. Since then important improvements of the working processes have been registered. The Park administration is now an example for other enterprises and organisations to certify their management systems.

Relevance for biodiversity:	**Relevance for regional development:**
The aim of the Natural park Mont Avic is to preserve nature, to communicate about environmental issues and to increase public awareness. These aims and the impact of nature and environment they have haven't changed. Through the improvement of the working processes the park may assure a more efficient work and improve therefore the impact on environment. Overall relevance rather low (1)	The aim of the Nature Park is not to create an economic value added. But the improvement of the different processes may lead to gain savings. Overall relevance low (3)

Circumstances and success factors:

The EMAS registration of the Nature Park Mont Avic was an important step and a symbolic act of the park. On one hand the registration certifies the environmental management system of the organisation and improves its internal functioning. On the other hand the park is now a model for other public and private organisations and companies to improve their environmental performance.

In some Member States environmental instruments (Regulations, Directives, aso.) are the basis for most of the environmental legislation in force. In spite of all the Directives and Regulations adopted by the EC, and the international and national action in this field, environmental quality is still not improving as rapidly as some would hope. For many organisations simple compliance with legislative requirements is only the first step on the path to sustainable development. Reactive management strategies such as remediation, cleanups and paying penalties for breach of legislation incur financial burdens that undermine profitability. Therefore, the benefits of voluntary instruments such as EMAS are becoming more and more obvious.

Success factor "process flow":

Monitoring and evaluation: The Nature Park Mont Avic has registered to the Eco-Management and Audit Scheme (EMAS) of the EU. This voluntary instrument certifies them a functioning environment management system. The evaluation of the environmental performance of the organisation is guaranteed by the publication of an independently verified environmental statement. The Nature Park Mont Avic registered EMAS in May 2003. Since then important improvements of the working processes have been registered. The Park administration is now

an example for other enterprises and organisations to certify their management systems.
Difficulties: The Nature Park had to engage external consultants for the registration process because of a lack of experience and a lack of time.

11. Réseau Ecologique Départemental de l'Isère (REDI)

	Rhône-Alpes, Département de l'Isère	France
Conseil Général de l'Isère	Budget	2000-ongoing

There is a high human activity in the valleys of this French department. The human activity and the related infrastructure cause the destruction or fragmentation of many plant and animal habitats. The department started this project to analyse the existing ecological networks in this area. Therefore a group of experts was mandated to realise a study about the habitat connectivity in the department. The results of this study are now used to create or restore biological corridors for wildlife and are to be integrated in landscape plans. Several different actions are carried out to promote and realise the idea of an ecological network in the department.

Relevance for biodiversity:	**Relevance for regional development:**
The aim of the different actions carried out in the frame of this project is the preservation of the species biodiversity and their genetic capital. New biological connections between sensible natural sites are created and old ones restored. A sustainable land planning policy is going to be set up considering the biological corridors as important elements to take into account. Overall relevance high (4)	No direct economic value added. Overall relevance low (1)

Circumstances and success factors:

High motivation and investment of a regional public administration to design an own strategy for the creation of an ecological network of the region (Département Isère).

Involvement of competent organisations in the process.

A good communication strategy towards the public and the concerned actors and a good participatory involvement of all stakeholders in the different planning processes.

Success factor "process flow":

The Conseil Général of the French department Isère has decided an own policy in favour of the development of ecological connections on its territory. Until now there is no other project in the Alps dealing with these issues at this scale. The department Isère started a really dynamic process to raise the awareness on ecological networks and biological corridors, to include these subjects in the landscape planning policy and to start concrete actions to create wildlife corridors. During the whole process the different actors were integrated to the project and could participate in the development of the project. Many meetings were held at different municipalities to join the local population and the local decision makers to the process of planning and developing possibilities to include ecological connectivity areas in urban planning. The necessity of such ecological connections and their consideration in different planning instruments was well accepted by the local decision makers. The whole project was accompanied by a steering committee composed of different partners (local decision makers, hunters, naturalists, landscape planners,…).

Difficulties:

The two major challenges for the future development of this project will be to find a status for the ecological corridors and to assure the financing of the further concrete actions.

12. Diversification of vegetal production in the Regional Nature Park Queyras

Regional Nature Park Queyras	Hautes-Alpes, Provence-Alpes-Côte d'Azur	France
Regional Nature Park Queyras (IUCN V)	115 000 €	2002-2006

Since 2002 the Regional Nature Park Queyras leads a programme for the diversification of agriculture by encouraging new varieties in the vegetal production. In the frame of decreasing tendencies in the traditional production fields, the aim of the project is to stimulate agriculture on the parks territory, to diversify the income sources for farmers and to motivate the settlement of new young farmers. Experimentation of the feasibility of the production of genepi (Artemisia umbelliformis), saffron (Crocus sativus), industrial hemp (Cannabis sativa), the rehabilitation of traditional cereals and different potato varieties were conducted in the frame of this project. The Regional Nature Park signs conventions with interested farmers fixing the production rules, finances the seedlings and assures a technical and scientific support. The park also conducts research about possible markets and facilitates the communication between the producers and the consumers.

Relevance for biodiversity:	**Relevance for regional development:**
The programme contributes to the preservation of the domestic and wild biodiversity by encouraging farmers to cultivate old traditional varieties, alternatives to industrial or wild growing protected varieties and by diversifying the range of cultivated plants. The farmers engage themselves to produce following the regulations of the signed convention (close to organic farming). Overall relevance rather high (4)	Overall relevance rather low (2)

Circumstances and success factors:

Success factor "concept":

The programme for the diversification of the vegetal production in the Regional Nature Park Queyras combines different actions. On one side all actions in relation with the cultivation and farming of old or alternative plant varieties. On the other hand actions for the marketing of the produced products and communication actions to raise the public awareness on these traditional producing methods and all the cultural aspects they include.

For all actions related with farming the conditions are clearly defined by the contract that is signed between the farmers and the Park. The farmers engage themselves to raise the plants following the terms of the signed convention (close to organic farming). The regulations on the farming conditions, on how to monitor the cultures during the period of the experimentation and how to proceed with the harvest are strictly defined by this convention. The results are analysed and discussed by the scientific partners of the project which assure a correct proceeding during the cultivation (supply of seedlings and plants, information on cultivation techniques,…).

The brand mark "Marque Parc" can be assigned to products or services corresponding to the criteria established between the concerned sector, the Regional Nature Park and the union of all regional Nature Parks of France. The marketing strategy and the quality criteria for the label

are defined in the specification book. A process was started to allow the using of this brand mark for cheese, potatoes and milk products of the Park. A major success factor for this project is the fact that it relays on a voluntary participation of the actors. They have a new income through the plants they produce (in the moment the parks guarantee them the buying of their harvest). In the same time they get aware of the cultural heritage linked to this way of production and to the traditional products. Through the products a common local identity can be created. A second point is the creation of links between the actors at different levels, beginning at the producer's level (farmers) up to the consumer's level. The chain is short, the producers and the users work together, know themselves and their requirements, the quality can be guaranteed and the added value stays within the region. Different networks could be created in the frame of the project (network of artisans, tourist actors and traders, network of accommodation providers).
Difficulties: Some problems are due to the seedlings material, the lack of experience with the unknown varieties. The backers had some problems with the characteristics of the produced flower but this is also due to a lack of experience in manufacturing the cereals and can be solved by improving the procedures.

13. Hedgerow network landscape of the Champsaur and Valgaudemar Valleys

National Park (IUCN II)	Provence Alpes Côte d'Azur, Hautes-Alpes	France
National Park Les Ecrins	610.000 €	1999 - 2004

In 1999 a large project of a new physical planning of the Champsaur Valley has been planed. In the frame of this new physical development of the area, all hedges and small forests forming the typical valley landscape should be removed. To prevent this, a protest movement grew and led to an agro-environmental local operation (OLAE: Operation Locale Agri-Environnementale) to preserve the landscape. In the same time, the National Park finished a study about the biological importance of the hedgerow network. This study showed the importance of the hedges as landscape structures, their special interest for ecology and agriculture. In this frame, the National Park started a programme for the maintenance and restoration of the characteristic hedgerow network landscape of the Champsaur and Valgaudemar Valleys and brought together the different partners of the project. The whole programme lasted from 1999 to 2004 with different parts regarding the content and the funding. From 1999 to 2004 in the frame of agri-environmental measures to finance the actions of the farmers for the maintenance and restoration of the hedgerow network. From 2000 to 2001 in the frame of a Leader II project marketing actions were organized, communications tools were created and a scientific monitoring of the project was initialised.

Relevance for biodiversity:	**Relevance for regional development:**
Preservation of the typical hedge landscape with all its ecological and agricultural advantages. Management of wetlands. Overall relevance high (5)	First steps to combine the environmental actions with economic activities such as the fire wood marked. Overall relevance rather low (2).

Circumstances and success factors:

Success factor "human resources":

The first success factor of this best practice example is the motivation of the programme coordinator at the National Park. The whole project planning as well as the idea of the combination of two financing tools was done by the coordinator. Another success factor was the motivation of the local actors and the awareness raising of the local public for their common and traditional landscape.

Success factor "process flow ":

The communication aspect played a major role in the success of this project. Not only communication with concerned farmers and the local residents but also a large communication strategy to reach a larger public and schools. Even an international exchange could be organised in the framework of this project.

Difficulties:

The French regulations on contracts for agri-environmental measures with farmers changed during the project duration, the old model of agri-environmental measures was given up for new contracts with farmers (CTE – Contrats Territoriaux d'Exploitation). This new contract model stopped the possibilities for promotion of the programme.

14. Partner businesses of the Biosphere Park Rhön		
Biosphere Reserve (UNESCO MAB)	Hessia, Bavaria, Thuringia	Germany
Biosphärenreservat Rhön	100 Mio €	Project start 1992

The target of this project is to strengthen farming and forest enterprises as well as workmanship within the region. Participants have to fulfil quality criteria to name themselves “Partnerbetriebe des Biosphärenreservats” (partner of the biosphere park). Further plans to generate a genuine brand have not been developed successfully yet.

Relevance for biodiversity:	**Relevance for regional development:**
The impact of this project is not exactly quantifiable. Fact is, that currently 65% of agricultural land is cultivated extensively, 8% ecologically. One organic dairy was founded. Local products are more requested. Preservation of open space was reached by grazing projects. Overall relevance rather high (3)	Fact is, that after the foundation of the Biosphere reservation, 18 regional marketing companies, one regional-shop chain, and one Logistic and distribution centre settled in the region. The amount of regional products is 5% within private consumption and 15% within gastronomy. 150 new jobs were created, 45 are directly connected to the biosphere park. Overall relevance high (5)

Circumstances and success factors:

Success factor “human resources”:

Particularly the high participation of citizens and the cross state approach were innovative factors in the early 1990ies.

Difficulties:

Tourism in the biosphere park is non-professional. In six rural districts ("Landkreise") and three federal states there are more than 50 organisations and institutes (chambers of commerce and industry ("IHKs"), chambers of crafts, business development associations ("Wirtschaftsförderungsgesellschaften"), tourism associations, foundation centres ("Gründerzentren") aso. which deal more or less with regional development. There was no overall institution or cooperation covering the three federal states.

The German expression "Biosphärenreservat" (English: biosphere reserve) has not been accepted by the population. People did not want to live in a "reserve" as the expression evokes parallels to "Indian reserves" in the United States. "Biosphärenpark" (biosphere park) would have been a better alternative as it is used in Austria.

15. Regional brand „Regionalmarke Eifel“ in the Eifel National Park		
National Park (IUCN II)	Nordrhein-Westfalen, Rheinland-Pfalz	Germany
National Park Eifel	2,5 Mio federal funds during the 4-year starting phase	project start 2005

The brand “Regionalmarke Eifel” which was applied by the Nature Park “Naturpark Südeifel” contains high quality standards for organic and regular products. By the brand corporation these products are offered in trade. Gastronomy can also be user of this brand when having 15% (in 2006 25%) of brands in the kitchen goods and material employed.

The competitiveness of farms and forest enterprises within a network of food and wood manufacturing trades and tourism services generates an active development of the traditional cultural landscape. Thus an attractive tourist area can be preserved by the support of the tourist industry itself.

Relevance for biodiversity:	**Relevance for regional development:**
By saving the competitiveness of farms through environmentally friendly land use the cultural landscape and the diversity of species is preserved. Overall relevance rather high (3)	As a basis of tourism the attractive cultural landscape is preserved. By using the brand “Regionalmarke Eifel” farmers received an added value of 5-15%, manufacturing crafts 10-25%, and tourism 10-20%. For the year 2006 the brand is expected to generate a gross turnover of 0,3 up to 1 Mio €. Overall relevance high (5)

Circumstances and success factors:

Success factor “human resources”:

President of the Nature Park is the district administrator; Another leading person is the president of the farmer’s union.

Success factor “concept”:

Participants composed of farmers’ unions, chambers of crafts, Eifel Tourismus GmbH, and Naturpark Südeifel, are equal. 35 of 50 products with 50 quality criteria are in trade. Once a year the project gets evaluated by NOVA institute in Cologne.

Difficulties:

The acquisition of new brand users is quite difficult.

<table>
<tr><td colspan="3">16. National Park Hosts in the Eifel National Park</td></tr>
<tr><td>National Park (IUCN II)</td><td>Nordrhein-Westfalen, Rheinland-Pfalz</td><td>Germany</td></tr>
<tr><td>Nationalpark Eifel</td><td>800.000 € (public funds for qualification courses)</td><td>Project start August 2005</td></tr>
<tr><td colspan="3">Gastronomy businesses which use the brand “Regionalmarke Eifel” can be trained as “Nationalparkgastgeber” (National Park hosts). Until now there are 25 participating businesses who have to fulfil specific criteria. They have to act as ambassadors of the National Park and are provided with special information by the National Park.</td></tr>
<tr><td colspan="2">Relevance for biodiversity:</td><td>Relevance for regional development:</td></tr>
<tr><td colspan="2">By using the brand “Regionalmarke Eifel” or “Viabono” the National Park hosts oblige themselves to accomplish special nature friendly measures such as energy saving measures. Being ambassadors of the National Park the National Park hosts gain higher sensibility among their guests for environmental issues and make them to “ambassadors” as well. Among the local people a higher acceptance of the National Park’s ecological protection targets is aspired.

Overall relevance rather low (2)</td><td>By fulfilling environment saving measures it is anticipated to attract more visitors who are sensitive regarding ecological aspects.

Overall relevance rather high (3)</td></tr>
<tr><td colspan="3">Circumstances and success factors:

Success factor “human resources”:

The innovative content is, that hosts within the National Park deal actively with the subject National Park.

Success factor “process flow ”:

The National Park hosts participate actively in the coordination tasks of the Eifel Tourism Ltd. and the National Park Administration and have their own speakers. They develop their own criteria and packages. Training programs are part of the qualification criteria. Every three years the participants will be evaluated.</td></tr>
<tr><td colspan="3">Difficulties:

No noteworthy difficulties.</td></tr>
</table>

17. Lamb from the Nature Park Altmühltal

Nature Park (IUCN V)	Fränkische Alp, Bavaria	Germany
Naturpark Altmühltal	300.000 ha	project start 1997

The purpose of the project “Almühltaler Lamm” is the distribution of high-quality lamb from the Nature Park by butchers and gastronomy. While the shepherds and sheep-farmers within the Nature Park benefit they can maintain their businesses and preserve the unique gramineous formations which are so typical for the Nature Park Altmühltal.

Today the sheep-farmers have a higher reputation within the population. Inhabitants as well as visitors are aware of the need of preserving the cultural landscape in the Nature Park Altmühltal.

The Nature Park Altmühltal has an ideal net of cycle tracks, canoeing, rock climbing, shipping on the Main-Donau-Canal, fossils, roman remains such as the Limes and ancient forts, outstanding information, service and eco-centre in a baroque church.

Relevance for biodiversity:	**Relevance for regional development:**
The project supports the preservation of open space. Thereby unique gramineous-formations and seldom plants are protected. Overall relevance high (4)	The project supports the income of sheep-farmers and shepherds. There is no evaluation of the projects regional development effects, but the effects of the whole Nature Park have been evaluated. Overall relevance rather low (2)

Circumstances and success factors:

Success factor “human resources”:

The innovative content of this project is the co-operation of clubs and associations who used to be more like rivals previous to the project.

Success factor “concept”:

By organising events and wide public relation activities together with all project executives publicity as well as team spirit were raised.

Success factor “process flow”:

The project itself has not been evaluated yet. However an overall survey within the “Naturpark Altmühltal” regarding the economic effects shows, that the average daily expenditure of daytime visitors is 11,70 € per capita; 76% spent in gastronomy, 9,4% in retail, 18% in services; The average daily expenditure of short term tourists is 39,70 € and 44,20 € of long term tourists; 910.00 visitors in total the gross turnover of tourists within the “Naturpark Altmühltal” is 20.704.100 €. By subtracting sales tax you receive the net turnover. The proportion of net turnover that results in income is 40,3% in the “Naturpark Altmühltal”. Within the first and second income group the total income is 10.252.400 €. By dividing the turnover of tourists by the average social income you can generate the employment effect. The employment equivalent is 483 within the “Naturpark Altmühltal”. This means that visitors provide 483 jobs in the region.

Difficulties:

The project lamb from the Nature Park Altmuehltal suffers from a lack of professional personnel and effective marketing.

ANNEX 3: MATERIALS TO BEST PRACTICE EXAMPLES

Materials saved on the online platform for documents

- Programme de réhabilitation de céréales locales (pdf document)
- Les expérimentations en production végétale agricoles brutes et transformées édition 2005 (pdf document)
- Productions agricoles brutes et transformées et utilisateurs locaux potentiels dans le Parc naturel régional du Queyras (pdf document)

Hard copies

- There is no further original material besides the above mentioned literature and documents.

ANNEX 5: DEFINITIONS OF KEY TERMS (UPDATE)

Key term	Definition relevant for 'Future in the Alps'
Accessibility	The possibility to be (physically) accessible depends on the availability and quality of transport infrastructure, transport means and transport services. Accessibility is usually measured by travel time.
Added value	Additional benefit generated through a sustainable process (development, production, education, management, know-how-appliance, co-operation, networking)
Alpine biodiversity	The variety and abundance of species in the geographical region of the Alps, their genetic composition, as well as the natural communities, ecosystems, and landscapes in which they occur
Awareness raising	To enhance the conscious knowledge of one's feelings, motives, and desires related to a specific topic.
Co-operation	Working together for the purpose of sustainable development and of generating added value Cross-sector co-operation: different sectors working together for the purpose of sustainable development and of generating added value Regional/local co-operation: public and private institutions working jointly on a regional or local level to achieve a common purpose
Direct marketing	Direct marketing is the effort to enhance producers income by selling self-made goods and services directly to the end-user and thus to avoid trade costs.
EMAS	EMAS ("eco-management and audit scheme"): The objective of EMAS is to continuously improve the

	environmental protection at operational level. EMAS helps to remove ecological and economic weak points, economise material and energy and thus save expenses. EMAS is a certification system for enterprises, but can exceptionally be used in a wider sense to evaluate sustainable development of protected areas.
Endogenous potential	Economic, social and ecological opportunities of development existent in a region or a country. Mobilisation of endogenous potential through regional development, economic and social infrastructure, environmental education, ecological valorisation, knowledge management, public participation, aso.
Endogenous resources	Economic, social and ecological resources existent in a region or country
Evaluation (of policies)	To assess the policy performance in relation to objective standards. This includes evaluation of relevance, coherence and impact (of policies).
Good governance	Good governance ("White Book EC") includes openness and transparency of decisions, public participation, responsibility and clear distribution of roles, effectiveness of decisions through subsidiarity, coherence. Coherence: clear, logical and consistent argument, theory or practice Subsidiarity: the principle that a central authority should perform only those tasks which cannot be performed at a more local level
Governance capacity	Governance: rules, processes and behaviour that affect the way in which individuals and institutions, public and private, manage their common affairs, particularly as regards openness, participation, effectiveness and coherence Capacity: the ability or power to do something In the context of ´Future in the Alps´ we focus on

	the governance capacity of local or regional social entities (municipalities, regional or local institutions aso.).
Impacts	Marked effects or influences of plans, concepts, legal regulations, policies or other activities
Implementation	A phase of the (transdisciplinary) process. Implementation comprises not only a synthesis of the results compiled in a project, but also the effects of these results. Possible effects include new insights, an altered perception of a problem, or an influence upon decision-making.
Innovation	Each action, which is not taking place in a specific rural region or in a thematic area before, is innovative to this region. Innovations are all changes which are deliberate by one or more initiators and which could achieve a positive outcome in their interest. Innovative actions must focus on projects in which a lot of players could take place. These actions should be exemplary and it should be possible to copy them in a cost-saving way. They should furthermore have positive or no negative impacts on the environment or the employment and serve for the collective good.
Instruments (political)	Means of pursuing an aim, for example formal or legal documents, plans, concepts, subsidies aso.
Interdisciplinarity	Several disciplines work together on a problem by going beyond the borders of the individual disciplines. Concepts and methods of the multiple disciplines are combined and transferred between the disciplines. Interdisciplinarity means that, e.g., agricultural economists cooperate with landscape ecologists, biologists with sociologists and psychologists, landscape planners with communication scientists, aso. As opposed to that, the term 'multidisciplinarity' is used if several disciplines work on a problem side by side. It is a basic assumption that the quality of interdisciplinary co-operation depends on the competence of the disciplines involved.

IUCN	International Union for the Conservation of Nature and Natural Resources
Monitoring	Monitoring is the regular observation and recording of activities taking place in a project or programme. It is a process of routinely gathering information on all aspects of the project. Monitoring also involves giving feedback about the progress of the project to the donors, implementors and beneficiaries of the project. Reporting enables the gathered information to be used in making decisions for improving project performance.
Motivation	Motivation is a concept used to describe the factors within an individual which arouse, maintain and channel behaviour towards a goal.
Negotiation procedures	A series of actions conducted in a certain manner in order to reach an agreement or compromise
Oepul	Oepul is the Austrian programme for an environmental friendly agriculture. It is co-financed by the EU and aims for the enhancement of sustainable land use above all by financial support.
Policies	Courses or principles of action adopted or proposed by an organisation or individual in order to reach certain aims
Product chain	Chain of custody, including all elements of the production and trading process of a product
Protected area	Protected areas are defined areas under national or international law and guidelines. There is a high variety of categories even throughout the alpine region depending on individual laws. Currently there are about 25 categories in the alpine region, the most important categorical system is the IUCN-system. Apart from areas, which are protected by law, "protected area" also includes predicates like Nature Park, Biosphere Reserve aso. which are not necessarily protected by law over their total area. New and traditional types of large protected areas (National Parks, Regional Nature Parks, Biosphere

	Reserves, Protected Landscapes IUCN category V, Managed Resource Protected Areas IUCN category VI, aso.) incorporating resident human populations and their socio-economic structures as an essential element. Management objectives include both environmental conservation and sustainable regional development.
Protection by contract/ compensation payments	Protection by contract is a very common and successful instrument of nature conservation giving determined payments to the landowner for compensating yield reductions through specific land use burdens
Public participation	The involvement of the public (stakeholders, land owners, persons affected by a plan or a project as well as the general public) in planning, decision making, implementation and monitoring
Recommendation	Statements in order to put forward ideas, concepts, measures or projects which seem to be suitable for a specific purpose or role
Regional chains	See product chain, service chain
Regional identities	Identity: the fact of being who or what a person or thing is as well as the characteristics determining this. Regional identities are influenced by various factors from local to global scale. Today, people often have more than only one single identity, that's why we use the word in plural.
Regional (level)	Level below national level, the scale depends on the specific issue. It can be a mountain valley, an administrative unit aso. EU definition: national = NUTS I, regional = NUTS II (Bundesland), local = district or area such as Montafon, Nationalpark Hohe Tauern aso.
Service chain	Provision of services, including all elements of the development and appliance of a supplied service
Slowness	New and specific aspects mainly of touristic marketing promoting qualities like low speed, tranquil-

	lity, taking and having time
Social capital	Social capital is the driving force behind social relations and can be generated by a wide variety of different social interactions and institutions (see Robert D. Putnam: Making Democracy Work 1993, Bowling Alone 2000).
Social services	Services provided by the state or by private institutions for the community, such as education, social welfare, healthcare, religion, advocacy, fight against poverty aso.
Spatial polarisation	Spatial polarisation describes the trend of wealthy regions (for example metropolitan areas) developing better and better and less favoured regions (for example peripheral areas) declining more and more. This trend can be observed on different scales in and outside the Alps.
Successful development strategies	Development strategies generating an additional economic, social and ecological benefit for a region, e.g., where a large protected area has been or will be established with the purpose to enhance sustainable development.
Sustainable development	Brundtland-Definition 1987: ´Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' Thereby economic, social and ecological processes are interrelated, and should be considered equally by public and private stakeholders.
System knowledge	Knowledge about empirical relationships between different parameters. System knowledge can be both quantitative and qualitative and includes knowledge from all scientific disciplines and practice. System knowledge can be of general interest or refer to a particular place, object or people.
Target knowledge	Knowledge about the goals of different actors and their normative evaluation (objectives and value systems of actors). Target knowledge includes empirical knowlegde about the value system of different social groups as well as normative considera-

	tions. Laws and norms also have to be taken into account.
Theoretical knowledge	Knowledge based on or involving theory rather than its practical application
Tourism mobility	Mobility in connection with the commercial organization and operation of holidays and visits to places of interest – including travel behaviour and spatial aspects
Transdisciplinarity	Collaboration of multiple disciplines with the purpose of knowledge production for solving a practical problem and with the involvement of all relevant stakeholders and their needs. Scientists cooperate with, e.g., schools, farmers, citizens, media and artists. The public, i.e. those who will be able to apply the research results, are involved in the research process at an early stage.
Transformation knowledge	Reflective and instrumental knowledge about how to modify actions and attitudes in order to achieve a goal (instruments and methods). Knowledge about the feasibility of an action or measures have to be taken into account. Transformation knowledge includes knowledge from all disciplines of science and practice.
UNESCO	United Nations Educational, Scientific and Cultural Organization

ANNEX 6: POTENTIAL MEMBERS OF THE NETWORK "ENTERPRISE ALPS"

Business name:	**Archi Noah**
Contact person:	Robert Unglaub
Location	Austria
Address:	Proboj 2, A-9133 Miklauzhof
Activities:	The company of Dipl. Ing. Robert Unglaub is specialised in environment protection, landscape gardening, landscaping and planning.

Business name:	**JOANNEUM RESEARCH Forschungsgesellschaft mbH**
Contact person:	Dr. Mathias Schardt
Location	Austria
Address:	Steyrergasse 17, A-8010 Graz
Activities:	With its 14 research facilities, the "JOHANNEUM RESEARCH" is the biggest research facility in Austria which is not part of an university. They develop and optimise products and processes in different areas, e.g. biotechnology, environment and geoscience. A special aim of the "JOHANNEUM RESEARCH" is the development of the Steiermark in the framework of "EU future-regions" and to strengthen its position. The overall concept of JOHANNEUM RESEARCH is Sustainable Development.

Business name:	**E.C.O. Institut für Ökologie Jungmeier GmbH**
Contact person:	Michael Jungmeier
Location	Austria
Address:	Kinoplatz 6, A-9020 Klagenfurt
Activities:	The company "E.C.O. institute for ecology" is a modern service enterprise which provides consulting, research and conception in the areas of applied ecology and nature conservation. Some of the main areas of work are cultural landscape, nature conservation, vegetation and forest-ecology, which are all important themes for the Alps

Business name:	**Rieder's Quellenbetriebe Ges.m.b.H**
Contact person:	Robert Schausberger
Location	Tirol/Austria
Address:	Nr. 403, A-6230 Münster
Activities:	The main product of the "RIEDER'S QUELLENBETRIEBE GES.M.H.", a family business, is the mineral water out of the

Mountains of Tirol the "ALPQUELL". Their hallmark is an eagle which is flying over the Alps of Tirol. The eagle is market as a symbol for strength and pride. The Alps stand for the pureness of the water

Business name: **Adelholzener Alpenquellen GmbH**
Location Germany
Address: St.-Primus-Straße 1 – 5, D-83313 Siegsdorf
Activities: The company "Adelholzener Alpenquelle" is owned and managed by a convent. It is the oldest mineral spring in Bavaria. All profits of the company go to social and welfare organisations of the convent like hospitals, children's homes, nursing homes and welfare centres. Their overall concept is to protect water, air and landscape and to prevent its uniqueness to future generations. The company is very ambitious in the area of environment protection, for example they have got a solar power facility and the suppliers are selected for ecological standpoints.

Business name: **Sixtus Werke GmbH Co. KG**
Location Germany
Contact person: Fritz Becker, Anton Becker
Address: Urtlbachstraße 3, Schliersee
Activities: The family business "Sixtus", which is located in Upper Bavaria uses pure herbs from the Alps and natural essential oils for their foot and body care products. They are producing since 65 years and got the overall concept of accommodate economic profit with protection of the nature.

Business name: **ALPARC Alpine Network of Protected Areas**
Location France
Contact person: Carlo Ossola
Address: 256 Rue de la Republique, F – 73000 Chambéry
Activities: In 1995 the Alpine Network of Protected Areas was established by the initiative of France. The main aim of this international governmental organisation is the application of the article 12 of the protocol for Nature Protection and Landscape Conservation of the Alpine Convention.

ANNEX 7: ONGOING RESEARCH PROJECTS (ISCAR-DATABASE)

- IPAM – Integrative Protected Area Management: www.ipam.info
- PANET 2010 – Protected areas networks (Oct 2006: www.panet.info)
- KONA - Conception Analysis of Austrian Nature Conservation: www.e-c-o.at/projects/kona
- ODNS – Mathematical dynamic model of the relationship between protected areas and utilisation like tourism.
- HTPA – actual situation of technics used in protected areas and further possibilities in the future.
- FOWA – Concept for Research and Monitoring in the Biosphere Reserve Großes Walsertal.
- FOWI – Concept for Research and Monitoring in the Biosphere Reserve Wienerwald.
- Federation of the regional parks of France - Implementing ecological and biological corridors in the area of Regional Nature Parks.

ANNEX 8: LIST OF FIGURES AND TABLES

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