Comparative study of Models and approaches of "Eco-provinces and Eco-cities"

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Summary

Farmland conversion to non-agricultural uses, degradation of semi-natural and farmed habitats as well as urban expansion all seriously threaten biodiversity and landscape in rural and peri-urban areas in Europe. China shares similar problems such as the rapid decrease of farmland, intensive land use etc. which cause high pressure on natural resources and biodiversity.

Changes in EU regulations have induced a shift in understanding of nature conservation in rural areas. Instead of ‘protection through excluding human resource use’, more and more the principle of ‘integrating protection and use through sustainable practices’ is being implemented.

This comparative study has selected five exemplarily approaches in Europe which successfully combine the preservation of biodiversity (and landscape) with sustainable land use. Those case studies represent best-practice examples of nature conservation oriented regional development. The following regions have been selected: Laag Holland (Netherlands), The Baix Llobregat Agricultural Park Barcelona (Spain), PLENUM Western Bodensee (Germany), Fundatia ADEPT Tarnava Mare area (Romania), and Biosphere Reserve ‘Rhön’ (Germany).

The selected regions vary from rural to peri-urban, and are faced with intensification and abandonment of land use, urban expansion and many others. All have developed their own specific strategies to tackle these challenges. Though the regions differ, they use similar approaches and principles of management adapted to local/regional conditions and requirements.

On the basis of the 5 best-practice examples, as well as a literature review, a set of overarching factors of success for nature conservation oriented regional development can be identified. A certain natural and socio-cultural potential in the region as ‘pre-condition’ should be the starting point for initiating sustainable regional development processes. The patronage by strong partners such as key personalities and, of course, political support by local authorities is of central importance for the development process. Efficient networks and process management as well as adequate planning systems continue the list of ‘success factors’.

A crucial factor is public participation, especially of relevant social groups and those who directly contribute to sustainable land use. Public participation activates local knowledge and enhances acceptance of the development process. The active communication of achievements enhances the ideal support, and the marketing of environmental-friendly products or services advances the recognition value even beyond the boundaries of the corresponding region. Last but not least, a supporting national framework should exist, which avoids ‘counter-productive’ government programmes, and which ensures uniform national nature conservation legislation.
Introduction

Over the past 50 years, humans have changed ecosystems extensively, largely to meet the growing demands for food, fresh water, timber, fuel etc. This has resulted in a largely irreversible loss in the diversity of life on earth. Approximately 60% of the services which ecosystems provide to people are being degraded or used unsustainably; the economic and public health costs associated with damage to ecosystem services can be substantial. The challenge of managing ecosystems in a sustainable way, while meeting these increasing demands, involves significant changes in policies, institutions, and practices (MEA, 2005).

Across Europe a growing trend can be seen in recent years to convert farmland to non-agricultural land uses. The main concerns about the rural environment which were identified by the CORASON research project (Tovey & Mooney, 2006). These were: progressive degradation in semi-natural and farmed habitats, driven by a combination of intensification and abandonment; urban expansion leading to a fracturing of rural landscapes; and the disruption of habitats by infrastructural projects.

National policy responses to environmental problems are strongly shaped by EU directives, most recently Natura 2000. In rural areas, understandings of nature conservation have begun to change (primarily influenced by changes in EU regulations) from a policy of ‘protection through excluding human resource use’ to one of ‘integrating protection and use through sustainable practices’ (Tovey & Mooney, 2006). But also the amount of open space in Europe’s urbanised regions is diminishing and the quality of the environment, of biodiversity and landscape is under serious threat. Initiatives such as the Peri-Urban Regions Platform Europe (PURPLE) strive for sustainable rural and agricultural development in peri-urban regions.

In China, two-thirds of the territory is deserts and mountains of an altitude over 1000 m. The remaining third, mainly in the east, is where 90% of the population lives. Intensive use of soils and dense settlement cause high pressure on natural resources and destroy habitats. The Chinese government has attempted some reforms in land resource management since the middle of the 1980s, and has introduced several measures to preserve farmland since the 1990s. However, it is still struggling with how to effectively govern land use and control illegal farmland conversion (Lin and Ho, 2005).

This comparative study of ‘models and approaches of Eco-provinces and Eco-cities’ aims at contributing to an exchange of experiences between ‘Western’ and ‘Chinese’ approaches of sustainable regional development, named ‘Eco-provinces’. The central part of this paper is the presentation of five best-practice examples from Europe which cover rural as well as peri-urban areas. They successfully combine sustainable land use with nature and biodiversity conservation. The role which planning instruments, such as landscape planning, play in those case studies will be considered.

In the final chapter main conclusions and recommendations are drawn, based on the experiences from the case studies and on a literature review.
1 Support programmes, instruments and approaches of sustainable regional development

This chapter provides a short overview of the main funding programmes, instruments, and exemplarily approaches which have been implemented in the selected case studies and contribute to nature conservation oriented regional development.

INTERNATIONAL LEVEL

Protected Areas: Biosphere Reserves

The designation of various kinds of protected areas is a key instrument of nature conservation and landscape management. Here we will concentrate on Biosphere Reserves since they are particularly well suited for implementing sustainable approaches of land use.

Biosphere Reserves have been recognised by UNESCO since 1976 under the Man and Biosphere (MAB) programme. The ‘biosphere designation’ is assigned under the Statutory Framework of the World Network of Biosphere Reserves (UNESCO 1995). They fulfil the following functions:

- Conservation (of landscapes, ecosystems, species and genetic variation),
- Development (economic and human development which is ecologically and socio-culturally sustainable),
- Support (for demonstration projects, environmental education and training, research and monitoring).

Biosphere reserves represent a new type of ‘economic landscape’. Regional and local initiatives as well as public-private partnerships play a particular role in the sustainable economic management of Biosphere Reserves. Specified development goals which consider the ecological and socio-economic framework of the particular biosphere reserve, are to be defined. Administrative, planning and funding measures shall be oriented towards the local and regional requirements.

A core principle of Biosphere Reserves is the zoning in a core area, a buffer zone and a transition area. Whereas in core areas nature must be left undisturbed by human influence, the surrounding buffer zone serves the conservation and management of ecosystems by land use. The outer transition area serves to promote sustainable land use and economic activities.

- Case study: Biosphere Reserve Rhön (p. 23)

EU-LEVEL

Protected areas: Natura 2000

The European Union is seeking to ensure biodiversity by conserving natural habitats and wild fauna and flora in the territory of the Member States. An ecological network of special protected areas, known as "Natura 2000", is being set up for this purpose. The network is given coherence by other activities involving monitoring and surveillance, reintroduction of native species, introduction of non-native species, research and education. The network comprises "special areas of conservation" designated by Member States in accordance with
the provisions of the Directive, and special protection areas on the conservation of wild birds. Member States must take all necessary measures to guarantee the conservation of habitats in special areas of conservation, and to avoid their deterioration. The Directive provides for co-financing of conservation measures by the Community.

- **Case studies:** Laag Holland (p. 11), Tarnava Mare, Transilvania (p. 21)

**LIFE / LIFE+ Programme**

The LIFE programme is the EU’s financial instrument for the environment. It was launched in 1992 to support environmental and nature conservation projects throughout the EU. The LIFE/LIFE+ programme comprises various funding phases for which separate budgets are allocated (LIFE I, II and III). LIFE +, a fourth funding phase constituting the EU’s new financial instrument for the environment for the period 2007-2013, is designed to assist implementation of the 6th European Environmental Action Programme with its three subcategories: nature and biodiversity, environment policy and administration, and information and communication. Special importance is placed on achieving the objective of halting biodiversity loss in the EU by 2010 and on climate change-related threats to biodiversity. Distribution of project funding across member states follows a strict pattern based on population size and density and on the absolute and relative number of sites in the Natura 2000 protected area network.

- **Case studies:** Agricultural Park (p. 14), Biosphere Reserve Rhön (p. 23)

**EU rural policy**

The shift from an agricultural to a rural policy orientation at EU level has been an important step. It has changed the development objective from increasing agricultural productivity and incomes to that of maintaining rural communities and diversified rural livelihoods (Tovey & Mooney, 2006). In the year 2000 the European Common Agricultural Policy (CAP) supplemented the so-called first pillar (market and pricing policy) with a second pillar comprising coherent rural development policy. Member States comply with by compiling rural development plans with agri-environmental schemes as a mandatory component of these plans.

For the funding period 2007-2013 three general objectives for rural development were set out by the European Commission: improving the competitiveness of the agricultural and forestry sector (Axis 1); improving the environment and the countryside (Axis 2), and improving the quality of life in rural areas and diversification of the rural economy (Axis 3). The LEADER approach (Axis 4) takes a cross sectoral, methodological focus. It is defined to take effect by means of all three objectives. Other than with the first pillar, the second pillar is not fully funded by the European Union; it merely makes funds available to co-finance nationally funded programmes.

**LEADER**

Inspired by an integrated, bottom-up approach to rural development, the LEADER initiative represents an approach that exceeds the ‘mainstream measures’. Introduced in 1991 with LEADER I, followed by LEADER II and LEADER +, the approach was included in a new overall policy framework of EU rural development.

The programme aims at motivating local actors to carry out innovative multi-sectoral projects capable of valorising and exploiting local resources and improving the
competitiveness of rural areas. There are three main elements characterising the implementation of the LEADER method: 1) a ‘territory’ or LEADER area, 2) an integrated strategy relying on an endogenous approach and innovative actions, and 3) a ‘local action group’ (LAG) characterised by decentralised financing, co-operation and partnerships between public and private stakeholders.

The regions have to apply for and to participate in a competition in order to be selected by a jury as LEADER-region. With the LEADER-funding a regional management can be installed which supports the implementation of projects and network cooperation. This financial aid is a kind of ‘start-up financing’ which is supposed to enable the regions to continue their cooperation and projects beyond the funding period.

Case studies: Tarnava Mare area (p. 21), Biosphere Reserve Rhön (p. 23)

NATIONAL / REGIONAL LEVEL

PLENUM

PLENUM is a regional programme of the federal state of Baden Wuerttemberg in Germany targeting nature conservation oriented regional development. The main nature preservation goals of PLENUM are: the protection and improvement of the biodiversity and the scenic characteristics in the project areas; the conservation and development of environmentally friendly used farming areas, forests, flowing and standing waters, valley slopes, swamps and watersheds, and the conservation of special geological structures.

Based on the mapping and assessment of nature and landscape areas, criteria for the selection of ‘areas with high nature value’ were defined and corresponding objectives of nature conservation for those areas formulated. Currently, the PLENUM programme has been implemented in five project areas, which total 13% of the federal state’s area.

In order to realise the nature conservation goals within the PLENUM framework, a multiplicity of strategic approaches are applied which will be presented in detail later on in the case study ‘PLENUM region Western Bodensee’.

Main controlling elements for the realisation of the PLENUM approach are the definition of an area and the participative development of specific strategies in form of a regional development concept. Projects as well as a regional management will be financially supported for a maximum of eight years. Innovative governance structures such as the regional management, funding committees and project-related workgroups are an essential factor for the successful implementation of the PLENUM programme.

Case study: PLENUM Western Bodensee (p. 18)

2 The role of planning instruments for sustainable land use

Landscape planning is a precautionary planning instrument in nature conservation and landscape management. In Germany landscape planning as a tool is very advanced. In other European countries comparable planning instruments also exist.

The objectives, requirements and measures formulated in landscape plans are intended for nature conservation administrations, authorities in charge of regional planning and land
use planning, local government, as well as civil society organisations and the public. Landscape planning covering the whole area, and being drawn up at different levels and on different scales, offers many advantages.

Landscape planning provides a comprehensive information base, covering all natural resources, which can be used for project-related planning and assessments. With the help of landscape planning, measures beneficial to nature and environment can be better coordinated and matched, and thus multifunctional effects can be achieved. Intrusions can be conceived in an ecologically sound way. Land users can use the information on how to integrate nature conservation aspects into their operational management. With regard to public participation, members of the public and organisations receive an information basis on the condition of the nature and landscape as well as to securing biodiversity (BfN 2006, 2008).

In the case studies, we have identified the role of planning instruments with regard to planning and control functions in the corresponding regions.

3 Proceeding and criteria for the selection of ‘best-practice’ examples

At the beginning of this study we intended to look for best-practice Eco-provinces in Europe and ‘western’ countries like the USA, Canada, New Zealand and Australia. We ended up with ‘only’ European case studies, since approaches to sustainable regional (rural) development are quite advanced in the European Union and supported by corresponding policy frameworks and funding programmes. Apparently, similar approaches do not exist or are still in their infancies in other ‘western’ countries.

For our survey we have used different information sources such as project publications, evaluation reports and other available literature as well as internet sources (websites). Furthermore, we have contacted representatives from ministries in several countries, Biosphere Reserves, research institutes, Environmental Agencies, NGOs, and Rural Networks in multiple EU member states. Overall, our survey could not be exhaustive and our experience was that suitable case studies were difficult to find.

The actual selection of case studies was done on the basis of the following criteria:

- **Contribution to nature and biodiversity conservation** as a key criterion
- **Integrated approach**: The case studies should integrate at least nature conservation plus two of the following fields of action: agriculture, forestry, renewable energies, food production (value-added chain), and tourism
- **Applied tools of planning and control**
- **Participatory and integrated management**
- **Minimum size of area**: Thousands of small regional initiatives exist all over Europe, but for this study we have selected case studies which cover areas between 50 000 ha and 180 000 ha
- **Rural and peri-urban areas**: The selection of case studies should cover a variety of areas, from rural to peri-urban.
- **Duration of implementation:** The case studies had to be implemented for a couple of years so that experiences and results existed which could be assessed.

- **Access to and availability of information** about case studies.

  Based on the procedure explained above, the following case studies have been selected:

  1. Laag Holland (Netherlands)
  2. The Baix Llobregat Agricultural Park Barcelona (Spain)
  3. PLENUM Western Bodensee (Germany)
  4. Fundatia ADEPT Tarnava Mare area (Romania)
  5. Biosphere Reserve ‘Rhoen’ (Germany).
4 Selected case studies

1. Case study: Laag Holland, Netherlands

(1) Characterisation of area

Laag Holland is a typical Dutch open landscape north of Amsterdam (see map). Its total area spans 51400 ha, and 13 municipalities with 110000 inhabitants. It is a valuable cultural landscape as well as an important nature and recreation area. The urban areas that directly surround Laag Holland have more than one million inhabitants. Since 2004 it has had the status of a National Landscape characterised by a mixture of small polders, land reclaimed on lakes, and former peat islands cultivated in the Middle Ages; about 15600 ha are Natura 2000 areas (EU Bird and Habitat directives). Laag Holland has been designated a UNESCO world heritage site.

(2) Overall concept

The main spatial objectives to be achieved in Laag Holland are to keep the peat meadow landscapes open, to conserve and develop ecologically significant areas, and to preserve the cultural historic character of the area. Recreational and tourist facilities shall be increased, and new nature and recreation areas realised. Further aims are sustainable water management, and the promoting of agricultural businesses to ensure that the land can be sustainably managed.

(3) Analysis

a. Main impacts on biodiversity and landscape

The ‘environmental capital’ of the area is characterised by extensive and environmental friendly agricultural practices which strongly support meadow bird populations. Agri-environmental policy schemes were already introduced in the 70's. A high percentage of the area is owned and managed by professional nature conservation organisations and large
areas are under EU Habitat and Bird directives. Due to peat soil shrinkage and acidification water management is a serious challenge in this area, and costs to preserve nature and landscape values are high. In large parts of Laag Holland, the production conditions are too wet for farming. This makes agricultural production more expensive and the incomes lower. More and more of the mainly small farms are closing down. With them, the traditional landscape threatens to disappear. In the past, areas comparable to waterland were standardised by intensive land consolidation projects (enlargement of parcels by filling up ditches, lowering water levels etc.) but those projects are more and more rejected by changing policies and opinions in society on landscape and nature.

b. Fields of activity

Most of the following projects are integrated and therefore cover several fields of activities. We have allocated the projects to the field where the main focus lies.

Nature conservation

The main nature conservation activities in Laag Holland are oriented to meadow bird protection. For example, nest protection, delayed mowing dates, setup of escape zones for chicks, mosaic planning of mowing (resulting in a more varied biotope for different bird species), extra high water level on some parcels etc.

Agriculture

Farmers are indispensible for the management of this cultural landscape and the development of a multifunctional agriculture is one of the main priorities stated in the National Landscape Programme. The Association Agrarian Nature and Landscape Management is an organisation of more than 400 farmers, which started 30 years ago to develop alternative ideas of how to contribute to a better landscape and nature management on the basis of specific local knowledge. This association has been the initiator of new activities and forms of cooperation in the area. They offer services to their members (85% farmers of the peat areas) and provide them with access to payments for nature management.

Whereas dairy farming is the dominant agricultural activity, there has been a strong growth in extensive beef cattle production in the area. ‘Waterland Beef’, for example, is merchandised by the Green Hat, an organisation which has set up rules for production and cooperation in marketing of region-specific products.

Some activities exist related to the natural water management of banks of ditches and dikes, such as the use of a special kind of dredging pump to clean the ditches which has positive effects on the vegetation on the banks of the ditches. Small scale energy generation is carried out by means of manure fermentation (bio-gas). Activities in the field of tourism include small scale accommodation on farms, for example the ‘Hotel de Boerenkamer’, as an additional income source for farmers.

Further activities

In cooperation with health assurance companies and municipalities the ‘Landzijde’ coordinates care on farms for people with a care-demand (such as mentally handicapped, disabled people, burned-out managers and others). Furthermore, art projects, and environmental education projects are in place as well as activities to direct visitors
(information panels, car parks, picnic benches etc) and to regulate recreation (traffic flows etc.).

c. **Instruments of planning and control**

The National Landscape legal status implies only one hard regulation, namely that the migration balance (number of inhabitants) for the area as a whole is zero. In 2006 the delineation of Laag Holland was incorporated into the regional plan and core qualities were worked out into spatial objectives listed under ‘overall concept’.

d. **Participatory and Integrated Management (organisation, administration)**

Characteristic for Laag Holland is a new area-specific governance approach. A total of 22 organisations and institutions signed the ‘Temporary Governance Agreement’ and set up a ‘Programme office Laag Holland’ to support initiatives in the area, to elaborate implementation plans and to stimulate cooperation. Involved are Province Noord-Holland, 12 municipalities, nature conservation organisations, the Association of Agricultural Nature and Landscape Management, the Chamber of Commerce, the polder board and others. These organisations posted 12 employees in this office. One of the main tasks of the Programme office is to create some cohesion and integration within all the policy initiatives and interventions of the different governmental organisations concerning this area. In particular, the mutual positive influences between the Programme office and the Association Agrarian Nature and Landscape management strengthen the rural development process.

(4) **Summary / conclusion**

In Laag Holland local ecology and landscape are the starting point for planning and rural development. In the course of the development process major shifts have been realised: There has been a shift from a sectoral to an integrated, multifunctional approach. New local resources have been recognised and opened up and new forms of cooperation emerged. Towns and countryside have been ‘reconnected’ and there is a strong urban institutional commitment and involvement in Laag Holland.

The development of Laag Holland is increasingly based on the use of own local resources and there is a growing synergy between agricultural production, new agricultural products, several new services, new ways of marketing and short chains and the management of nature and landscape. Nevertheless, there are also challenges in Laag Holland. Public funding exists, but the current budget is far too low to preserve and develop all core-qualities of Laag Holland. Particularly for long term management and processes there is a lack of money. New economic systems and new funding of landscape management need to be developed in order to keep sufficient farmers in all parts of the area to bring about the required management.

Within the Netherlands Laag Holland is clearly one of the best practices of creating a new institutional framework. It has a broad basis and proved its capacities to facilitate the rural development process. However this framework is still fragile. In the case of conflicts between organisations, they still can revert into traditional power politics (nature conservation organisations against farmers, Ministry of Agriculture, Nature and Food Quality against Province etc.)
2. Case study: The Baix Llobregat Agricultural Park (Barcelona), Spain

(1) Characterisation of area

The Agricultural Park is located little more than 5 km south of Barcelona, and specifically in the low-lying valley and delta of the River Llobregat. The park takes in land belonging to 14 municipalities with a total population of some 700000. With an agricultural surface area of 2938 ha, it represents the last agricultural alluvial plain land in the immediate area surrounding Barcelona. The area has a long tradition in fruit and vegetable growing. It forms one part of twelve linked natural areas which make up the Natural Parks Network with a total of 100625 ha.

In 1996, The European Union awarded a LIFE project for recovery of agricultural land in the Baix Llobregat valley, which led to setting up of the current Baix Llobregat Agricultural Park (in 1998). Today, this area is a point of reference for agricultural and environmental management and an emblematic part of the metropolitan area.

(2) Overall concept

The Agricultural Park is an instrument for preserving, developing and managing a peri-urban agricultural area. Its objective is to "consolidate and develop the basis for land use and to facilitate the continuity of agriculture by promoting specific programmes which enable the preservation of values (productive, resource-based, ecological and cultural) and to develop functions (economic, environmental and social) of the agricultural area in the framework of sustainable agriculture integrated into the area and in harmony with the natural environment and its surroundings."

(3) Analysis

a. Main impacts on biodiversity

The high pressure caused by urban and industrial expansion in Barcelona and its adjacent municipalities creates problems for agriculture in this area, and consequently for natural areas, metropolitan sustainability and landscape. An important natural asset of the river delta lies in its wealth of birdlife. Traditional farming practices on wetlands in a specific area of the park (and close to protected areas) help to expand the nesting and feeding areas
of birds. Furthermore, there are activities to maintain the genetic heritage of this traditional fruit growing area through an arboretum which also contributes to the preservation of local agro-biodiversity. An overarching planning system and projects support the preservation of natural and landscape values.

The Agricultural Park is part of the Natural Parks Network within Barcelona Metropolitan Region. Its main objective is to guarantee, in each of the twelve areas, the conservation of nature and landscape, sustainable socio-economic development and an organised public use. Additionally, the LIFE-GREEN Belt project with one of three initiatives taking place in the Agricultural Park, intends to make the involved areas to a point of reference for limiting the growth of built-up land, and at the same time ensure increased biodiversity of the landscape.

b. Fields of activity

Nature conservation

In 2001, the European Commission approved a LIFE programme of the Provincial Council of Barcelona which included, among others, a pilot programme entitled "Setting up an arboretum for the recovery of species and traditional varieties of fruit trees in the Agricultural Park". This project has permitted the recovery, maintenance and conservation of the main traditional fruit tree varieties in the area. The arboretum has now a surface area of 18,000 m² and a collection of 62 varieties of eight species (apple, pear, peach, prune, cherry, olive, grapevine, and kaki fruit). The trees are growing following principles of ecological agriculture. Besides being a germplasm bank, the arboretum also functions as a demonstration field showing farming of fruit trees following ecological criteria.

Traditional farming practices have been brought back in a specific area of the park, consisting of temporarily flooding fields located next to the protected reserves and areas around the Agricultural Park. When properly managed this helps to expand the nesting and feeding areas of birds.

Agriculture

The Agricultural Park depends on the active presence of farmers in the area. To this end the management of the park has decided to promote more environmentally-friendly farming methods, to support initiatives around the identification and promotion of the consumption of farming products, and to disseminate the values of the landscape as a resource for the generation of income.

The Agricultural Park works with a network of technicians who advise farmers on how to introduce integrated and ecological production methods. The aim is to increase technical know-how to ensure proper rationalisation in the use of fertilisers and the fight against pests and diseases. Among the work being done there, of particular note are the introduction of biofumigation, bio-solarisation, eco-farming techniques for soil disinfection and fight against pests.

Food production (value-added chain)

Farmers are supported to produce under objective quality-based criteria such as the Protected Geographical Indications (PGI). The Agricultural Park also promotes also the consumption of ‘local products’ through its own distinctive quality brand “Producte FRESC del Parc Agrari (Fresh Produce from the Agricultural Park)”. With prior application and acceptance of a set of regulations, farmers are able to use this brand, which is also
associated with a campaign aimed at restaurants in the municipalities, entitled “The tastes of the market garden”. The Park helps to promote the brand in local markets, where farmers can sell directly to the consumer, but their fresh produce is also supplied to large commercial distribution chains. Worth mentioning is the El Prat breed of capon chicken, which has been classified as a PGI by the EU since 1996, and the Prat Artichoke.

**Water management**

One of the greatest strengths of the Agricultural Park lies in its network of irrigation which is distributed fundamentally through two 19th-century canals. A Geographic Information System (GIS) is currently being developed which will enable management to be carried out based on the efficiency and effectiveness of the use of this natural resource. At the same time, water quality controls are being carried out at various points along the irrigation network.

**Further activities**

There is a permanent Surveillance Service whose mission is to carry out environmental and urban control in order to detect illegal dumping and discharges, as well as unauthorized building work. Activities of environmental education (e.g. arboretum leaflets etc.) can be also found in the park.

c. **Instruments of planning and control**

Besides the consortium as a management body, two other elements build the basis for the Agricultural Park. Firstly, the special protection and improvement plan for town planning (PE) which defines the territorial limits of the park within which the consortium can act and regulates the land use. The consortium also has the possibility to establish town planning rules within this demarcated area. These rules make it possible to manage the Agricultural Park in such a way that the aim of preserving and improving the agricultural and natural heritage of the area can be achieved. Secondly, the Management and Development Plan (MDP), which specifies the five strategic lines for managing the area as described in the PE. The Agricultural Park is part of the Nature Parks Network, a local planning and managing system.

d. **Participatory and Integrated Management (organisation, administration)**

Since 1998 the Park has been managed by a consortium consisting of the Provincial Council of Barcelona, Catalonia’s Regional Government, the County Council of El Baix Llobregat and the largest farmer’s union in Catalonia. The 14 municipalities have joined the Consortium, forming part of the management structure. There is no direct participation in the management, but a socio-professional network exists in the field of training, research and consultation.

The management of the Agricultural Park is based on the Management and Development Plan (MDP) which establishes five strategic lines of action aiming at: efficiency of the infrastructures and services in the agricultural land; improvement of production, marketing and sales of agricultural products; successful formation of space in harmony with the natural surroundings and its consolidation, and disseminating knowledge on the natural and cultural heritage found in the park.

These general strategic lines are developed by means of 17 specific aims and a large number of actions are specified by bi-annual action plans approved by the Plenary Council of
the Agriculture Park Consortium. So far the strategic line of “improvement of production, marketing and sales of agricultural products to increase incomes generated by farms’ has been developed the most.

The Agricultural Park is part of the Nature Parks Network managed by the Department of Natural Spaces of Barcelona Provincial Council (member of FEDENATUR). The 12 areas are managed directly or in collaboration with the town councils through consortia. Both the Provincial Council of Barcelona and the town councils have opted for management in agreement with civil society. This is why all the areas have their corresponding consultant councils, made up of representatives of the diverse areas that have some kind of relationship with the parks.

(4) Summary / conclusion

The future of the Agricultural Park, located in an area submitted to constant urban pressure, depends in part on the actions carried out with respect to its preservation, improvement and development. But its future also depends on how it projects itself outside the park in promoting itself and in not becoming isolated from a Europe-wide movement in defence of peri-urban spaces and particularly of peri-urban agriculture. The excellence of the landscape is beginning to be seen as something marking it out as distinctive, and this is becoming increasingly relevant in the competitiveness of different areas.
3. Case study: PLENUM Western Bodensee, Germany

(1) Characterisation of area

The Bodensee (alias Lake Constance) is a lake on the Rhine at the northern foot of the Alps, situated between Germany, Switzerland and Austria. Decisive for the regional landscape is the Lake with its shallow water zones and the distinctive reed zones in the flood areas as well as the moraine landscape of the ice age. The Western Bodensee is of high value for biodiversity. In 2004, as many as 63 nature conservation areas, 15 landscape conservation areas and 108 water conservation areas existed in the district of Konstanz (46 square kilometres). Predominant cultivation practices are intensive multi-crops farming, market gardening and fruit growing. The project area covers 81776 ha, 32 settlements, and about 275000 inhabitants, experiencing population growth of 17% between 1987 and 2004. In 1991, the Western Bodensee became a model region for the ‘PLENUM’-programme, the ‘Project of the Land to Develop Nature and Environment’ of the ‘Land’ Baden-Württemberg.

(2) Overall concept

The main objectives in PLENUM Western-Bodensee are managing water resources, implementing environmental-friendly agricultural practices, and organizing sustainable economic cycles in bio-energy, tourism, handcraft, and industry. According to the motto ‘protection by utilisation’, projects are developed together with local stakeholders and consider the needs of the population.

(3) Analysis

a. Main impacts on biodiversity and landscape

The area, shaped by the lake with its water zones, is an internationally important place for bird hibernation and resting. Due to the high standard of quality of life, the whole Bodensee region has experienced a rapid expansion of settlements. The biggest risk is to overload the capacity of the ecological viability of the Bodensee region by high population density (with more than 500 inhabitants per square kilometre on the lake shore), high traffic
volume and constructions, water sports (more than 55000 boats registered), and intensive agriculture and market gardening.

b. Fields of activity

Most of the following projects are integrated and therefore cover several fields of activities. We have allocated the projects to the field where the main focus lies.

Nature Conservation

Nature conservation projects focus on developing and implementing new concepts that help to maintain protected areas and areas with high biodiversity. Such projects are ‘landscape conservation and maintenance of valuable meadows through extensive grazing’ or ‘enhancing the biological quality of streams’. Moreover, a habitat network is being created on the basis of a masterplan in the northern part of the Bodensee (80 separate activities in a total area of 350 square kilometres). The habitat network intends to restore and link habitats like wetlands, streams, ponds, alluvial forests, and buffer zones in intensively used agricultural land. A ground-breaking approach in generating financial resources for nature protection is the ‘Nature-Auction Western Bodensee’: companies, municipalities, associations, and individuals can ‘buy’ nature conservation measures at this auction and thereby fund the preservation of nature and biodiversity.

Agriculture

For agriculture the priorities are assigned to sustainable land management and extensive agricultural farming practices by farms in the whole area. Activities concentrate on advancing alternative incomes, implementing local concepts of biomass utilization from landscape conservation, implementing innovative and integrated land use-concepts for areas of high ecological quality. So far, the cultivation of agricultural land could be sustained even in areas of high ecological quality and marginal revenue.

Food Production (value-added chain)

The Western Bodensee gave considerably economic impulses for integrated nature conservation, rising awareness, and marketing of regional products. The build-up of the regional umbrella brand ‘Gutes vom See’ (‘Something Good from the Lake’) can be seen as a breakthrough. Even wholesalers and regional distributors identify with this brand and have listed regional and regional-organic products. Locally, we find intensive cooperation between large-scale catering establishments, gastronomy, and agriculture. Tourist attractions try to offer regional and regional-organic food.

Tourism

Tourism is an important economic branch in the region. The goal is to actively direct visitors and create sustainable tourism offers. This is by connecting environmentally sound tourism, cultural and natural landscape as an attraction, marketing of region specific products, and environmental education. This is put into practice by cooperation projects between gastronomy, catering, and touristic organizations on the one hand and agriculture and nature conservation on the other hand. Successful cooperation projects regarding nature conservation are ‘Bodensee guides’, ‘experimental cycling’, and ‘nature protection and water sports’.

Water Management
Projects mainly aim at protecting and developing nature-oriented flowing waters and their wetlands / water-meadows (e.g. ‘shallow water basins for water and wading birds’).

**Renewable Energies**

Renewable Energies became a main pillar in the region’s sustainable development, especially since local stakeholders founded a private initiative, the ‘solarcomplex’, in 2000. Supported by funding from the PLENUM programme, studies/concepts (e.g. ‘Energy Potential Study’; ‘ELABO – Energy and Landscape Conservation Bodensee’; ‘Regio-Energy Wood: Potential Study and Feasibility Study’) accelerated the development of solar plants and bio-energy. In 2006, the village of Mauenheim got the first bio-energy village in Baden-Wuerttemberg, fully supplied by local renewable energies. Today, the goal is to get two new bio-energy villages ‘on the net’ per year. In 2009, the Western Bodensee became a winner of the national competition ‘Bioenergy-Regions’.

**Further fields of activity**

A major field of activity is environmental education which comprises local activities and the creation of teaching materials such as ‘Learning on the farm’ or ‘Vacation on the farm’, ‘Our Drinking Water – Our Wastewater, a practice- and experimental-oriented manual for schools’). Since 2001, more than 160 projects have been realised through PLENUM.

**c. Instruments of planning and control**

The installation of the PLENUM programme ‘Western Bodensee’ has been based on the biotope mapping and the programme of species protection of the Regional Agency for Environmental Protection Baden-Wuerttemberg (LUBW). For the implementation of projects the official landscape plan is adhered to, but it is less relevant for the conception and control of PLENUM-activities. A regional ‘concept of implementation’ must be drawn up in order to apply for funding by PLENUM.

**d. Participatory and Integrated Management (organisation, administration)**

The local administrative office ‘Model Project Konstanz’ (funded by PLENUM since 2001) can be seen as regional management that coordinates the planning efforts of diverse institutions and their planning instruments. The regional management consults with representatives from local municipalities, agriculture, environmental organisations, tourism, commerce, and business on strategies and actions to realise. Stakeholders participate at a governing level through a ‘governing body’ (municipalities, prominent local actors, etc.) and an ‘advisory board’ (companies, forestry, etc.). According to the regional managers, it is also very useful for them to share their experiences with the other PLENUM regions in Baden-Württemberg (a total of five regions).

**(4) Summary / conclusion**

The establishment of the PLENUM programme can be regarded as crucial for implementing nature protection through nature oriented regional development. Projects stimulate an integrated approach. Starting with model projects in small areas, if successful, they will be transferred to other and bigger areas. Public participation has always been a central task. PLENUM and the integrated projects brought people and institutions together, which efficiently merged resources (e.g. knowledge, finances) in order to stimulate environmentally sound regional development.
4. Case study: Tarnava Mare area, Transilvania, Romania

(1) Characterisation of area

Tarnava Mare area in southeastern Transilvania covers 85000 ha of valuable landscape which lies at the heart of the Saxon Villages area. It is a Natura 2000 site. The area is characterised by most extensive flower-rich grasslands and 40% broadleaf forest. About 22000 inhabitants live in this area. The landscape still presents a medieval land-use pattern: forested ridges, pastures and hay meadows on gentler slopes and terraces, and arable land and smaller meadows near villages. This kind of landscape has almost entirely disappeared in lowland Europe.

(2) Overall concept

“Protecting the rich biodiversity of Transilvania and using it to benefit local communities.” Fundatia ADEPT is carrying out an integrated conservation, rural development and agri-environmental programme, linking economic and social benefits with biodiversity conservation, and raising local capacity for good management in the future.

(3) Analysis

a. Main impacts on biodiversity and landscape

Southeastern Transilvania is one of Europe's most important natural and cultural landscapes, supporting many rare habitats, fauna and flora, including some of the most significant areas of wildflower-rich grasslands in Europe. The biodiversity-rich meadow-steppe grasslands, lowland hay meadows, scrub, fens, and oak-hornbeam woods are all habitats threatened in Europe and strictly protected under the EU-Habitats directive. The area contains numerous plant and animal species that are threatened at national or international level.
The high nature value farmland as a result of good husbandry over hundreds of years is threatened by poor rural incomes, abandonment or intensification of land use. The whole area is extremely fragile. Application of artificial fertilizers would seriously damage or destroy many of the wildflower meadows. Other threats are unsustainable forestry practices such as clear-felling with loss of tree cover, or planting with exotic trees and many more.

A lack of public knowledge and information about the rich ecological and cultural value of the area is another menace to the conservation of landscape and biodiversity.

b. Fields of activity

Nature conservation

Conservation measures for the area are based on species and habitat surveys. The area is an important national pilot area for testing EU incentives for good grassland management. ADEPT is helping farmers gain access to these agri-environment grants. Other nature conservation initiatives are closely linked to the activities listed below.

Agriculture

In the case of Transilvania agri-environmental measures are actually the continuation of current (traditional) management. There are mainly small-scale farming communities with extensive farming practices. The survival of the grasslands depends on continued livestock farming. ADEPT develops incentives so that local people benefit from biodiversity conservation, including practical and effective agri-environment measures suited to the area, and grants based on recognition of the landscape as Natura 2000. ADEPT trains small producers so that accession into the EU does not threaten traditional food production.

Forestry

ADEPT, WWF Romania and local forest owners are designing a community forestry scheme to add value to wood and wood products linked to sustainable cropping.

Food production (value-added chain)

ADEPT has designed and built a community food processing centre and low-technology solar driers. It is helping individuals make the step from domestic to small-scale commercial production. ADEPT brings Slow Food groups in the area together with local farmers and producers. ADEPT helps to develop marketable aged cheeses to add value to cow and sheep milk, the main cash product of the area.

Tourismus

ADEPT is promoting a Tourism Association and beneficial links with international tour operators. It has developed a rural tourist training course to improve guest houses and stimulate associated activities such as walking and riding guides, and the production and sale of traditional crafts. ADEPT is developing long-distance walking routes between the villages of the Tarnava Mare area, and has opened a Tourist Information Centre to put visitors in touch with guest houses and small producers.

Further activities

In order to protect and revive craft traditions, the use of wild dye-plants for naturally dyed wool from local resources is promoted. ADEPT organises classes and practical courses for schools on environmental issues. They have produced a book on the flora, fauna, history and
culture of the area in Romanian and English. Additionally, ADEPT has launched a locally-managed fund to support small community projects, which is stimulating local interest and participation in this integrated programme. Local communities are aiming to become a pilot area in Romania for the EU’s LEADER+ programme.

c. Instruments of planning and control

There are no particular instruments of planning and control, but management plans are designed in close cooperation with local councils and community groups.

d. Participatory and Integrated Management (organisation, administration)

Fundatia ADEPT, as a foundation, is supported by Orange Romania as part of its Corporate Social Responsibility programme, by the UK Government Department for Environment, Food and Rural Affairs (Defra), and by other charities.

Fundatia ADEPT began working in 2002 and cooperates with farmers, local communities, universities, other NGOs, and government at all levels. Public participation is a core principle in their management. Fundatia ADEPT has a total staff of 13 plus 3 directors and 6 UK Trustees. ADEPT has received several awards in Romania for best practice in Corporate Social Responsibility.

(4) SUMMARY / CONCLUSION

Fundatia ADEPT conducts integrated nature conservation and rural development projects that are firmly rooted in local communities and benefit local people. Public participation is a crucial element of the work of Fundatia ADEPT. Romanian and wider European expertise are brought together, ensuring the development of innovative approaches which accounts for local requirements.
5. Case Study: Biosphere Reserve Rhön, Germany

(1) Characterisation of area

The Rhön was officially designated as a Biosphere Reserve in 1991. Situated in the centre of Germany it covers a total area of 185276 ha. The Rhön is considered a rural area with about 162000 inhabitants who live in small villages and towns in 42 municipalities. The area covers five districts within three federal states (‘Länder’): Bavaria, Hesse and Thuringia. The area is characterised by 40% forests, 35% grassland, 18% arable land and 7% settlements. The Rhön is mainly a human-made ecosystem, created by land use over centuries, and has become the habitat for many rare wild animals and plants.

(2) Overall concept

In order to preserve, maintain and develop the cultivated landscape and biodiversity, new strategies have been developed following the motto: ‘Conservation by utilization’. The preservation of indigenous breeds of domestic animals breeds and plant species plays an important part in this concept. The main goal is to merge the different interests of agriculture, nature conservation, gastronomy and tourism. In addition, the availability of funding and the active involvement of the local population are crucial elements.

(3) Analysis

a. Main impacts on biodiversity and landscape

The greatest risk of the ecosystem is the abandonment of land use. This leads to succession and a loss of the species-rich landscape. Forestrs are near-natural in the whole area. It is especially difficult to avoid the further afforestation of poor grassland, in order to conserve the habitats, the appearance of landscapes and the cultural and historic importance of the Rhön.

b. Fields of activity

Nature conservation

The main activities regarding the preservation of biodiversity are continuing farming and the maintenance of extensively used grasslands and densely structured hedgerow-country
by farmers. Furthermore, projects aim at avoiding further afforestation of poor grassland areas in order to conserve the open land habitats. Ecological stepping-stones are established in order to guarantee a genetic exchange between protected areas. The protection of the abiotic resources air, water and soil is of great importance especially in the more intensively used areas. The framework concept contains specific characterization of the biodiversity and the natural habitats of the region as well as aims for the preservation and resettlement of species. More than that, constant research and monitoring is carried out to promote new approaches in species conservation.

A unique model project is ‘conservation of grassland and landscape development by large-area pasturing’. The project brought together nature conservation, agriculture and regional development. Biosphere administrations, regional farmer associations and public authorities worked hand in hand to allow pasturing beyond property lines and administrative boundaries.

Agriculture

Large parts of the Rhön can be regarded as marginal agricultural areas. It is a special strength to follow different ways by the three ‘Länder’ to achieve the same goals regarding agriculture. This is due to different land-use structures shaped by history. For instance, in Bavaria, small fields of the Upper Rhön, which are the result of historical field splitting, are purchased by public authorities and used by local farmers as mountainous mowing meadows under management contracts. In Thuringia large-scale agriculture could and should not be converted into small-scale farming. In Hesse however, main areas are used for grazing.

Food production (value-added chain)

The Rhön is known for direct marketing of regional products. In 1994, the project ‘From the Rhön – for the Rhön’ was launched. This involves cooperation between gastronomy and agriculture through the promotion of regional dishes and products in restaurants. A set of criteria had to be developed and was adopted by all collaboration partners. In 1998 this idea expanded to the concept of Rhön BR business partners. From this project the idea of creating a regional label for the Rhön has evolved. The objectives of the label are to make the region better known and to support the regional economy. Due to complex EU regulations and approval procedures, the Rhön label for products is not yet on the market. It will consist of a quality label for regional organic food products and a quality label for other food products, for non-food products and services. Successful projects are the ‘Rhönschaf project’ (Rhön sheep), ‘Rhöner Apfelinitiative’ (Rhön apple initiative) and ‘Rhöner Weideochsenprojekt’ (Rhön cattle project).

Further activities: Research and Monitoring

Research and monitoring is a major stepping stone for the region to enhance methods of nature conservation. Studies say that almost 50% of the German Research on Biosphere Regions is carried out in the Biosphere Reserve Rhön. A research programme coordinates several activities in research and development which comprise environmental impact and risk studies, integrated and interdisciplinary studies, land use and land cover monitoring, planning and zoning measures, methods of sustainable use and sustainable development.

c. Instruments of planning and control
The basis for the Rhön Biosphere Reserve is the ‘framework management plan’ (since 1995). The framework management plan is not legally binding, however the idea is, that the visions and goals are imbedded step by step at all levels of planning (regional planning, town and country planning, protected area management planning etc.). The framework management plan is fully integrated in the regional planning in Thuringia and partly integrated in Bavaria and Hesse. It serves as a framework concept for several fields of action: nature and landscape conservation, zoning, environmental-friendly agriculture, forestry, economy, settlements, environmental education, and others.

Maintenance and development concepts exist in Bavaria and Hesse, partly in Thuringia. The Biosphere Reserve Rhön also promotes land purchase to preserve nature areas.

The Rhön is also included in the EU-LEADER programmes and constitutes three LEADER regions one in each ‘Land’. The LEADER programme is especially used for funding tourism (e.g. tourism concepts) and projects concerning gastronomy, handcraft and business. Other projects were developed through the EU-LIFE programme.

d. Participatory and Integrated Management (organisation, administration)

The Biosphere Reserve has an administrative agency in each of the ‘Länder’ (Bavaria, Hesse, and Thuringia). Since 2002, the cooperation between the ‘Länder’ has been bindingly arranged by a treaty on the constitution, development and administration of the Rhön. The cooperation across ‘Länder’ boundaries is managed by the ‘ARGE Rhön’ (‘Regional Working Group’). The ‘ARGE Advisory Board’ consists of 12 members (among others five district administrators, three LEADER initiatives, and representatives from conservation initiatives, nature associations, and expert groups). Furthermore, constant circles of experts have been established on specific topics (‘umbrella brand Rhön’, ‘tourism and nature’, ‘environmental education’, ‘protection of species’, and others).

(4) Summary / conclusion

The foundation of the ARGE can be considered as the breakthrough in shifting part of the responsibility for the Rhön biosphere reserve from government administration to the local people (respectively to their political representatives), also integrating the adjacent areas around the Biosphere Reserve in the concept. Furthermore, conclusions from the Rhön show that the willingness to cooperate with many different and (very unusual) partners is a key factor (vertical and horizontal regional networks). Therefore, creating a strong regional identity was a critical success factor for projects of sustainable regional development. Today, business partners are proud of the certificate ‘Biosphere Reserve’ given by UNESCO and use it as a marketing brand. Therefore they intend to contribute to the future conservation and careful development of the valuable landscape.
5 Conclusions and recommendations

This chapter summarises the main results of the assessed case studies and of existing validated concepts of 'success factors' for sustainable regional development. Although our appraisal primarily refers to 'European conditions', an international study on influence factors for the success of biosphere reserve management (Stoll-Kleemann & Welp, 2008) confirms that these conclusions are of international validity / transferability. The following conclusions and recommendations can be allocated to six main areas.

**Figure X: Success factors for sustainable regional development**

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1. Suitable pre-conditions: natural and socio-cultural potential

**Existing problems and the will to find solutions:** In order to achieve sustainable land use management, the local population and authorities must be aware that existing practices are unsustainable and need to be changed.

**Options for action and win-win solutions:** If the natural potential respectively nature conservation can contribute to the solution of regional problems, win-win solutions are possible. This can be, for example, the marketing of environmental-friendly generated products or services. As a premise, there must be a market where an attractive price for such produce can be achieved.

**Regional identity and support by the local population:** A distinctive regional awareness, and (especially in the case of protected areas such as Biosphere Reserves) a strong
commitment of the local population are of great relevance for the promotion of sustainable land use.

Environmental education and qualification: The case studies and the literature review show that raising the awareness of the value of biodiversity and landscape as well as qualification measures for sustainable use options are crucial elements for the spreading of nature-oriented practices.

2. Patronage by strong partners

Political support on a regional level: When local authorities take the leadership in sustainable regional development, obstacles can be easier overcome and the process can be accelerated.

Key personalities as ‘locomotives’ for sustainable development: The participation of promoters, such as highly committed individuals with persuasiveness, and who are accepted by the local population, are of central importance in the regional development process. Additionally, the support of representatives from non-governmental organisations is essential.

3. Efficient networks and process management

Integration of management: In many reviewed regions management has been implemented in conjunction with local authorities. This interlocking, as well as the execution of responsibilities of public administration ensures high integration in regional planning and decision making processes.

Expertise and resources: The management and coordination of sustainable regional development needs sufficient financial and personal resources as well as professional competence in the relevant fields of activity. Furthermore, development processes are very dynamic. This requires an adaptive management system which understands itself as a ‘learning organisation’.

Transparency of process and resource management: Structures and activities of regional development processes need to be transparent and open to new players, ideas and approaches. The assignment of financial resources to process and projects need to be efficient and transparent as well. Quality control by independent consultants should be conducted for completed projects.

Networks: The willingness to work together with many different partners creates new forms of cooperation, vertical and horizontal networks which play a substantial role in sustainable regional development and in reconnecting towns and countryside. It takes time to gain confidence in order to build networks and to make them function. Therefore, the continuity of a (funding) programme has to be guaranteed.

Innovative projects: Many regions struggle with a limited financial budget, especially for longterm projects such as the management of areas of high nature value. In addition to those projects of ‘conservation through sustainable land use’ they are forced to develop
innovative approaches of funding. The ‘Nature-Auction’ from the Western Bodensee is one example of alternative funding model, where companies, organisations or private people can buy ‘nature conservation measures’ at an auction. It is the task of the ‘regional management’ to foster such innovative projects and to show that ‘new ways’ are possible.

**Planning tools:** In many regions, planning systems and their integration in overarching regional or town planning support the preservation of nature and landscape. This is the case, for example, in Laag Holland, the Biosphere Reserve Rhön and in the Agricultural Park (Spain). Landscape planning is based on a comprehensive analysis and assessment. It provides an extensive information basis on the condition of nature and landscape and facilitates a precautionary planning approach for the area (region) in question. The effects of landscape planning manifest themselves in efficient procedures, low-conflict and cost-saving consideration of environmental issues in the event of changes to nature and the landscape. Landscape planning and similar tools provide an information basis which can be used, among others, to identify areas of ‘high priority’ where measures should be implemented, combined and limited financial resources concentrated.

### 4. Public participation

**Balanced participation of social groups:** A crucial factor influencing success is the balanced and locally adapted participation of relevant social groups in the regional development process. In particular, those, who contribute directly to a nature-oriented land use should have sufficient time and options to build a consensus on important decisions and steps to take. Local knowledge of inhabitants is recognised as valuable to the development process. In the analysed case studies options for participating are assured by thematic and project-related forums or advisory councils.

Public participation and subsequent negotiations between stakeholders on projects can be time consuming, but they enhance acceptance for the process and motivate people to align themselves with the projects. This can be underlined by the following quotation from one of our presented case studies: “In interviews with local actors they indicated that top-down imposed measures don’t work in Laag Holland, but in the case of ‘the idea is something of your own’ developments never go quick enough.”

### 5. Communication of achievements and marketing

**Communication of success:** Achievements such as economic success through sustainable land use should be communicated as early as possible, in order to enhance acceptance and idea support.

**Marketing and advancing the recognition value:** The marketing of environmental-friendly generated products or services can be advanced if quality and product standards are transparent and well communicated. In many regions, regional product brands have been developed, e.g. ‘Waterland Beef’ (Laag Holland), ‘Gutes vom See’ (Western Bodensee), and the ‘Producte FRESC del Parc Agrari (Barcelona). These brands facilitate the dissemination of the products beyond the project area.
6. Supporting national framework

Avoidance of counter-productive government programmes: In Europe nature-conservation oriented regional development programmes have an accompanying character to mainstream programmes of agriculture or business development. In the case of LEADER, they are part of these programmes. It is important to verify the coherence of interacting programmes.

National nature conservation legislation: Uniform nature conservation legislation provides a binding framework of action. Adding the principle of ‘preservation through utilisation’ besides the ‘traditional’ strategies of conservation creates the chance of a large-area implementation.
References

Chapters 1 + 2


LFU / LANDESANSTALT FÜR UMWELTSCHUTZ BADEN-WÜRTTEMBERG 1996: PLENUM. Konzeption und Grundlagen. – Projekt Angewandte Ökologie 14; Karlsruhe.


PETERMANN, C. 2002: Naturschutz als Impulsgeber für sozioökonomische Entwicklungen; Landwirtschaftsverlag; Münster-Hiltrup.


Chapter 5


Websites:

EU Rural Development Policy 2007-2013:  
http://ec.europa.eu/agriculture/rurdev/countries/index_en.htm

European Network for Rural Development / ENRD, contact point:  
http://ec.europa.eu/agriculture/rurdev/enrd/index_en.htm

The EU-LIFE programme:  
http://ec.europa.eu/environment/life/home.htm

NATURA 2000:  

Urban-rural linkages fostering sustainable development in Europe

PLUREL-project (Peri-urban Land use relationships – Strategies and Sustainability Assessment Tools for Urban-Rural Linkages):  
www.plurel.net

CURE: Convention for a sustainable Urban and Rural Europe:  
www.cureforsustainability.eu/

PURPLE (Peri Urban Regions Platform Europe):  
www.purple-eu.org

FEDENATUR (European Federation of Metropolitan and Peri-urban Natural and Rural Spaces):  
www.fedenatur.org

Landscape planning:

Landscape planning directory with information on landscape programmes, structure plans and landscape plans adopted or currently being drawn up in Germany on the BfN website at:  
www.bfn.de/0312_lpv.html

Case studies:

Laag Holland (Netherlands)

Van Broekhuizen, R., von der Ploeg, J.D., Oostindie, H. (2008): Case study report, carried out in the course of the EU-funded ETUDE-Project. Report is published under:  
www.etuderd.eu/dynamic/media/1/files/Plaatsen/D_4.4__D_4.3_NL_Laag-Holland_CSA.pdf

www.laagholland.nl

www.hotel-boerenkamer.nl

www.waterlandendijken.nl

Agricultural Park Barcelona (Spain)

Montasell I Dorda, J. and Callau I Berenguer, S. (2008): The Baix Llobregat Agricultural Park (Barcelona): and Instrument for preserving, developing and managing a periurban agricultural area. Available online at:  

(only in Spanish)

http://www.diba.es/parcsn/parcs/life/eng/llobregat.htm

PLENUM Western Bodensee (Germany)

www.plenum-bodensee.de
www.plenum-bw.de/gebiete.westlicher-bodensee.php
www.bodensee-stiftung.org
www.solarcomplex.de
www.sielmann-stiftung.de/de/projekte/sielmanns_biotopverbunde/biotopverbund_bodensee/index.php

Fundatia ADEPT, Tarnave Mare Area (Romania)
www.fundatia-adept.org

Biosphere Reserve Rhön (Germany)


www.brrhoen.de/en/
www.unesco.de/rhoen.html?&L=0
www.rhoen.de/eng/index.html