6. ISCAR Workshops

6.1. Demographic developments in mountain areas of Europe. Challenges, research demand, perspectives

6.1.1. Key questions

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1. Facts

- Development of population indices in moutain areas of Europe
- Differentiation between remote (altitude) locations and main valleys
- The Alpine City an oxymoron?

2. Causes

- Availability of infrastructure (schools, hospitals, airports, train stations)
- Employment (tourism, industry, agriculture, tertiary sector)
- EU, transboundary transport ...

3. Consequences

- Ageing
- Emigration
- Infrastructure breakdown
- Cultural change (the roles of tradition, culture and language)

4. Open questions, research demand, perspectives

- Internal differentiation and small-scale differences
- Availability of infrastructures
- Political and planning activities (jurisdiction, support policies)
- How to act?

6.1.2. Infrastructure, economic situation and demographic patterns in European mountain areas

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The global importance of mountains is increasingly recognised, as shown by the inclusion of a dedicated chapter on mountains in the Agenda 21 and the declaration of the year 2002 as the International Year of the Mountains. Europe has many mountain ranges in all parts of the continent. However, these mountains are very diverse at every scale, in terms of climate, ecology, economy, demography and other characteristics.

In the context of European cohesion and enlargement, mountain regions are considered as having permanent natural handicaps, due to topographic and climatic restrictions on economic activity and/or peripherality. On the other hand, they also provide potentials and assets as they are centres for biological and cultural diversity, providing opportunities for recreation and tourism, or because they act as water and energy suppliers for lowland areas.

As Europe expands and becomes increasingly complex, future policies for mountain areas must be based on a thorough understanding of their current social, economic and environmental situation. Such an in-depth analysis of the mountain areas for the old and new EU member states plus Romania, Bulgaria, Norway and Switzerland was conducted in a study commissioned by DG Regional Policy of the European Commission, undertaken by a consortium of twenty-two partners from across Europe, led by Nordregio.

This presentation shows subset results of this study, focusing on infrastructure supply and accessibility, the economic situation, and demographic patterns and trends in European mountain areas. The situation of and within the Alps is compared against the situation in other mountain ranges in Europe, so as to identify the specific handicaps, potentials and assets of the different mountain ranges. As there is not only diversity between mountain ranges in Europe, but there are also great disparities within individual mountain ranges, the basic analyses of the situation are carried out at municipality level. Thus, the presentation will provide results both at municipality and at massif level. Eventually, three typologies of mountain areas will be introduced, where different massifs are classified according to certain sets of criteria in order to define massifs with similar problems and potentials.

The three typologies assess the massifs in Europe from three different perspectives as they relate to (1) social and economic capital; (2) infrastructure, accessibility and services; and (3) land use and land cover; representing the key issues of mountain areas.

The specific situation and the performance of the Alps will be highlighted against the situation in other massifs in Europe. The internal variety within the massifs will also be addressed in the presentation.

6.1.3. Concentration and abandonment in alpine areas and their impact on landscape structures

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Recent statistical data concerning the demographic situation of the Alps (CIPRA area) in the past twenty-five years emphasize the general growth of the alpine population and the end of emigration movements of the 20th century. We must consider this subject carefully: apart from quantitative evaluation, we have to look at the quality of the process in action and to observe its impact on the structure of alpine landscapes. While the great process of demographic redistribution actually increases the number 'people in the alpine arc', it reduces the number of 'mountain people' and generally produces a loss of homes, of a natural and cultural relationship with the environment.

In past decades, mainly in the Italian and French Alps, a change towards urban diffusion and settlement increase along the periphery of the Alps and on the main valley floors has been observed. Elsewhere the depopulation trend perseveres, affecting mountain slopes, remote inner valleys and peripheral regions away from the tourist areas. These areas are characterized by population age increase, abandonment of dwellings, decay of agricultural and utility structures (terracements, meadows, small utility buildings), and loss of usefulness due to increasing natural afforestation in uncultivated areas.

Reading these processes in the light of the main subject of this Forum ('from preview to action'), we have to ask ourselves what kind of Alps we desire in the future. If we think that the Alps will chiefly be the 'playground of Europe', i.e. a great wilderness/leisure area for urban people and a few tourist operators, perhaps this is the right trend. But if, on the contrary, our vision is the continued presence of alpine people and their cultural landscape, we must provide better measures and more resources for adaptable, flexible and integrated processes, finding a balance between traditional activities and new economic forms of production or tourist activity. This action is a strategic goal in the fight against the hydro-geological, environmental and cultural deterioration of these territories.

6.1.4. The alpine city – an oxymoron?

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The term 'alpine city' seems to hold a contradiction between the two words it consists of. The city – of human construction, where we expect modernity and the absence of natural habitats, except for some 'greens' intended for recreation (parks) or for aesthetic value (trees) – contrasts with the Alps – symbol of naturalness, a region where humans are guests rather than hosts, a sanctuary of biodiversity and an infinite array of landscapes. In reality, however, and at closer range, the alpine city may represent a kind of synthesis between the anthropogenic and the natural spheres, a paradigmatic new city which embraces the positive values of both humans and nature. Is that how it is, or is this still fictitious?

6.1.5. Population and culture in the Alps today – in the light of the Alpine Convention

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This presentation wants to emphasize the presence of historical cultural communities in the Alps which have to be protected and sustained. At the same time there is an urgent need to formulate the Population and Culture Protocol of the Alpine Convention in order to avoid the disappearance of those specific communities and their replacement with a 'culture' alien to the mountains. Such groups should be named *cultural communities* rather than *ethnic* or *linguistic minorities*, as reported in the proceedings of an international conference in Belluno in 1996 (*Mes Alpes à moi. Civiltà storiche e comunità culturali delle Alpi*, Regione Veneto-Fondazione G. Angelini ed., 1998).

It is necessary to give culture a central and objective role, as it is an essential factor of a more remote yet sustainable connection between people, and between people and their environment. Already in the resolution signed by the president of the Alpine Convention, the Slovenian minister for the environment, Pavel Gantar, it was established that to develop mountain communities we do not need more museums or sentimental or folkloristic recalls of the past. What is required are efficient political and legal instruments to allow for the dynamic evolution of cultural communities, which must be protected in their identity yet open towards the world around them; moreover, the needs of the young generations need to be considered especially. A new booklet 'The privilege of the Alps: multitude of peoples, environments and cultures', published by the European Academy of Bolzano/Bozen and the Fondazione Angelini under the auspices of the Italian ministry for the environment and in cooperation with the Club Arc Alpin, will be launched at the ForumAlpinum2004. It will present those communities as well as a 'new charter of mountain values' based on a harmonious

relationship between people and the environment. The booklet also contains a specific proposal from the Italian part for the Population and Culture Protocol.

6.1.6. Transport through and in the Alps: necessity and burden

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No other topic has stirred as much controversy in the alpine region as that of transport. The discussions on the transportation protocol in the context of the Alpine Convention illustrate the at times diametrically conflicting positions between individual states, as well as between the alpine region and national interests. The commercial transport which crosses the fifteen most critical passes in the alpine region (domestic, export and transit traffic in the alpine region) has more than doubled since 1980, and in 2004 amounted to a total of 195.1 million tons, approximately 154 million tons of which were transported via the passes between Ventimiglia and Tarvis. The percentage of commercial transport actually transiting the Alps amounts to fifty per cent of total commercial traffic in the region. At the same time, however, commercial transport has shifted towards the road. The percentage of road-use in alpine transit amounts to seventy-five per cent, although this figure varies in individual countries (roads in 2004: CH 35.3%, A 76.8%, F 77.9%). In comparison to the road network, the railway network is still beset by serious structural, organisational and logistical disadvantages. According to a survey conducted by the Economic Research Institute of Bolzano (2002), the railway system's lack of reliability is one of the major criticisms raised by transport agents. Moreover, Alpine transit traffic is increasingly affected by trends in international freight transport. Changing employment legislation, the expansion of Italian Mediterranean ports and their strategically more favourable location in proximity to intercontinental routes passing the Suez Canal have resulted in large growth. The new EU infrastructure programme (TEN-t) addresses several projects which directly affect the alpine region (Brenner, Mont Cenis, Genoa-Swiss border etc.) and were approved by the European parliament and the council (ruling no. 884, of April 29, 2004). This is an attempt to offset existing deficits of the railway system. However, it is still doubtful that this will suffice to establish sustainable development in a sensitive region unless decisive transport policies, organisational and logistical measures are implemented.

6.2. Key issues of landscape development in the Alps

6.2.1. Key questions

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- 1. What are the driving forces related to landscape development in the Alps?
- 2. Who is affected by landscape development in the Alps now and in the near future?
- 3. At what institutional level (local community, region, nationwide, Alpine Convention) should landscape development be dealt with? In other words, is landscape development (now and in the near future) an item the international, transnational agenda, e.g. the Alpine Convention?
- 4. What lessons can we learn from the past?

Content:

Contributions to the key questions will be gathered from the following sources:

- 1. the Swiss National Research Programmes (NRP 48 Landscapes and Habitats of the Alps) (6.2.2. 6.2.4.)
- 2. ongoing research programmes at national and international level (6.2.5. 6.2.9.)
- contributions, statements and assessments by the workshop participants
 Special attention will be paid to international agendas on research, strategic planning and policy.

6.2.2. Swiss NRP 48: Landscapes and Habitats of the Alps

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Sustainable development in alpine areas

The Swiss National Research Programme Landscapes and Habitats of the Alps (NRP 48) aims to determine what developments in the alpine area are discernible, socially desirable, ecologically sound, and economically sustainable. To this end, NRP 48 prepares foundations and develops specific strategies to help set sustainable development in motion. Long-term possibilities and opportunities are sought to overcome conflicts between the demands of consumers and conservationists.

NRP 48 intends to heighten awareness of the collective assets of 'landscape' and 'habitat' and their far-reaching social significance. The aim is to produce results which can be applied not only to Switzerland, but to the entire alpine region. In this respect, collaboration and exchange with parallel research endeavours at European and international level are of great importance.

Research foci and key questions

The research activities of NRP 48 are gathered up in five research foci. The key question in each case formulates the expectations of NRP 48 as regards future synthesis and implementation of the results. Thirty-five individual projects dealing with inter- and transdisciplinary concepts contribute results in one or several research foci.

I Processes of perception

Key question: how are landscapes and habitats perceived?

II Processes of change

Key question: how and why do landscapes and habitats in the alpine area change?

III Designing goals in landscape evolution

Key question: how can objectives be defined and achieved?

IV Land use and adding values

Key question: how can one ensure that landscapes and habitats maximise their potential value?

V Virtual representation

Key question: how can landscape development be anticipated?

Research effectiveness and collaboration with actors involved

The results of NRP 48 are intended to help the various authorities, decision-makers (Swiss government, cantons and municipalities), as well as private-sector protagonists both within and beyond the alpine area to better identify their landscape-related tasks, to match their activities to agreed goals, and to make use of available means. In order to ensure this, the majority of the 35

projects involve local communities and individuals in the research process. A supervisory group of representatives from seven federal offices are actively involved in the programme in order to ensure optimal transfer of research results to legislation and public administration. Key Swiss NGOs are involved in the dissemination of the programme results.

Programme stages and funding

The first stage (2002-2005) of NRP 48 consists mainly of actual research in the 35 projects. The second stage (2005-2007) will be devoted to synthesis and implementation. The Swiss National Science Foundation (SNSF) is in charge of executing the NRP. A framework budget of 15 million Swiss francs over five years has been granted.

6.2.3. FUNalpin, virtual future – new types of alpine landscapes. Evaluating the resource bases of new economies for reshaping local policy.

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What economic opportunities do alpine landscapes offer today? Perhaps cross-country skiing in front of Cologne cathedral rather than in the Engadine? It would seem that landscapes can easily be changed. Due to the economic transformation and mechanisation of leisure activities, regions with a high landscape potential are experiencing economic decline. The project examines how, on the basis of a performance agreement, public money could in future increasingly be directed towards public causes such as landscape maintenance.

Background

Partly due to globalisation and liberalisation, the economic situation in the alpine area has changed dramatically. New relationships are forming between peripheral and central alpine regions. The traditional resource of 'alpine landscape' is losing importance, being increasingly supplanted by mechanical structures, landscape simulation, organised leisure, and/or new technologies. Owners and 'suppliers' of real landscapes are thus losing the foundation of their livelihood. Economic activity is concentrated in intensely used alpine areas of much less value in terms of nature and culture, as well as in regions on the periphery of the Alps. Alpine regions must decide what sustainable long-term economic use they can make of their landscape resources.

Objectives and approach

The project is based on the idea that regions have a chance of survival if state payments (grants, sponsorships, etc.) are directed to areas showing high ecological performance. This ecological performance would be awarded official certification as a preservation area, something which would also be useful to these regions for their own marketing. Working from case studies, quality criteria will be drawn up for ecological performance regulations, and a certification procedure established. A further stage would involve the assessment of economic potential, and the drawing up of elements for a performance agreement.

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Significance

The project involves a new approach in regional policy: public money should increasingly be directed towards public causes such as preserving the quality of resources and landscape, on the basis of which the private sector can produce certified quality goods and services. The elaboration of award criteria and performance regulations is to be carried out in close cooperation with the affected parties in the regions, as well as with members of the national and cantonal governments.

6.2.4. Maintenance of the traditional cultivated alpine landscape by means of institutional resource regimes

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This study is based on the following initial hypothesis:

Sustainable landscape development requires the integration of collective property rights into the former institutional regime for the resource of landscape, which previously was predominantly conceived on an individualistic basis, i.e. individual ownership of individual plots.

Theoretical base

Our use of natural resources is strongly determined by the institutional framework which exists for the use of a resource. Property rights play a particularly important role here as they constitute the link between users and a resource. Ostrom (1990) and Hanna et al. (1996) assumed that unless the property issue could be resolved, sustainable use of resources would be impossible to achieve. However, property rights are just one part of the institutional regime determining the way in which natural resources are treated. The institutional regime includes not only the distribution of rights but also the nature and content of regulations, participating actors and institutional structures, and the processes and measures involved in public protection and use policies.

So far, the framework conditions for co-operation and collective action in the landscape have only been examined in a few research programmes.

Research questions

Today, historical traditional landscapes, like the terraced landscapes in the Lower Engadine, Ticino and Valais, or traditional alpine landscapes with their old irrigation and access systems, are no longer economically viable. The introduction of a system of direct agricultural payments in 1992 meant that at least some of these landscape-conserving activities have been funded. These subsidies are, however, closely associated with farming activities and are therefore only paid to the farmers who own or lease the land. The example of terrace sponsorships in the Cinque Terre region (in Italy), which give non-farmers the opportunity to become land sponsors is another potentially interesting solution.

Furthermore, demands to impose management obligations on persons wishing to convert old agricultural buildings in rural areas into holiday homes were also voiced in the context of the debate surrounding the new Swiss Federal Law on Regional Planning. A similar aspect was recently introduced in a government decision concerning the problem of the rustici in the canton of Ticino.

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The proposed project seeks to answer the following questions:

- How does the institutional regime for the resource 'landscape' (property rules, public conservation and use policies) influence the quality of this resource, taking the historical and geographical particularities into account?
- How can new or revived traditional collective forms of institutional property (e.g. common property and combination of diverse property regimes) contribute to sustainable landscape development?

Methods

Three case-study areas will be subject to a screening process. This will make it possible to record the extent of sustainable landscape use (the criteria/indicator system has been borrowed from the BAFU Project Landschaft 2020 (Landscape 2020). The resource regime (property situation and public policies) will also be recorded. We assume that it will be possible to adequately record and describe the situation in the case-study areas using a maximum of about twelve screening criteria/indicators (Knoepfel et al. 2001). This screening process will focus on three time reference points (prior to 1980/90, the current situation and, prospectively, the year 2020):

With the help of these case studies, it will be possible to test the hypothesis that there is a causal relationship between altered regime components and assumed changes in landscape quality. To avoid any distorting mono-causality, in addition to the variables with a direct effect on regime change, other exogenous and endogenous influence variables will also be tested.

On completion of this screening and hypothesis verification, possible desirable target status variants for sustainable landscape development will be outlined for each case study area and, on this basis, the institutional landscape regime will be derived as an ideal model which would positively support this target status.

Expected results

The proposed project will examine the relationship between institutional regimes for the resource of landscape and the actual state of the landscape, taking historical and geographical particularities into account. The study shall also demonstrate whether the terraced landscapes currently threatened by abandonment, intensification or destruction might not be better preserved if new common-property-like regimes were established.

6.2.5. REGALP: Regional development and cultural landscape change: The example of the Alps.

Evaluating and adjusting EU and national policies to manage a balanced change

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REGALP is a research project funded by the European Commission under the 5th Framework Programme, Quality of Life, Key Action 5, sustainable development of rural and other relevant areas. The overall aim of REGALP is to investigate the interrelation between regional development and cultural (= man-made) landscape change. In a future-oriented approach the research team will propose

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improvements and adjustments to policies at EU and national level. The proposals are based on a new understanding of the interrelation between regional development and cultural landscape change, in order to meet future requirements and to manage balanced change in the Alps and other European landscapes and regions.

Project structure

- Working package 1: identifying the relevance of the landscape issue in regional development policies at EU and national level;
- Working package 2: analysing the interrelation between regional development and cultural landscape change in the Alps;
- Working package 3: evaluation of public policy contributing to the interrelation between regional development and cultural landscape change;
- Working package 4: developing integrated cultural landscape scenarios in the Alps for the year 2020;
- Working package 5: making public the view of locals;
- Working package 6: proposing adjustments to EU and national policies.

6.2.6. VISTA – Vulnerability of ecosystem services to land-use change in traditional agricultural landscapes

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Problems to be solved

Rapid technological, economic and social changes have induced major land-use changes in traditional landscapes in Europe's 'marginal agricultural areas', resulting in a steep decline in the total area of extensive agro-ecosystems typical of these regions. Agricultural abandonment and reduction, or abandonment of grazing and hay-making in semi-natural pastures have transformed landscapes from diverse mosaics of land use intensities to coarse mosaics, where large abandoned areas contrast with foci of intensive use. Remaining open habitats characteristic of traditionally managed lands are potentially under further threat from continuing land-use change and/or an intrinsic fragility of sparse and disconnected plant and animal populations. Hence many areas have evolved towards less ecologically and culturally valuable vegetation. An assessment of the vulnerability of traditional agroecosystems to future land-use change, including an evaluation of threats and a quantification of their impact on the delivery of ecological services they provide is therefore urgently required.

Scientific objectives and approach

VISTA aims to compile an *integrated assessment of the vulnerability of European traditional agro-pastoral landscapes to land-use change* which will assist land managers and regional policy makers towards sustainable development.

1. Build a framework for predicting the dynamics of and services provided by agro-pastoral landscapes. Based on previous studies of the response of plant traits to land-use change and experiments at eleven sites in Europe and Israel, we will identify morphological and easily-measurable physiological Plant Functional Traits (PFT) which predict the response of vegetation diversity and ecosystem functioning to land use, and unravel experimentally the relevant ecophysiological and demographic mechanisms.

- 2. Develop, in collaboration with land managers, easy and cost-effective trait-based indicators of ecosystem services such as herbage production, litter decomposition and agro-economic value. The robustness and the community utility of a short list of easily measurable traits as indicators of these services will be tested by involving land managers and an anthropologist throughout the research, and by running field demonstrations and training courses.
- 3. Apply a scenario-based approach to simulate ecological changes and assess with stakeholders the vulnerability of services provided by traditionally managed landscapes. Scenarios for future land use at six of the study sites will combine sensitivity thresholds identified from the compilation of historical data, constraints by regional socio-economic scenarios, and local natural and socio-economic context. Their impacts will be projected by combining landscape simulations of vegetation diversity and ecosystem functions, and the relationships between these properties and ecosystem services. Then alternative projections within each site will be ranked according to stakeholders' criteria. A synthesis highlighting regions with differing vulnerability will be presented during a multi-sectorial conference.

6.2.7. IMALP – Implementation of sustainable agriculture and rural development in alpine mountains

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IMALP is a three-year project initiated in January 2003 and funded under the European Community 5th Framework programme for Quality of Life and Management of Living Resources (QLK5-CT -2002-01099).

IMALP has developed a research-demonstration approach to sustainable agriculture in four pilot areas across the Alps: Moyenne Tarentaise (France), Val di Sole (Italy), Oberes Drautal (Austria), Val d'Hérens (Switzerland).

Project objectives:

- to design and implement local action plans for sustainable agriculture to contribute to rural development in the alpine region;
- to assess implemented action plans and disseminate methods and tools to promote sustainable agriculture;
- to make political recommendations about rural development.

Expected results and challenges

IMALP will lead to new knowledge on the sustainability of alpine agriculture at an inter-territorial European scale. This knowledge will inform:

- the operational definition of sustainable agriculture at local level;
- the relationships and negotiation processes between actors;
- the multi-functionality of farming systems and current changes;
- representations of farmers' identities and definition of farmers' tasks.

IMALP will propose:

• methods and tools to implement sustainable agriculture and indicators of sustainability from monitoring and backing to decision-making.

6.2.8. Euromontana project: strategic information for development of quality mountain food products in Europe

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In 2000, on the occasion of the Trento Mountain Convention, Euromontana1 emphasised the comparative advantage of food products from mountain areas, justifiably described as a 'reservoir of diversity'. However, both the world and the European economic context tend to progressively marginalise these regions and their products. In a purely economic logic they struggle to find their place, which is why it is essential to study the development of mountain products through innovation and quality responding to consumer expectations. Euromontana decided to act, with fourteen partners, by establishing a European study programme on mountain food products.

The project in context; its objectives

From October 2002 to September 2004, Euromontana coordinated a European research programme on mountain food products, funded by the Framework of the 5th RTD Programme of the DG Research (European Commission). The aim is to develop and put at the disposal of actors and professionals some useful tools for the development of mountain products.

The fourteen partners are from different mountain areas in eight European countries, i.e. Spain, France, United Kingdom, Greece, Italy, Poland, Romania and Norway. They are development agencies, local authorities, research or training centres and associations active in the field of food products from their mountain territories.

The two objectives of the project are:

- to create an Internet site making available strategic information on mountain products with the long-term potential to become a resource centre for the professionals in these areas;
- to develop political proposals and strategic recommendations at the European level, based on a European Charter of Quality Mountain Products.

Methodology and results

The study comprises two series of surveys conducted in ten study areas in eight European countries. The first was a questionnaire survey to collect data on more than 120 products. The second study took the form of case studies on eighteen of the previously surveyed products. Legislation concerning these products was also scrutinised in the eight countries.

Consultation with a larger public was made possible through two seminars. The 'technical' seminar in Turin (February 2004) involved the participation of selected experts to deepen and refine the final project findings. The final conference in Cordoba (July 2004) enabled a large audience to validate future development of the Internet site and a European Charter of Quality Mountain Products.

Some results: of the 122 products examined, 87 are processed (55 of animal and 32 of vegetal origin) and 35 non-processed (23 and 12, respectively). Communicating their merits relies more on the image of the region (mountainous) than on the term 'mountain' as such. They are more easily identifiable through private brands than through quality denominations (European or national);

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¹ European multisectoral network for the development of mountain areas

however, there are considerable differences between individual products (plenty of cheeses bear the PDO label2).

Most of the raw material is produced in the mountains, where processing also mainly takes place. For the most part, the natural mountain conditions positively affect raw-material production; however, effects can occasionally be negative (poor soil...).

There are two major product categories, i.e. products originating from natural conditions and a particular environment (mountains), and unique products requiring specific know-how. The following success factors have been identified, i) in terms of production: natural conditions, historical presence, extensive use of resources and a social link;

ii) in terms of organisation: availability of a collective structure and quality management; and iii) in terms of funding: local or national public support of the launch of the project and of collective structures.

Currently only the French government has legislation on the term 'mountain' with regard to foodproducts.

European information website

The website makes available the results of the project in eight languages, i.e.:

- information on national and European regulations on quality and mountain products;
- ii) examples of innovative local initiatives; relevant contacts to promote exchanges;
- iii) an analysis of factors contributing to success.

This European resource centre will be developed by referring other processes to it, ongoing projects, and news on this theme in order to make it a 'European centre for the exchange of information on mountain food products'. This site will be available online from October 2004 and should be associated to projects and exchanges in the field with the support of Euromontana.

A European Charter on Quality Mountain Food Products

The point of such a Charter is to define common perceptions and concepts on what constitutes a mountain product in order to promote cooperation, initiate the involvement of various actors to develop these products, and finally raise awareness and involve European and national institutions. Euromontana foresees a period of consultation from now on, and will be progressing towards a wide recognition and ownership of this Charter by the mountain organisations in Europe. Initially, the Charter is expected to play a political role. It is hoped that it will be signed by all the professionals, national and international institutions, research and development centres. Euromontana will also submit its own recommendations to the European Commission, and when appropriate, to national governments.

6.2.9. proVision – providing for nature and society

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End of September 2004 the Austrian Ministry for Education, Science and Culture (BMBWK) started its new national research programme proVision, which focuses on providing for nature and society.

² PDO: Protected Designation of Origin: quality designation defined in EC regulation EC 2081/92

proVision is part of the Austrian initiative for research on sustainable development (FORNE) of the Austrian Council for Research and Technology. It also includes the research programme on Technologies for Sustainable Development of the Austrian Ministry of Transport, Innovation and Technology (BMVIT), and the Pfeil05 research activities of the Austrian Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW). The objective of the FORNE initiative is the definition and further development of a common set of future goals for Austrian sustainability research, and the strategic coordination of the various research programmes. More detailed information on FORNE can be found at www.forne.at

proVision is designed for a ten-year period (2004-2013), with the first call for proposals starting end September 2004. Programme management is shared between the BMBWK and the Environment Agency, each with a different focus on strategic and operative management activities.

proVision was developed in a nine-month participatory process and will cover seven key questions:

- Integrated risk-management research: vulnerability of humans and nature how can we deal with this in a prospective way? Despite risks and insecurity how can we deal responsibly with global environmental and climate change and spatial development?
- *Prospective/sustainable lifestyles*: how can we agree on standards of life-quality which correspond to the goals of sustainable development?
- *Prosperity and fairness of costs*: what are the future costs of environmentally responsible actions and who has to pay? How can we formulate, implement and evaluate an extended and broader understanding of prosperity in a participatory manner?
- Environment in Balance: what services can ecosystems provide? How much wilderness does Austria need?
- Spatial development and land-use: what use, stress and interference in land-use and development is justifiable in regard to sustainable development? What are future forms of land-use and development?
- Global responsibility: how can Austria meet its international obligations in regard to sustainable development? How can Austria contribute to the advancement and implementation of sustainable development?
- *Dialogue for sustainable development*: what kind of science culture is necessary for a provident society? What type of language can encourage dialogue?

Apart from these key-questions, on which calls for proposals will be made, proVision has defined certain operative goals:

- enhance international co-operation;
- enhance the quality and quantity of science-practice co-operation;
- enhance the quality and quantity of research-education co-operation;
- strengthen involved disciplines through interdisciplinary work;
- foster gender equality in science;
- foster gender-related research questions;
- increase the percentage of women in science;
- increase the number of young scientists;
- foster the qualification and career-potential of young scientists in inter- and transdisciplinary research.

6.3. Participation – a key element for sustainable development

6.3.1. Participation – a key element for sustainable development – from the Entlebuch Biosphere Reserve to INNOREF

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1. Introduction

How can regional development improve prosperity in alpine regions? Methodology, principles of participatory processes and best practice examples are presented. Initiation of bottom-up processes, involvement of stakeholders, building up networks, co-operation and communication are crucial factors for the success of sustainable development.

Representatives of communities and regions are invited to share their experiences and best practice examples during the workshop.

The project idea of the Regional Framework Operation (RFO) INNOREF (2004 - 2005) derives from the Programme Man and the Biosphere MAB promoted by UNESCO. The sustainable development model has been successfully tested in the Entlebuch Biosphere Reserve in Central Switzerland. Entlebuch has developed a strategy for the conservation of culture, nature and landscape as well as economic development based on local resources, creating added values and benefits for the local population.

2. Entlebuch: model region for sustainable development

The long-term targets of the Entlebuch Biosphere Reserve are conservation, development and cooperation. These goals imply the conservation of the unique, protected natural and cultural landscapes, especially of the raised bogs, moorlands and karst areas, and, simultaneously, the realization of sustainable regional development. A cooperation process allows sustainable growth and prosperity in the region. In connection with the experiences from the process, the 'I method' (for details see below) may enable the adaptation and application of the model in other regions as well.

Due to its topography, soil, climate and development, the Entlebuch valley does not have optimum site qualities concerning agriculture, industry and trade. The topography, fauna and flora of the Entlebuch cultural landscape, comprise many unique features of national and even international importance. Large areas of Entlebuch are dominated by a patchwork of valuable and diverse habitats, such as cultivated green-land ecosystems, raised bogs and peat bogs, alluvial woodlands along the Kleine Emme and Grosse Entlen rivers, hedge landscapes and large, near natural forests.

About 50 per cent of its 395 sq km surface area is agriculturally utilizable and alp meadows, 43 per cent is forested land, while the 2 per cent settlement areas are mainly villages, some industrial companies and tourist infrastructure. Of the 17,000 Entlebuch inhabitants, around 8,000 are in work, a third of whom are employed in agriculture and tourism, respectively. Among the 1,200 farms, 83 per cent are full-time enterprises; 39 per cent of employed work in the first sector. The main employers are the two mountain railways, Sörenberg and Marbach, as well as the five largest industrial firms and local trade.

The project (from 1998 to 2001) aimed at the establishment of a UNESCO Biosphere Reserve in Entlebuch. Based on the local characteristics and resources, lasting economic development with sustainable growth was to be achieved. A referendum in September 2000 on providing financial support and on establishing the Biosphere Reserve was unexpectedly successful: 94 per cent of the voters in the eight municipalities concerned supported the bill. Prospects for the future, local participation, extraordinary communication efforts as well as convincing arguments were important factors for the project's success.

In 2001 the Advisory Committee of the International Coordination Council for the Man and the Biosphere Program (ICC) congratulated the people in charge on the democratic process, their project management strategy, the procedure by which the municipalities reached agreement on the biosphere reserve and on its financial support.

Cooperation as a key issue for sustainable growth

Sustainable development may be achieved by establishing regional structures and cooperation within and between sectors, as well as with other regions. This improves the regional material loop and raises added value. Consequently, long-term growth may be guaranteed by resource efficiency and innovation potential within the various networks. Regional management as a professional hub is responsible for cooperation and moderation, communication, innovation and implementation of the Biosphere Reserve concept and, as a centre of competence, have to initiate, integrate, facilitate and evaluate the project and its data.

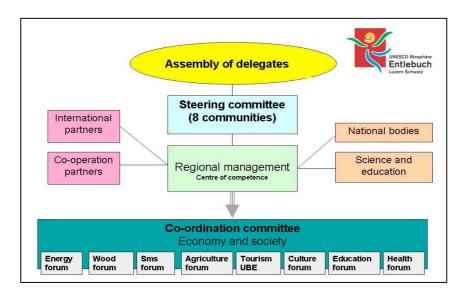


Fig. 1: Participatory structures: The bottom-up organisation of the Entlebuch Biosphere Reserve allows the involvement of society and economy.

The legal institution in the Biosphere Reserve is the Entlebuch Association of Municipalities, formed by the Steering Committee and the Assembly of Delegates (fig. 1). Their members represent public institutions and are delegated by the municipalities. The implementation process will not be accelerated without direct involvement of the stakeholders from economy and society. Therefore the stakeholder networks, the so-called Forum, were reorganized on a regional scale; the Coordination Committee consists of their chairpeople. Together with the Regional Management, these bodies implement the Biosphere Reserve's development strategy.

3. Methodology applied in the Interreg IIIC project INNOREF

The partner regions of INNOREF, Friuli Venezia Giuli, Umbria (Italy), Western Greece and Hranicko (Czech Republic), found this idea suitable to be adapted to different economic and social environments. Moreover, it is coherent with the territorial approach sustained by Interreg IIIc and with the strategies implemented by the participating regions.

The implementation of a sustainable regional development will be reached through participatory processes and bottom-up network structures. This approach is considered a normative participation process based on people participating in the decision process from the very beginning. It therefore contrasts with the usual top-down approach based on a hierarchical structure. The main advantage of adopting a bottom-up approach is participant identification with decisions concerning their environment.

Participatory processes require all participants to show a high degree of competence and imply a permanent learning process required great flexibility. Therefore, INNOREF is focusing on creating stakeholder and public involvement, corporate citizenship, regional management structures and capacity building within the framework of sustainable development within regional networks. All stakeholders interested in regional development activities should be able to participate. The motivation to achieve sustainable development will be a key factor.

In fact the bottom-up process will not be successful without top-down governmental support and side-in effects due to support from NGOs, research and education institutions, and national and international organisations, increasing know-how and competences within the region.

Methodologies integrated in the 'I method' concept:

- Participatory methods
- Target-oriented process management
- Decision process
- Workshop moderation
- Communication and Public Relations
- Cooperate identity and Marketing
- Leadership in public organisations
- Conflict prevention and resolution

Implementation of the 'I method'

Through a methodological procedure the process will be accelerated. Capacity building in the region can be improved through management team and stakeholder training. Even if, at the beginning, time must be invested in establishing and honing procedures (methodology and training), the processes will be faster later on due to the participation of networks which build up sub-projects and will be assisted and moderated by staff from the Professional Service Centre (PSC).

In INNOREF the target process is initiated by networks which propose goals relating to the regional strategy and topics of sub-projects, according to needs having emerged in the area and defined through a SWOT analysis. Networking is essential already in the decision process in order to create acceptance, synergies and to improve co-operation and resource efficiency. Networks in different sectors will cooperate; the exchange of information and ideas will bring creativity; innovation and focus on a long-term culture to manage changes will be enhanced.

The consistent implementation of the strategy will bring the desired impact and added values. It is necessary to balance short-term goals leading to concrete results, against profit and long-term goals creating an impact, in order to motivate participants to proceed consistently.

Methodological procedure with I-Method:

- 1. Creation of Pioneer Team: Selection field of activities
- 2. Target finding process: Ideal development, overall objectives (vision)
- 3. Selection of Stakeholders and interested persons
- 4. SWOT: Strengths, weaknesses, opportunities, threats/bottle necks
- 5. Establishment of stakeholders networks and professional moderation
- 6. Quality check of targets (CARMAT: are they Clear, Attractive, Realistic, Measurable, Accepted, Time defined?)
- 7. Goal concretisation (short term, long term)
- 8. Implementation plan: activities, tasks, tools, resources (human, financial, natural) and timetable
- 9. Assessment strategy and selection of indicators
- 10. Actions: results and impact
- 11. Assessment (Activities, Indicators and Process)

4. First Success in the Entlebuch Biosphere Reserve

Impact-oriented public relations strategy

The communication strategy has to be tailored to the process of sustainable development. Permanent and long-term information as well as positive communication are crucial for successful public relations and the creation of a chain reaction. An important task is to switch from activity to impact-oriented communication. A feedback culture helps focus consistently on the needs of the local population. A further important task is to translate complex information on regional sustainable process into simple language which a majority of the population can understand.

The Entlebuch process has been the topic of some 700 (2004) newspaper and magazine articles and TV and radio reports every year. Also, 8,000 individulas have participated in Entlebuch excursions and events, providing ideal information multipliers in a word-of-mouth chain.

The Echt Entlebuch (Genuine Entlebuch) trademark

Products and services as well as partner companies can obtain certification of the Biosphere Reserve and use the Echt Entlebuch trademark. This is an instrument to create credibility for consumers and to increase productivity based on local resources.

The main tasks of such a trademark are:

- Production of high-quality products
- Creation of a corporate design and image
- Support the philosophy of the Biosphere Reserve
- Enhance regional identity and local particularities
- Increase innovation of products and services
- Assessment of origin and quality
- Added-value creation within the region

The criteria for individual product and service categories and companies were developed by a committee consisting of representatives of the sectors involved, and with producer participation.

Certification of partner companies

The partnership programme has been established for restaurants, bakeries and butchers. This partnership is of high interest regarding the great need for local resources and exponentially increased added-value creation through production activities. Moreover, small companies know their customers, which makes them ideal communicators of the philosophy of the Biosphere Reserve.

Criteria relate to products and to service provided for guests. Criteria concerning products are:

- 75 per cent of all products from the area must be certified or from organic production;
- the menu must state the origin of the produce and producer's name; meals have to contain seasonal food;
- 50 per cent of the products used in a certified restaurant must originate from Biosphere Reserves, including foreign sites;
- typical meals must be on the menu daily;
- staff must be able to inform their guests about the Biosphere Reserve;
- promotion material must be available and well presented;
- information material must be supplied with the menu, and placed in all hotel rooms.

The consistent implementation has increased the use of local products and the creation of added value resulting from local resources. Moreover, cooperation with partners can accelerate implementation.

Quality economy increases prosperity

The objective of the Biosphere Reserve was to create and promote a new destination in line with the aims of nature protection and education, requiring the promotion of new venues and facilities away from the main winter ski resort. A regional network of agencies, public bodies and private operators had to support destination marketing. The main task was to improve cooperation between the stakeholders in the tourist sector.

The results of these efforts have been:

- definition of a new destination strategy and creation of greater authenticity;
- diversification of tourist products, mainly during the summer season;
- creation of new products linked to agritourism;
- creation of new packages for seminars and congresses, mainly related to research and education, nature and recreation;
- promotion of the Biosphere Reserve school targeted at schools and groups, combined with excursions and overnight stays in farms in mountain areas;
- increased overnight stays during the summer season, 3.5 and 5 per cent respectively;
- double the number of excursion participants every year;
- increased involvement of Biosphere Reserve partners from the tourist sector;
- increased income for producers of local products as a result of the new tourist marketing strategy.

First Success	1999	2000	2001	2002	2003	2004
Communication						
Visitors on the homepage www.biosphaere.ch		6'218	12'219	25'054	50'832	71,132
Number of articles on UBE	40	72	424	471	532	576
Edition of news papers with articles from UBE	1,292,952	2,292,952	13,599,964	17,100,000	21,500,000	24,700,000
Excursions						
Excursions organized by tourist office	20	18	21	39	34	32
Excursions organized by BE management	2	6	22	66	112	122
Participants tourist office excursions	289	315	249	474	443	402
Participants BR excursions	36	121	661	1445	2070	2568
Services by BR Management						
Cash flow realized by services (meals) for groups CHF			6,125	28,100	49,624	48,776
Cash flow realized by services for overnight for groups CHF			0	10,430	22,409	20,776
Trademark "echt entlebuch"						
Number of producers "echt Entlebuch"			6	28	34	36
Product groups "echt entlebuch"			31	117	133	135
Gastronomy partners				0	6	10

Tab. 1: Results from the BR Management activities:

The project's website and the media are most effective means of communication to make a process visible and to obtain feedback: visits to the website and number of articles concerning the Biosphere Reserve.

Increased numbers of excursions and participants, as a result of the activities of the Biosphere Management, compared to tourist office.

The services linked to the Biosphere Reserve Management show that there is an enormous potential to increase added values and same time to co-finance the management

The consequent implementation of a brand improves the cooperate image, can be successful within short time and increases the cooperation among producers and partners

The partly self-sustaining management system has been made possible through a private-public partnership created from the beginning, providing flexibility and freedom to management. This

bottom-up system benefits from bottom-up initiatives, support from local and regional bodies, and from know-how transfer from universities and research institutions.

The Entlebuch model is reproducible because it has followed a methodical procedure ('I — method'). The needs of the local/regional population are taken into particular consideration: everybody should have the opportunity to participate in the development. The 'I method' as a concept can therefore be used in regions all over the world with different historical, political, cultural backgrounds because it is based on local human and natural resources and knowledge and aims to benefit the local population.

The methodical course of action allows for an acceleration of all processes, which additionally enhances the development of added values in the region. Therefore, a secure economic perspective is prerequisite for the conservation of a natural and cultural landscape and of intact social structures.

6.4. Mountain sports without Alps

6.4.1. Key questions

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The purpose of the workshop on "Mountain sports without Alps" was to examine the increasingly widespread creation of artificial or semi-artificial sports and recreational centres both in the mountain valleys and in urban areas remote from the Alps: adventure trails, canyoning parks, white water stadiums, urban hikes, artificial potholing trails, cross-country skiing on roads, ski pistes on former mining sites, aeroparks (simulation of free flight by parachute), snow domes etc.

This issue was examined on the basis of two addresses which complemented each other effectively.

- First of all, Professor Juergen Schmude (Regensburg University) presented the results of a highly original research project into the phenomenon of snow domes which are becoming increasingly frequent all over the world and in Europe. Based on in-depth studies of attendance at these artificial ski centres, he showed how these infrastructures are complementary to, rather than competitors with, alpine ski resorts.
- Dr Pascal Mao (Institute of Alpine Geography at Grenoble University) went on to explain that these new recreational spaces encourage an increasingly strong segmentation of the relationship between nature-based sports and their spheres of action: alongside traditional uses of the mountains in a largely unspoiled natural environment (outdoor), more dilettante practices of tourist consumption are developing in completely artificial (indoor) spaces or in transitional spaces (aroundoor). The people who use these different alpine or urban sports areas and their reasons for doing so differ increasingly widely.

The discussion between the speakers and the audience then turned to the environmental implications of these phenomena, which are paradoxical and very interesting. While the development of sports sites which are largely artificial responds first and foremost to constraints of accessibility and economic utilization, it also indirectly contributes to a limitation of the impact of sports which involve nature on the natural environment. Despite the ethical and ideological criticisms to which these recreational spaces are exposed, they also lend themselves very clearly to the principle of "local concentration" of some forms of use and can therefore help to circumscribe within limited and

managed sectors, some of the problems of environmental impact, conflicts of use and even of security generated by sports pursued in the mountains and in a natural setting.

These leisure infrastructures can therefore be regarded as "part of the solution" and not just "part of the problem" of the impact of mountain sports on nature. To achieve these objectives, better use should therefore be made of these spaces to support information, education and preparation for access to the alpine environment.

6.4.2. Skiing without mountains? The tourism of skiing between the Alps and ski domes

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Two years ago the first two ski domes has been opened in Germany (in Neuss and Bottrop) and there is a great demand. Does that mean that the tourism of skiing will run a development to "artificial worlds" similar to other segments of tourism?

This paper does not discuss the question of sense of such "new winter worlds" (e.g. ecological problems), but it analyzes the perception of these snow domes by ski tourists and how they judge them as locality for skiing activities. The problem of new spatial patterns will be discussed (away form the alps to the new location) as well as the possibility of a temporal expansion (activity not only in winter, but for the whole year).

The results presented in this paper are based on a questionnaire about the perception of ski domes given to skiers in Regensburg, Heidelberg and Düsseldorf. It will be discussed whether the perception varies with the spatial distance to traditional alpine skiing regions. The results of another questionnaire given to skiing tourists in a traditional alpine skiing resort in Germany (Sudelfeld in Bayerischzell) and in a sow dome (in Neuss) in spring 2002 show differences in socio-demographic structure of the ski tourist and their behaviour. The paper presents the first results of the field work.