



The role of mountain regions in territorial cohesion

**a contribution to the discussion on the Green Paper on
Territorial Cohesion**

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Euromontana is the European multisectoral association for co-operation and development of mountain territories. It embraces regional and national mountain organizations throughout greater Europe, including regional development agencies, local authorities, agriculture organizations, environmental agencies, forestry organizations and research institutes. Currently Euromontana comprises 72 members in 17 countries.

Euromontana's mission is to promote living mountains, integrated and sustainable development and quality of life in mountain areas.

In order to achieve this, Euromontana facilitates the exchange of information and experience among these areas by organizing seminars and major conferences, by conducting and collaborating in studies, by developing, managing and participating in European projects and by working with the European institutions on mountain issues.

Euromontana, together with partner organisations, was instrumental in the lobbying efforts to include territorial cohesion in the draft constitution, currently recast in the Lisbon Reform Treaty. Ever since, Euromontana has worked on developing and refining the concept in dialogue with its members and other stakeholders, including the European institutions. For instance:

- The Euromontana organised an "Olympus" lecture, 25th October 2007 in Brussels on "Reflections on the evolution, progress and expected impact of the Territorial Agenda concept" through a high-level round table discussion bringing together the senior responsible representatives of the German, Portuguese and Slovenian Presidencies
- Euromontana organised a Round Table discussion on the implications of the Territorial Cohesion Green paper for mountain and similar areas, 19.2.2008, Brussels

Euromontana has delivered various written contributions on the topic, such as

- Correspondence with the German presidency on the Territorial Agenda in 2007
- Reply to the Cohesion Consultation in January 2008

Euromontana is a member of the "Group 158" representing the economic, social and political interests of the territories beset by severe and permanent natural or demographic handicaps; namely northernmost areas with very low population density, islands and mountain areas.

This document has been commissioned by Euromontana from Thomas Dax as a contribution to the Green Paper on Territorial Cohesion. The structure and ideas were discussed with Euromontana members and stakeholders at the Round Table discussion on the implications of the Territorial Cohesion Green paper for mountain and similar areas in Brussels on 19.2.2008.

Outline Summary and Recommendations

The aim of this report is to demonstrate that regions like **mountain areas have a specific relevance in the debate on territorial cohesion** in Europe. The central premise is that, truly construed, **Territorial Cohesion focuses on targeted assistance to areas most in need** and thus has to highlight strategies and policies required to address the needs and the opportunities of the worse off areas. A review of the evolution of the concept and the **existing literature and studies tends to support this analysis**.

An examination of **challenges and opportunities** facing mountains illustrates the wealth and diversity of mountain areas in physical, climatic and cultural terms despite their basic commonalities it is widely accepted that there is a **general need to recognise mountains as a distinct area** and to evolve criteria for sustainable land use.

Through the provision of **positive externalities** mountain farming contributes to the economic and social wellbeing of the European population in general and to the maintenance of settlement structure and shaping the cultural landscapes in areas which otherwise would lose significant parts of their development potential. Since by definition public goods are not rewarded in the market, there is **an obvious case for transfers from society at large to reward those who maintain such public goods** – a mechanism that would also contribute coincidentally to territorial cohesion.

Nor is the contribution of mountains to the European Union confined to the externalities of land management but it extends to **quality goods and skills and a robust capacity to innovate and experiment** borne of adversity.

Mountain regions are a considerable part of European (mainly rural) areas and greatly reflect the situation in peripheral contexts. As such they are an important case for the development of territorial cohesion objectives across Europe.

Key elements and principles¹ for a policy approach to focus on sustainable development in mountain areas (Mountain Agenda 2002) and to prevent marginalisation tendencies and so contribute significantly to the objectives of Territorial Cohesion would be:

- (1) recognition of mountain areas as specific development areas
- (2) remuneration for services rendered to surrounding lowland areas
- (3) diversification and exploitation of the local potential for innovation
- (4) cultural change without loss of identity
- (5) sustainable management of mountain ecosystems and biodiversity
- (6) taking account of spatial aspects to support cooperation and strategic approaches
- (7) institutional development to focus on sustainable resource use

¹ Set out in full at Section 5 below

TABLE OF CONTENTS

OUTLINE SUMMARY AND RECOMMENDATIONS	3
INTRODUCTION BY FRANK GASKELL, PRESIDENT OF EUROMONTANA	5
INTRODUCTION	8
1. THE CONCEPT OF TERRITORIAL COHESION	9
EUROPEAN COMMISSION REPORTS ON ECONOMIC AND SOCIAL COHESION.....	10
EUROPEAN REPORTS ON SPATIAL PLANNING.....	11
2. CHALLENGES AND OPPORTUNITIES FOR MOUNTAIN AREAS	12
RAISING AWARENESS ON MOUNTAIN ISSUES.....	12
INTERNATIONAL NETWORKING.....	14
MOUNTAIN RESEARCH FOCUS.....	16
DELIMITATION.....	18
STRENGTHS AND WEAKNESSES OF MOUNTAIN AREAS.....	21
3. VALUING DIVERSITY OF MOUNTAINS	24
DIFFERENTIATION OF MOUNTAIN AREAS.....	24
RECOGNIZING RURAL AMENITIES – A POTENTIAL OF MOUNTAIN REGIONS.....	27
REFLECTING THE WIDE SCOPE OF ECONOMIC ACTIVITIES IN MOUNTAIN REGIONS.....	30
PROVIDING SERVICES TO SURROUNDING REGIONS AND SOCIETY.....	32
4. POLICIES IN MOUNTAIN AREAS	33
THE ELABORATION OF MOUNTAIN POLICIES.....	33
OVERVIEW ON CURRENT MOUNTAIN POLICY IN EU.....	34
IMPACT OF SECTORAL POLICIES.....	36
FOREST POLICIES.....	40
PUBLIC SERVICES AND INFRASTRUCTURE.....	41
MOBILITY AND ACCESSIBILITY.....	43
REGIONAL POLICY, STRUCTURAL FUNDS.....	44
ENVIRONMENTAL DEVELOPMENT.....	46
INNOVATION EXAMPLES AND BEST PRACTICES.....	47
INTEGRATED VIEW ON POLICIES.....	48
5. RECOMMENDATIONS FOR MOUNTAIN POLICIES AND ACTION	49
(1) RECOGNITION OF MOUNTAIN AREAS AS SPECIFIC DEVELOPMENT AREAS.....	49
(2) REMUNERATION FOR SERVICES RENDERED TO SURROUNDING LOWLAND AREAS.....	49
(3) DIVERSIFICATION AND EXPLOITATION OF THE LOCAL POTENTIAL FOR INNOVATION.....	50
(4) CULTURAL CHANGE WITHOUT LOSS OF IDENTITY.....	51
(5) SUSTAINABLE MANAGEMENT OF MOUNTAIN ECOSYSTEMS AND BIODIVERSITY.....	51
(6) TAKING ACCOUNT OF SPATIAL ASPECTS TO SUPPORT COOPERATION AND STRATEGIC APPROACHES.....	52
(7) INSTITUTIONAL DEVELOPMENT TO FOCUS ON SUSTAINABLE RESOURCE USE.....	52
REFERENCES	54

Introduction by Frank Gaskell, President of Euromontana

This report prepared by Mr Dax at the request of Euromontana is an excellent review of the territorial cohesion concept from the point of view of the issues facing European mountain areas.

The current debate about the definition of territorial cohesion cannot be resolved without reference to the terms of Article 158 – the territorial cohesion article of the Lisbon Reform Treaty that raised the concept to the heart of the political consciousness. This issue is firstly and lastly a question of interpretation of a specific Treaty provision. Reference to the two basic principles of statutory interpretation – the ‘literal’ analysis and analysis on the basis of ‘mischief’ addressed – might therefore be recognised as offering a logical starting point.

Literally one might question what do the words chosen by the drafters tell us about the intention of the legal provision – what do the words mean?

The part of Article 158 that is operative for the purpose of this analysis reads:

“... particular attention shall be paid to –

- *Rural areas*
- *Areas affected by industrial transition*
- *Regions suffering from severe and permanent natural or demographic handicap, such as: Northern-most regions with very low population density, Islands, cross border and mountainous regions.”*

It can be seen that most of these references, even if broad, are spatially identifiable, with only ‘areas affected by industrial transition’ offering any relevance to agglomerations and even that is quite specific.

On the other hand one might wonder what was the *mischief* or defect that the provision in the Treaty set out to remedy – what was the reason for this Article being introduced?

As far back as 1986 when the Single Europe Act was being debated, much of the discussion focussed on the centripetal impact on economic development that the Act was accurately predicted to provoke and the inevitable damage that would threaten to any area outside the favoured centres. The discussion then was already of territorial cohesion – and the term was used at the time. The consensus however appeared to be that reliance on social and economic cohesion was sufficient to address this territorial issue.

Arguments for the specific inclusion in the Treaty of a reference to territorial cohesion re-emerged when the acceleration of economic polarisation in the EU and Member States became more pronounced. Clearly a strategic focus limited to economic and social cohesion was insufficient to effectively promote territorially balanced development. Certainly the interests who successfully lobbied at the time of the Convention on the European Constitution for the inclusion of reference to territorial cohesion where in no doubt that this was the ‘mischief’ that the concept was intended to address and this was the argument used.

The concept of territorial cohesion must recognise the significantly different territorial situations in the Union. By encouragement of balanced spatial development territorial cohesion must operate as a counterweight to concentration, noted for example as ‘the growth of the European capital areas at the expense of their hinterland’ by the 4th Cohesion Report. European policies have been adjusted to address geographic specificities for a long time – precedents exist from the principle of Structural funds concentration, perhaps best illustrated by the old Objectives 1 and 2 and 5(b) in the 1994-99 programme period, to the treatment of less favoured areas and the preference given to high nature value farm land under EAFRD Guidelines.

What are the opposing arguments now deployed?

Many commentators counsel that at this time of increasing globalised competition Europe must place its investment where the growth opportunities exist. This is characterised as efficiency and 'efficiency is more important than equity'. In the words of the OECD speaker at the 4th Cohesion Forum this growth pole centred 'efficiency is an absolute prerequisite to any aspiration to equity'. Wealth has to be created before it can be spread. This in effect is 'trickle down development' doctrine although the words are not invoked by advocates of this growth centred approach... and every student knows that 'the trickle down' rationale was discredited years ago.

Nor does 'growth focus' argument address anything but the short term horizon. It is beyond dispute that agglomeration is a quick route to growth but in the medium to long term there is a tendency to congestion, pollution, exclusion and social tension in the centres and depopulation in other more fragile areas, and the dereliction of the often unique and precious assets commonly found there. This leads to an interesting conclusion - in the medium to long term 'Equity *is* Efficiency'. The adoption of the literal and rational interpretation of territorial cohesion then can be recognized in truth as an exercise in enlightened self interest on behalf of the whole of Europe.

Certainly the concept can be based on addressing the relationship between urban areas and their surrounding rural areas, but this is relevant only within the functional footprint of each urban centre. Much of Europe, especially in the fragile rural and remote areas, is outside the reach of the economic functionality of the nearest centre and so for much of the area/regions of the EU this model is hardly relevant. There will always be a valuable relationship between urban and rural areas even where they are outside common functional proximity. For example rural areas will always have to rely on urban based or non-local universities for access to

some speciality intelligence not catered for within the specialities of their own necessarily more limited educational centres. Similarly urban areas will always need the positive externalities of rural land management and rural settlement – recreation, water quality, natural disaster prevention and quality food.

In the face of the accelerating polarisation of economic activity in Europe the central issue becomes how can we best deal with the negative externalities of agglomeration/concentration, - by an ex ante or an ex post approach? We submit that territorial cohesion is intended for, and best suits, an ex ante role and is ill fitted to an ex post role. In any event prevention is better than cure.

The Lisbon growth Agenda is a legitimate - even inspirational - objective for territorial cohesion if considered not only at a strategic pan EU level but more specifically at a regional level. .But the Lisbon strategy cannot be the principal focus of territorial cohesion. Likewise, territorial cooperation is a valuable and obvious tool for the achievement of territorial cohesion with its proven capacity to recognise and empower groupings defined by broad geographic rather than national commonality. Even more use can be made of territorial cooperation to animate action at the massif, river basin and watershed level. But again territorial cooperation is not adequate, alone, to deliver territorial cohesion.

The specificities of regions should be recognised as opportunities and potentials rather than burdens. The diversity of Europe in terms of culture, languages, and products is a unique comparative advantage in the globalised world. Much of that authentic diversity is retained in the fragile Article 158 areas of the EU and territorial cohesion can encourage its use to achieve significant contributions to Lisbon goals that will otherwise be irretrievably lost.

Territorial cohesion also offers a positive response to the pressing need for integration of European policies. Territorial cohesion matters at European and National level because integration must happen at every

level, but most significantly at local and regional level because this is the delivery level. Coordination and integrated policies are key in particular in the mountain areas. Therefore sectoral policies must also contribute to territorial cohesion and a *territorial impact assessment* approach can help achieve this.

Finally, perhaps the major significance of territorial cohesion is in the clarity of its message to many of the citizens of Europe who do not yet see the relevance of the Union to them. The European citizen will clearly understand territorial cohesion on the basis of

the definition used in the Third Cohesion Report and subsequently adopted in European Parliament documentation: This is **the simple concept that European Citizens should have the same access to basic services and life opportunities regardless of where in the EU territory they live**. If simultaneously serious efforts can be made to promote a similar recognition of the reality of the positive externalities of land management and settlement of fragile rural areas - and the need for their reward - the territorial cohesion concept and one of its major justifications will also be understood.

Introduction

In recent years the concept of territorial cohesion has increasingly gained importance in European policy-making and academic spheres. Having evolved from economic and social cohesion it is rather vaguely defined and no definite indicators for the measurement of territorial cohesion have been agreed upon up to now. As a general reference, the objective of territorial cohesion can be understood as constituting a policy framework which provides measures to achieve a more balanced development by reducing regional disparities, avoiding territorial imbalances and by making sectoral policies, which have a spatial impact, and regional policy more coherent.

The current discourse on territorial cohesion is strongly driven by the perspective that urban areas are the core engines for European growth. Polycentricity has been recognized as the new conceptual orientation for spatial planning. Analyzing this concept at a high geographical level neglects the contributions by and the need for integration of smaller towns and the rural areas. This implies that hardly any account is being taken of the economic and social potential available in vast areas of Europe.

The degree of regional disparities has not significantly been diminished over the last decades, in which regional policy has been strengthened in Europe, although the Structural Funds and the Cohesion Fund have been oriented towards the regions and countries with weaker economic performances. Whereas centres in these areas have gained many incentives and could reduce the gap between their per capita GDP and the European average, differences in economic

performances within the countries persist. This calls for on-going activities and renewed strategies of regional policy. The European framework for the current programme period has provided some possibilities to take care of the country specific situation and needs. The national strategies for spatial development which have to be drawn up in the preparation of the Structural Funds programmes allow/require the geographical divergences to be addressed and the main spatial strategies for each country to be set out.

Despite this focus on place-specific action at the implementation level it seems important to undertake analysis at higher levels, including the European level to establish if policies reflect the geographic specific areas sufficiently. The most visible type of these are mountain areas, firstly, because they are perceived easily by all Europeans due to the topographic significance and secondly, because they overlap to a high degree with peripheral areas. As such they can be taken to represent geographical specific areas that require their geographical characteristics to be taken into account, as these affect the specific functions and structure of regional economy considerably.

The aim of this report is to demonstrate that regions like mountain areas have a specific relevance in the discussion on territorial cohesion in Europe. If we cannot integrate these remote parts of Europe, cohesion in itself is endangered and easily can become an academic term subordinated to competitiveness and processes of polycentricity limited to the MEGA cities and core agglomerations. But in its original

meaning territorial cohesion has to go well beyond that. Mountain areas, as well as islands and coastal areas, peripheral and sparsely populated areas have their place in the spatial development of Europe, like all the rural areas and the urban areas. This is often recognised in official reports, but often the balance of the discussion is still strongly in favour of urban areas. For example the recent European Parliament (2007) report (Kallenbach report) argues extensively the need for urban policies to address cohesion aspects and refers to the relevance of the urban-rural relationships only at the end of the document. It seems appropriate to achieve a more balanced view and reflect the contributions of these “neglected” areas to a greater extent.

The recent EU documents on integrating the spatial dimension into EU policies, the Territorial Agenda (EC 2007a) and the report on the State and Perspectives of Territorial Development in the European Union (EC 2007b), underpin the need for an integrated policy assessment of spatial impacts. The envisaged Green Paper on Territorial Cohesion, to be prepared by the European Commission by September 2008, presents a tool for intensifying the discussion on the spatial dimension of policies. It provides an increased

understanding for taking account of spatial impact assessment and an integrated view of spatial dynamics at the European level.

This paper aims to support the notion of territorial cohesion in the upcoming Green Paper by underscoring the significant differences in the regions of Europe. Areas with geographical specificities like the mountain areas can demonstrate that territorial cohesion is a comprehensive policy concept to achieve balanced spatial development. In this view territorial cohesion is focusing on targeted assistance to areas most in need and thus has to highlight strategies and policies required to address the needs and opportunities of the worse-off areas. The following analysis is conceived to summarize research studies on mountain areas, mountain policy and analyses that provide fundamental sources for a comparative assessment of European regions and a starting point for policy assessment. Much of this work focuses not on the disadvantages of the mountain regions, but tends to become part of a process where the main policy aims are not seen in “compensation schemes” but in approaches that build on place-specific potentials and help to use the numerous assets of these areas.

1. The concept of territorial cohesion

With the increase of the Structural Funds in European policy since the reforms in the late 1980s spatial issues and regional policy have gained ground. However it took considerable time until scientific theory and policy acceptance became robust enough to adopt major European documents reflecting these policy changes. The European Spatial

Development Perspective (ESDP, EC 1999) may be regarded as a main step in the process. Since then a number of further metamorphoses have taken place to arrive at “an, albeit tentative policy to achieve territorial cohesion” (Faludi 2007). The adoption of the Territorial Agenda and the decision to prepare the Green Paper on Territorial Cohesion are

signs that the notion and the common view that this concept is to be treated as a European issue have finally been accepted.

A series of significant documents had contributed before that to arriving at such an acceptance. The regional policy studies have repeatedly referred to the drafting and negotiating process over the last decade.

Following this process the need for European comparative studies and improvement of analytical tools for (integrated) impact assessment has been recognized. Documents, policy reforms and implementation, and the scientific debate have increasingly taken account of this. The review of the most important documents on territorial cohesion includes the following literature.

European Commission Reports on Economic and Social Cohesion

Up to now four European "Cohesion Reports" have been published. From the First report (EC 1996) the methodological approach to economic and social cohesion is set (according to Article 130a of the Treaty on European Union) in terms of harmonious development, reflecting an explicit recognition that wide disparities are intolerable in a community. Whereas the Second report (EC 2001) discusses the changes to regional and cohesion policy due to the planned enlargement of the Union, the Third report (EC 2004a) acknowledges the wide disparities which persist between countries and regions.

The document is entitled "A New Partnership for Cohesion: Convergence, Competitiveness and Cooperation" and devotes a whole chapter to territorial cohesion. This concept is presented as extending beyond the notion of economic and social cohesion by both adding to this and reinforcing it. In policy terms, the objective is set out to drive towards "more balanced development by reducing existing disparities, avoiding territorial imbalances and by making both sectoral policies which have a spatial impact and regional policy more coherent" (Farrugia and Gallina 2008, p. 16). The liberalization trends for transport, telecommunications and energy markets have

brought about threats to particular social groups and regions. It is therefore of crucial concern for cohesion aspects to establish regulations to ensure that everyone "can obtain services of general interest."

The Fourth report (EC 2007c) is the first comprehensive document to provide a summary of the economic, social and territorial situation of the enlarged Union of 27 Member States and 268 regions. The results presented in this report are somewhat mixed, it seems rather difficult to find statistical evidence for either convergence or concentration processes. Indeed both processes can be detected and spatial development for European regions cannot be described by one development pattern. There are programmes and regions where regional convergence and reduction of employment gaps have occurred, but the report states also that within the Member States, economic activity has become more concentrated in capital city regions. In the longer term these concentrations of population and economic activity could lead to negative externalities such as increases in housing costs, shortages of business space, congestion and pollution which would affect negatively their image and competitiveness.

European Reports on Spatial Planning

In the second half of the 1990s the Member States and the EU Commission initiated an intensive discussion process on European spatial planning issues. The document finally adopted, the European Spatial Development Perspective (ESDP, EC 1999), set out a framework for working towards a balanced and sustainable development of the territory of the EU. It focused on the three fundamental goals:

- (1) economic and social cohesion
- (2) conservation and management of natural resources and the cultural heritage, and
- (3) more balanced competitiveness of the European territory.

The document also underlines the importance of analysing EU policies with spatial impacts. This was particularly inspiring for regional studies and policy evaluation in the following years. What was even more important was the spatial orientation of policies set out in the document as follows:

- development of a polycentric and balanced urban system and strengthening of the partnership between urban and rural areas;
- promotion of integrated transport and communication concepts, which support the polycentric development of the EU territory;
- development and conservation of the natural and cultural heritage through wise management.

The impact of the ESDP was particularly strong with regard to the concept of polycentrism where it stimulated a rich debate. However, at that stage the term's relevance for regional

development was interpreted ambiguously and linkages towards implementation activities remained rather weak. So this did not lead to a full recognition of cohesion objectives and commentators argue that "the EU has swayed back and forth between a neoliberal model to a solidaristic economy model" (Farrugia and Gallina 2008, p. 21) over this period.

With the adoption of the "Territorial Agenda" (EC 2007a) and the document "The Territorial State and Perspectives of the European Union" (EC 2007b) a new type of spatial planning documents was achieved. Building on the main aims of the ESDP, the CEMAT Guiding Principles for Sustainable Spatial Development of the European Continent (CEMAT 2000) and a number of interim documents of the discussion process, set out a new framework for spatial development in the EU. The process towards the preparation and production of a Green Paper on territorial Cohesion is additionally enhanced by the motions of the European Parliament (2005 and 2008). The document promotes a polycentric territorial development of the EU, with a view to making better use of available resources in European regions, in order to secure better living conditions and quality of life, taking account of regional and local potentials as particular place-specific assets, both in the European core areas as well as in peripheral areas. The background document is particularly clear on characterizing the European diversity of regions both as a potential and a challenge. Nevertheless it is important to emphasize that specific geographic characteristics offer possibilities and opportunities for development. This provides interesting perspectives for peripheral areas, including mountain regions.

2. Challenges and opportunities for mountain areas

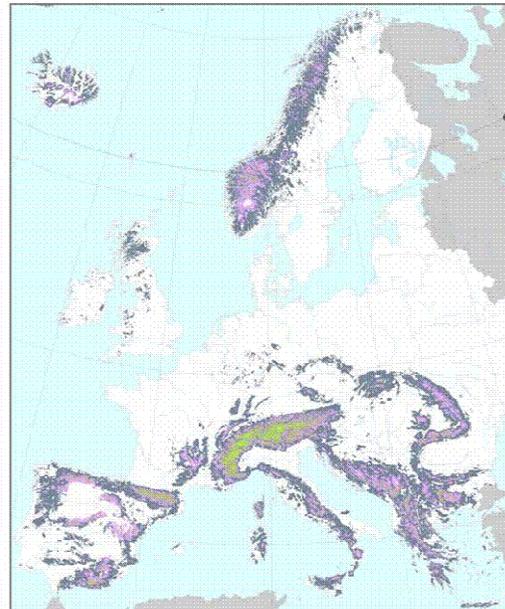
Raising awareness on mountain issues

Occupying about one-fifth of the world's land surface area, mountains are the direct life base for about one-tenth of humankind. In addition, they provide goods and services to more than half of the world's population. In the European context the share of people living in a mountain environment is even bigger: here mountains occupy about 40% of the total area with about 20% of the European population. The great variation between mountain ranges in Europe and the wide-spread differentiation in terms of climate, ecology and economy are striking elements (Nordregio 2004).

Mountain regions are of great importance within the European Union with regard to land coverage, population and economic activities, above all agriculture, forestry and tourism. As the best known feature, about 20 % of the utilised agricultural area in Europe is defined as mountain area and 27 % of all farms are situated in the mountain areas. In five member countries – Greece, Austria, Italy, Spain and Portugal – mountain areas comprise more than 50 % of the territory. Consequently European mountain landscapes can be realised as a main type of cultural landscapes reflecting long-term interactions of human beings with biophysical systems.

Over more than a decade the recognition of goods and services provided by mountain areas has risen considerably. The deliberations at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 can be regarded as a starting point for raising awareness and

Mountains of Europe



Graph 1: Mountain of Europe / Source: Nordregio 2004, p. 20

commitment for concrete action towards implementing sustainable mountain development by including Chapter 13 "Managing Fragile Ecosystems – Sustainable Mountain Development" in Agenda 21. Since then, a number of dynamic processes and activities related to mountain issues have been initiated. With the United Nation's International Year of the Mountains (IYM) 2002 the international awareness for mountain ecosystems and the inter-relationship to lowland developments attained high political levels and priority. Given the momentum of IYM an International Partnership for Sustainable Mountain Development has been established at the World Summit on Sustainable Development in Johannesburg in that year and through the inclusion of a

specific paragraph on mountain development in its final document (www.johannesburgsummit.org), United Nations 2002, para 42) reaffirmed commitment for these areas. The respective documents reflect the increasing social demand and the shift towards more sustainable strategies of regional development, addressing the interrelationship with other regions and the dependence of spatial dynamics on a comprehensive spatial perspective.

The Mountain Partnership is particularly dedicated to deepen comparable analysis of mountain problems and to prepare policy recommendations. One of the specific on-going activities resulting from those discussions is the initiative "Sustainable Agriculture and Rural Development in Mountains" (SARD-M), supported by FAO and a great number of actors in mountain regions (FAO 2007). It was acknowledged that improved policies and actions for SARD-M are urgently needed to meet the challenges of agriculture and rural development in mountain regions, where high levels of malnutrition and hunger persist, and to protect mountain environments for present and future generations, taking into account all the relevant factors. Although problems in mountain areas are not as substantial in the European context as in other continents (Panos 2002) there are significant parts of mountain regions affected by marginalisation trends. This threatens the general regional economy and living conditions for all the population in these areas.

Mountain regions are both fragile ecosystems and also an important source of water, energy and biological diversity. They are a source of key resources such as minerals, forest and agricultural products, as well as being landscapes for tourism and recreation. As

major ecosystems representing the complex and interrelated ecology of our planet, mountain environments are essential to the survival of the global ecosystem. Mountain ecosystems are, however, heavily influenced by local and global changes. The rapid pace of globalisation, urbanisation and mass tourism is threatening mountain communities and the resources they depend on. Given the great variation in climate conditions, biophysical systems and economic development of the mountains of the world, characteristics and challenges for different regions are very diverse. There is widespread poverty among mountain inhabitants and loss of indigenous knowledge in less developed countries. As a result, most global mountain areas face increasing marginalisation, economic decline and environmental degradation. However, such tendencies are also relevant at least in some of European mountain areas. Hence, the proper management of mountain resources and socio-economic development of the people deserves our attention and immediate action.

Cultural landscapes in these territories develop and change over time as a result of the interplay of socio-economic, cultural and natural factors and can thus only be understood as a process. Since changes are often irreversible, any change and interference demands careful consideration. In general, many parts of mountain regions have long been more than just agricultural areas. Rather they constitute a fully integrated living and working space, whose geographical characteristics do not lead to separation in a structural economic sense. Particularly in more integrated regions they express themselves much more in the limited space available for settlement and industry, the handicaps imposed on agriculture and forestry, in an expensive infrastructure and a particularly sensitive landscape. However, the various

component areas display great differences in structure and development. Policies to safeguard environmental and cultural achievements, as well as sustainable rural development, can thus only be effective in the long term by embedding spatially oriented sector policies in integrated regional development strategies (Dax and Hovorka 2004).

The specific problems of mountains have been increasingly raised in recent policy debate and are referred to in European spatial strategies. Following the ESDP, the Second and also the Third Cohesion Report have addressed the issue. Yet, the situation and understanding of the problems encountered is very diverse, and hampered by a lack of comparable information. A number of research projects are striving at improving knowledge, particularly through application of inter-disciplinary

research programmes. We can notice an increased awareness of the topic, but lessons from all the projects and activities have to bear in mind the great diversity of mountain ecosystems, and adaptive strategies require a long-term commitment to develop effective programmes. It has been realised that a number of EU (and national) policies are relevant for mountains (see below) and spatial policies engage in integrating mountain issues at various levels.

It is widely accepted that there is a general need to recognise mountains as a distinct area and to evolve criteria for sustainable land use. Given the high variation in local natural and socio-economic contexts local approaches are particularly important in developing adapted territorial strategies.

International networking

Since the 1992 Rio Earth Summit mountain development has acquired increased interest and networking on mountain issues has advanced significantly. A number of respective activities underline the rising concern for the issue and reflect that such international coordination is the base for enhanced research activities. The following section highlights the role of some influential institutions from a European viewpoint and addresses examples of European and trans-national research activities. Its aim is to underpin the concern for taking account of the mountain regions' role in European spatial development, expressed by the findings of the increasingly comprehensive research initiatives covering more and more mountain ranges. Particularly at national level many additional coordination initiatives have been taken recently. It is important to recognise institutional work as a patchwork of overlapping activities which

draws useful incentives from the exchange of different views.

At the global level the *Mountain Forum* has set up an impressive network (and indeed a network of networks). Founded in 1995 as a decentralized network of networks to provide mutual support, information-sharing and advocacy for mountain peoples, environments and sustainable development, the basic premise is that members benefit from each other through mutual support, exchange of information and advocacy. To provide a basic level of communications services, a few organizations serve as nodes, or coordination centers, for each region. The Mountain Forum's electronic information services include global, regional and thematic e-mail discussion lists, focused electronic conferencing, a calendar of events, and provides with the rapidly growing on-line library of mountain

resources a useful base for assessment of global mountain issues (www.mtnforum.org and <http://mtnforum.org/europe>). With the activities of the International Year of Mountains 2002 the international *Mountain Partnership* has been established which is coordinated and run under the support of *FAO*. This UN organization is focusing in addition on sustainable agriculture and rural development in mountain regions through a specific programme line (SARD-M; www.fao.org/sard/en/sardm).

The European association of mountain regions "*Euromontana*" has been established following an *FAO* workshop on mountain farming in 1953, and acted for decades as a working group of the European Confederation of Agriculture (CEA). Since 1996 it has a legal identity in order to facilitate the efficient continuation of its action with 14 European countries being founder members. It brings together regional and national organizations of mountain people: social-professional organizations, in particular agriculture, rural development centres, associations, territorial authorities, research institutes, etc. It includes organizations from Western Europe as well as from Central and Eastern European Countries in an effort to develop international co-operation with a particular focus on the situation of the new Member States. With thematic seminars on the issue of quality and rural development in mountain regions, the European Mountain Conventions and the preparation of the European Charter for Mountain Quality Food Products (2006) the perspective to build on key potentials of mountain regions was strengthened in the European discussion (www.euromontana.org).

The first set of trans-national regulations for a whole mountain range was provided through the *Alpine Convention* (Convention on the

Protection of the Alps) was signed in 1991. The signatories are Germany, France, Italy, Liechtenstein, Monaco, Austria, Slovenia, Switzerland and the European Union. Although it took quite a long process until the documents were approved by the partners, the Convention serves as an inspiring platform for a trans-national policy covering ecological and economic problems. The goal of the Convention is a comprehensive policy on the protection and sustainable development of the Alps. Thematic implementation documents on land use planning, mountain forests, the protection of nature and landscape, tourism and leisure activities, soil protection, energy, transport and agriculture prepare a common view on the issues. What is more besides the official process a number of information and thematic institutions have evolved and have made the Alps the best documented and researched mountain range. Important institutions include the International Commission for the Protection of the Alps (CIPRA) whose task is to improve information exchange across the different parts of the Alps and to enhance best-practice development (www.cipra.org). With its research programme on the "Future of the Alps" it achieved a big step towards an extended exchange and new perspectives in the Alps spatial development.

The collaboration within the Alpine space is enhanced through scientific congresses, e.g. of the *Alpine Forum* every two years (since 1994) which started to move towards worldwide cooperation in mountain research several years ago. A particularly focused consideration of the problems could be achieved in the *Alpine Space Interreg programmes* (IIIB and currently IVC). The priorities for cooperative projects of the programme have raised momentum on the discussion within the Alpine regions considerably.

Approaches similar to the Alpine Convention have been taken for the other big mountain ranges of Europe. The Carpathian Ecoregion Initiative brought together people to secure conservation and sustainable development in the Carpathians. Finally the *Carpathian Convention* was signed in 2006. Through this initiative, conservation and development of one of the most important natural areas of Europe is being combined with actions to support the local economy and culture (www.carpathians.org).

Other important documents for mountain ranges are the *Charter for the protection of the Pyrenees* (www.mtnforum.org/resources/library/ciapp95.htm), a charter for the Apennines, national evaluation studies and monitoring on mountain areas (e.g. France and Italy) and work to use these exemplary documents for setting up new cooperation documents, like the Balkan Convention Initiative.

Mountain research focus

While there are numerous reports and analyses available for the development in the Alps (e.g. Tappeiner et al, 2003; Bätzing 2002; Pfefferkorn and Musović 2003) a comprehensive study on all the European mountain ranges has only been carried out just recently (Nordregio, 2004). It presents information on a wide set of topographical and socio-economic indicators and allows changes to be traced at a low geographical level, i.e. in general the municipal level. The analyses include detailed information on demarcation options for mountain areas, and issues like land use, demographic patterns and trends, on economic characterisation and the particular relevance of access, infrastructure and services in mountain areas.

An investigation on the inclusion of mountain development issues within the European Framework Programmes for Research and other European research activities (Dax 2002) summarized the status of research activities and underscored the momentum gained for the new priority on "Global Change and ecosystems" and the (starting) integration of regional development issues. The selected list of examples addressed influential research activities either commissioned by the European Commission or by other international organizations: it includes EU-projects, a wide range of trans-border cooperation projects focusing on spatial planning issues and projects by international organisations

- Sustainable Agricultural Land Use in Alpine Mountain Regions (SAGRI-ALP, 1998-2000)
- A comparative analysis of the European Union's and Switzerland's instruments in terms of their influence on a sustainable agriculture in the Alpine arc (SUSTALP)
- Integration of Environmental Concerns into Mountain Agriculture (coordinated by Euromontana, 1996-1998)
- Regional development and cultural landscape change: the example of the Alps (REGALP, 2001-2004)
- Implementation of Sustainable Agriculture and Rural Development in Alpine Mountains (IMALP; 2003-2006)
- Tools for evaluating investment in Mediterranean mountain areas - an integrated framework for sustainable development (MEDMONT, 2001-2004); and the MEDEF network (first half of the 1990s).
- Diversification and reorganization of husbandry activities in less-favoured areas (DIVOR-DEF, 1997-2000) and Sustainable agriculture development - methodologies and definition of intervention criteria for mountain zones (PENEDA, Portugal)

- Entrepreneurship in Mountain Areas of Southern Europe" (EMASE, 1999-2001)
- The Cultural Landscape in the Mountain Area of Austria - Policies for the Environment and Rural Development. A national report for the OECD - Group of the Council on Rural Development (1998)
- case study on the Greek mountain area of Tzoumerka by OECD Group of the Council on Rural Development (2000)
- Biodiversity, Landscapes and Ecosystem Services of Agriculture and Forestry in the Austrian Alpine Region - An Approach to Economic (E)Valuation, national report for the OECD - Working Group on Economic Aspects of Biodiversity (2001)
- evaluation of mountain policies over three decades in France (Bazin 1999)
- Global Change in Mountain Regions (MRI), ETH Zürich, CH
- Aspatial Peripherality, Innovation and the Rural Economy (AsPIRE, 2002-2004)
- Future in the Alps, coordinated by CIPRA (2005-2008)
- Economic, Social and Ecological Development of a Mountain region (Carpathian Project), ISF München (2005-2008) <http://www.carpathianproject.eu/>
- Sustainable Territorial Development in the Alpine Space: Towards Long term Transnational Cooperation, Alpine Space Prospective Study (2004-2005) (Bausch et al. 2005)
- and specific national research programmes on mountain development issues. These include the Swiss programme "Landscapes and Habitats of the Alps" (NRP 48), the Austrian research programme on cultural landscapes, the UK's Rural Economy and Land use Programme and various other national research initiatives.

In addition a number of mountain targeted projects has been carried out under the various Interreg Programmes. With the rise of mountain development issues on the political agenda the need for adequate institutional support and research infrastructures became obvious. In many regions a lack of a sound research basis and institutes was experienced. Impacts from climate change effects and changes in mountain ecological and societal systems have been revealed by different research disciplines. The great variety of different aspects and dimensions involved called for a more integrated and focused research approach. Only a few countries or regions had developed major research activities explicitly addressing mountain development. However, in recent years the vigorous international debate and the close relation to regional development activities led to the foundation of research centres in several countries, mainly with an integrated research concept. However, most research

centres are oriented at the national level and more international coordination is required.

The exploration of the state-of-the-art in research on the sustainable use and management of mountain areas, summarized in The Abisko Agenda (The Royal Swedish Academy of Sciences 2002) provides a common understanding of major research priorities, approaches and needs in mountain development. It reveals also the requirement of inter- and trans-disciplinary work programmes and a continuity of research commitment which is maintained well beyond programmes' stereotypical 3-5 year life cycles. Closer cooperation and international collaboration will be required to cope with the increasing environmental, economic and societal problems of mountain areas which affect both mountain regions and lowlands.

Although comparative European studies on spatial impacts for mountain areas are rather

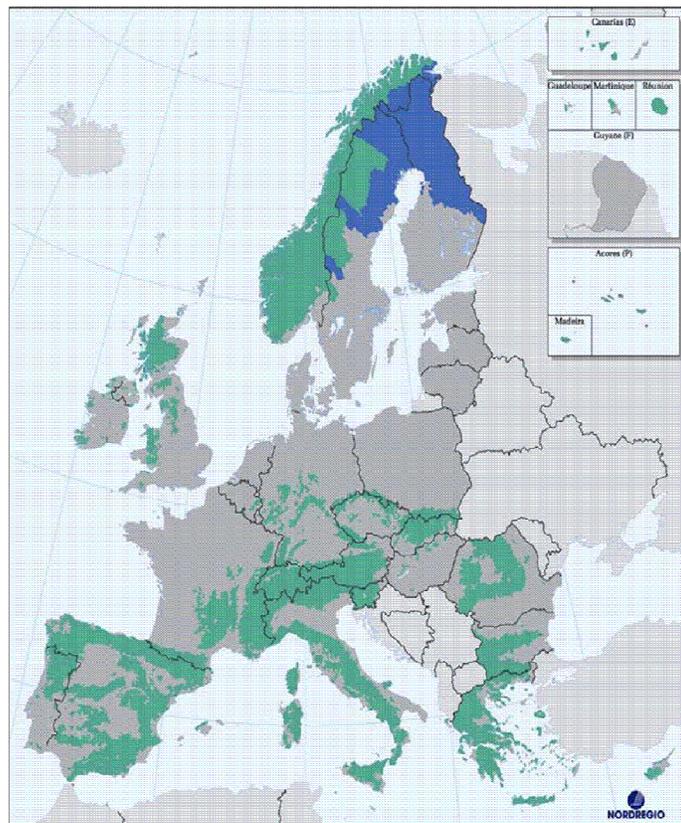
scarce we can acknowledge that the ESPON programme has developed a level of spatial impact assessment tools that are very interesting for peripheral and mountain areas, too. Chapter 4 will make use of some of the ESPON studies to highlight the current

discussion status on various policies' analysis. Due to the low geographical level of mountain areas delimitation, most of those results cannot be applied directly to mountain areas since there remain significant issues of geographical classification.

Delimitation

Mountain areas are economically handicapped due to their topographical situations and the climate conditions. Any delimitation seeking to define and categorize the mountain areas and regions has to take account of the interconnection of the two aspects. There are indeed different national definitions available and some European wide methods which are mainly developed with regard to agricultural policy or other sectoral approaches but also in some cases the development of regional policy is addressed.

However, a comparable approach on the European scale was missing and so the Project commissioned by the EC (Nordregio 2004) asked for a proposal on the mountain demarcation and for investigation of the availability of data sources at a low level. The method chosen to identify mountain regions was a refinement of the global approach developed by the UNEP-World Conservation Monitoring Centre, using a digital elevation model which records the elevation of every square kilometre of the Earth's land surface ([graph 1](#)). Additional criteria have been used to adapt it to the specific



Delimitation of mountain municipalities in Europe

- Municipalities defined as mountainous according to topographic criteria
- Municipalities defined as mountainous according to climatic criteria
- Study area
- Other countries

Source: Eurostat/CISCO

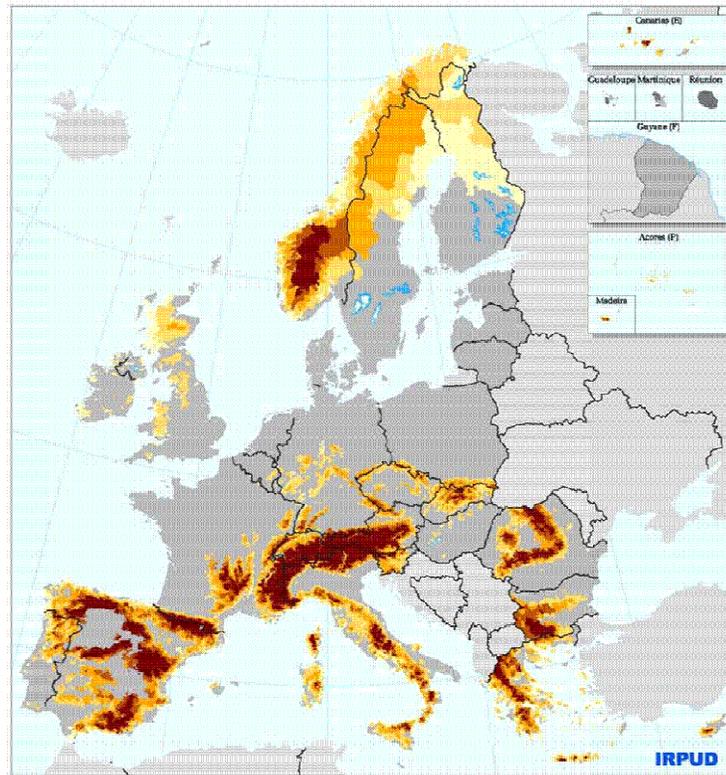
0 500Km
 Administrative boundaries: EuroGeographics, 1992; Climate, NCDC;
 Data: United Nations Statistical Office, Eurostat/CISCO

Graph 2: Delimitation of mountain municipalities in Europe / Source: Nordregio 2004, p.26

European requirements and achieve a delimitation which can be applied for administrative boundaries.

The main focus was at arriving at a classification of mountain municipalities, i.e. an allocation of the local administrative units to mountain or non-mountain areas. This simple categorization should allow the construction of a base for further analyses and a reference base for studies seeking to measure various mountain development issues (graph 2 and graph 3). Of course, this signified also that common rules to achieve this aim had to be carried out across Europe, which could in some circumstances not take account of local and regional specificities. The delimitation method uses the gradient of slopes by an algorithm to take account of the relief structure.

Previous studies of UNEP-WCMC have demonstrated that satisfactory mountain delimitations could be attained by using data with a one km resolution, identifying the extent of topographic constraints which create the main obstacles to human activities. In addition the climate constraints were included for situations where the temperature contrast is similar or worse than the values in the highest parts of the Alps. As it was the aim to arrive at more continuous areas, isolated mountainous areas of less than 5 km² were not considered, and, on the other hand, small non-mountainous areas within mountain massifs were included. The calculation of the portion for each individual municipality that



Mean altitude of mountainous municipalities



Graph 3: Mean altitude of mountainous municipalities / Source: Nordregio 2004, p.27

Source: Eurostat/ESCO, GTOPO30 DEM



falls within the mountain definition was taken as the criteria for attribution of the municipalities to mountain areas or not. A municipality had to have at least 50% of its area within the area delimited as mountain in order to be considered as mountainous. The check for the area classified as mountainous without showing the above topographical characteristics, i.e. because of its inclusion in a mountain municipality is just about 2.5%, whereas the opposite case of the exclusion because the threshold of 50% of the municipality area is not reached is only 3.4% (Nordregio 2004, p.24). In the end this reveals that ambiguity of including areas into the

mountain area classification or not is a matter for a small portion of the total mountain area.

However, this issue is much more important with respect to the population living there. For the EU countries a total area of 1,568 thousand km² is allocated to the mountain municipalities which represents a share of 36% of the total area. For the EU 15 this portion is somewhat higher (40%). As regards the territory of the European Union, about 76 million people (more than 20% of the population) live in these mountain municipalities. The issue of delimitation is a much discussed issue and has to be seen with regard to the specific target for its use. The divergence from the LFA classification relates

to the differences in the objectives of the two definitions. Other national classification and the regional programmes addressing the spatial planning issues of whole mountain ranges also deliver (slightly) different methods and achieve a different perimeter. The main problems arising are due to regional identity issues which emerge if borders do not reflect the local regional attributions. This can be more expressed for some countries than for others. Nevertheless the overall picture of the European mountains can be accessed in amore comparative way by using this delimitation exercise. In particular it provides a sound base for further data collection and interpretation of spatial developments within the mountain areas of Europe.

Table: Mountain areas in Europe

country	Total area (1,000 km ²)	Area of mountain municipalities (1,000 km ²)	Mountain area in % of total area	Mountain population as % of total population
All 27 countries of study	4,761	1,935	40.6	19.1
EU-15	3,319	1,323	39.9	17.8
Austria	84	62	73.4	49.8
Belgium	31	1	4.2	0.8
Denmark	43	-	-	-
Finland	327	166	50.8	12.0
France*	638	142	22.3	14.3
Germany	357	53	14.7	10.1
Greece	132	103	77.9	49.6
Ireland	70	7	10.6	2.6
Italy	301	181	60.1	32.6
Luxembourg	3	0	4.4	1.5
The Netherlands	41	-	-	-
Portugal	92	36	39.1	26.5
Spain	505	282	55.7	38.5
Sweden	450	228	50.6	6.9
UK	245	63	25.5	4.3
New MS	1,077	241	22.4	17.6
Bulgaria	102	54	53.3	45.6
Cyprus	9	4	47.6	14.3
Czech Republic	79	25	32.3	23.4
Estonia	45	0	0	-
Hungary	92	4	4.7	6.9
Lithuania	65	-	-	-

Latvia	65	-	-	-
Malta	0	-	-	-
Poland	311	16	5.2	5.8
Romania	238	90	37.9	24.9
Slovakia	49	30	62.0	48.6
Slovenia	20	16	78.0	64.9
Other countries				
Norway	324	296	91.3	63.4
Switzerland	41	37	90.7	84.2

* including DOM

Source: Nordregio 2004, p.29f.

Strengths and weaknesses of mountain areas

The perspective of mountain areas has shifted considerably according to the above mentioned process of extended recognition of key issues for mountain areas. The spread of international networks, national priorities towards sustainable mountain development and research agendas addressing mountain problems or analyzing sector aspects from the viewpoint of mountain areas signifies a new comprehension of the situation and challenges of these areas. They are not merely regarded as "problem" zones as they used to be classified, but their potential is more and more taken into account as a useful and significant development aspect.

In order to arrive at an overview on the main themes and strategic approaches relevant for mountain areas, regional development activities often start from a fundamental analysis of the strengths, weaknesses, opportunities and threats (SWOT-analysis). This has been applied also to mountain regions, aiming at an overview of the different perceptions of mountain areas' potential and the divergent situations of mountain areas. It is important to carry out these analyses at the regional level so that divergent and common themes as well as regional disparities between the different mountain regions become visible. The SWOT analyses carried out for the EU Member States clearly reveal this wide variety

of perceptions (Nordregio 2004, p179f.). We have to take into account that this is influenced by the actual political and economic situation of the regions and the integration level of the countries analysed. However, there are common features for mountain areas emerging from that analysis which underscore the main relevant themes in the mountain regions and the differences compared with the lowland areas. "Mountain regions are inextricably woven into a global fabric of interlinked markets, institutions, and policies within a biosphere that is experiencing rapid change. In other words, mountain environments ... are affected by all the ecological and societal processes of global change" (Price 2004, p.14). This view is particularly relevant when aiming at cohesion objectives which have to take account of an integrated development and recognition of the regions' development. In this respect we can address the following issues to include a number of common elements for, and thus be of specific relevance to, mountain regions:

a. *environmental sensitivity and natural resources*

Attention is here on mountain regions as "water towers", the high frequency of natural hazards, and increasingly the potential impacts of climate change. Mountains in Europe include many regions

with high levels and specific types of biodiversity, as well as a significant set of natural resources. With wide areas of sparse settlement structures and peripheral locations of mountain regions, they enjoy in general good environmental conditions which are, however, threatened by changes in land use.

b. *access to infrastructure and communication*

These are key issues for the integration of mountain regions in wider economies. Often their development has been driven by the needs of lowland populations. Due to the physical topography, extreme climate situations, high construction and maintenance costs, and sparse settlement patterns accessibility is a challenge in peripheral mountain areas.

c. *public service provision*

There are a number of issues about disparities between mountain and lowland regions which lead to different living conditions. Difficult conditions for service provision, including peripherality and isolation, and distance from urban centres as well as sparse settlement are aggravated by depopulation trends in many regions.

d. *Demographic trends*

In many regions, demographic development in mountain regions is characterized by depopulation and ageing of the population. Although this is a general trend in parts of the rural areas, some mountain regions are affected by it to a specifically high degree. Yet in some countries, mountain regions show an increase in population development and thus the trends are rather mixed,

respectively altering according to regional contexts.

e. *production difficulties in land use*

Production difficulties in agriculture and forestry have been recognized as the main disadvantages for mountains in the past since these sectors were dominating the regional economy. With the decrease of agricultural labour and the share in the regional economy, the focus has shifted. Nevertheless compensation schemes are esteemed to be fundamental for the maintenance of wider functions of agriculture, particularly towards the local environment.

f. *high reliance on tourism development*

With regard to the outstanding topography and environmental conditions, mountain regions are places of attractiveness. Landscape development and environmental protection strategies as well as various aspects of cultural heritage are the base for the high importance of tourism in many mountain regions. This reliance on tourism development has evolved over more than a century now and has accumulated in some cases the potential for conflict, since tourism intensities are endangering the overall balanced development.

g. *the role of culture, education and science*

Most mountain cultures have long traditions and are deeply rooted in the places where they have developed. There are increasingly needs to adapt to the rapid changes in the social context and technology development. Education and science can be a decisive input to regional development. This has to be set in

interdisciplinary and transdisciplinary approaches to take account of current societal needs.

h. *quality production linked to specific topographical conditions*

Despite the decline in agriculture, there is potential for innovative land use management and diversification in mountain areas. New approaches include in particular quality food development, regional production certification, based on environmentally-friendly production methods.

All of these have a distinctive regional dimension and are assessed from a regional viewpoint. The SARD-M rapid policy assessment was particularly clear in its focus to achieve an interregional analysis of the strengths and weaknesses (FAO 2007). This implies the synthesis of mountain ranges specific studies and summarizes the comparative assessment on main commonalities regarding policies, institutions and processes for a sustainable development strategy in mountain regions. It highlights particularly the following findings as specific to mountain regions:

- **Lack of strategies for sustainable development in mountain regions**
 - **Little consideration of mountain specificities in policies for SARD partly due to low awareness of the importance of mountains**
 - **Policies supporting value-added production and services in mountain**
- **regions are essential for sustainable agriculture and rural development**
 - **Weak coordination of institutions at national and transnational level**
 - **Inadequate knowledge management, exchange of information and networking regarding mountain regions.**

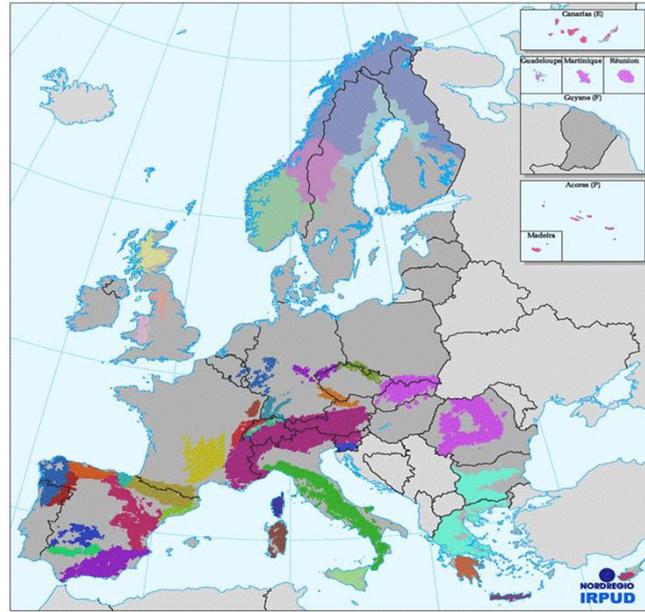
The Adelboden Group, a high-level advisory group to the FAO SARD-M process, emphasized in its Third Meeting in October 2007 "that the possible impact of climate change on the following key global issues need to be taken into consideration as a cross-cutting issue. The valorisation of positive externalities as well as migration/urban-rural linkages were particularly stressed as important and given a high priority for future activities" (FAO 2007, p.8). These key issues for the future are also of prime relevance for any consideration of territorial cohesion aspects. All of them address issues where activities have significant impacts on other regions. The trans-regional assessment and the subsequent consequences for cohesion of European regions becomes a major issue for the peripheral regions, including mountains, with a high degree of inter-linkages to surrounding areas and, vice-versa a dependence on global economic trends for the regional competitiveness.

3. Valuing diversity of mountains

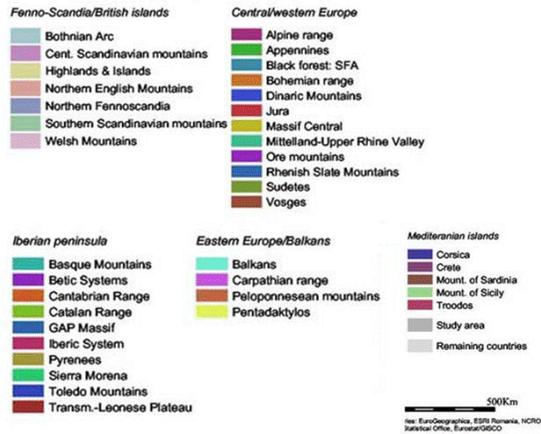
Differentiation of mountain areas

The above mentioned delimitation exercise and the difficulties involved with any attempt to achieve a classification of areas into mountain and non-mountain areas underpin the inherent problems with delimitation methods. Nevertheless it is important and useful to achieve a meaningful geographical category of mountain areas to serve as baseline for spatial analyses. When considering spatial policies at the European scale, the proposed delimitation, based on topographical indicators can present a highly valuable starting point. However, there is a requirement for a more in-depth analysis and interpretation of the internal divergences within the generic category of mountains. This implies both the issue of the border of the mountain areas and the differentiation within the mountain areas into different types and geographical parts of the mountain space of Europe.

The European wide delimitation carried out for the European Commission (Nordregio 2004) did not address the first part of this differentiation process. It neither answered the question of internal differentiation of core areas of each mountain massif and the pre-massif areas surrounding the core, nor could it provide the detailed analysis of different types of settlement structures in the mountain regions. This leads to the effect that some major cities (with no specifically visible mountain characteristics) were included in the perimeter



Mountain ranges (level 1)



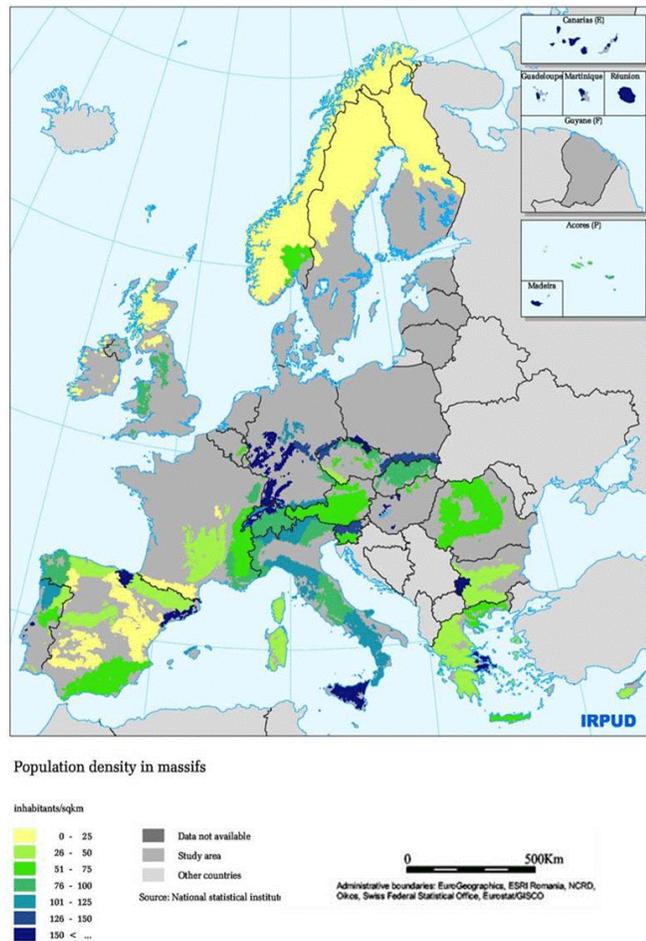
Graph 4: Mountain ranges / Source: Nordregio 2004, p. 39

of mountain area. As larger towns and cities often preoccupy a prominent place at the edge of the mountain area, they should, on the other hand, not be excluded automatically from a mountain classification. There is indeed a need for additional data interpretation of such cases which should arrive at a more precise definition and inclusion/exclusion of

highly densely populated centres into mountain areas. Such a refinement of the analytical base could improve the actual presentation and increase acceptability of the delimitation proposed.

The report addresses the issue indirectly by analysing transition areas surrounding the mountain perimeter. These are assumed to have functional spatial linkages to the mountain areas. The buffer rings around the mountain were set at a distance of 10 km, 20km and 50 km radius and reflect the assumption that linkages decrease with distance. In many cases centres within these buffer zones provide important services and economic attractiveness to mountain regions, yet the actual degree of the functional linkages between mountain and lowland areas is still to be proved.

As previous analysis, particularly for the Alps (Perlik 2001) has shown, the lowland areas immediately adjacent to the mountain areas have long been a location for the development of services serving both lowland and mountain population. Furthermore, access to energy sources and natural resources of mountains, together with the ease of access to lowland markets, have resulted in many industries being developed in close proximity to mountain areas. Another important factor for people's choice of residence location within these areas is the increasingly recognized attraction for leisure activities, sports and recreation. As the physical and climatic conditions are not as severe as within the mountains and potentials for settlement are usually greater, this resulted in an increase of population densities in the buffer zones. The study (Nordregio 2004, p.47) reveals that for the European countries analysed population densities are highest in a 20 km buffer of



Graph 5: Population density in Massifs / Source: Nordregio 2004, p. 76

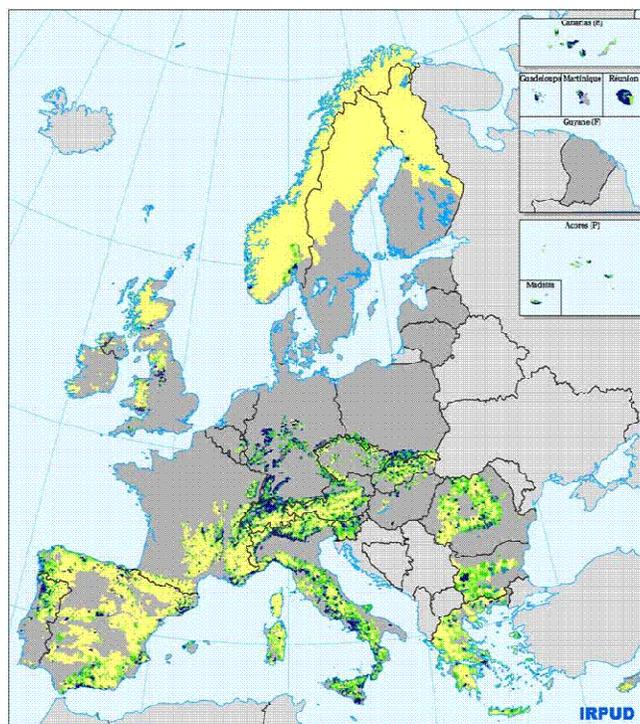
mountain areas (with a density of 184.1 inhabitants per km²). This is significantly higher than the remaining lowlands (outside a buffer of 50 km from the mountains (with an average density of 115 inh./km²), the overall EU average of the analysed area (of 105.2 inh./km²) and the mountain regions average (of 47 inh /km²).

The second differentiation reflects the need to interpret the different geography and socio-economic characteristics of mountain areas across Europe. It is rather commonsense that appearance, landscape structures and economic performances between different parts of mountains of Europe differ a lot. Addressing these divergences is not an issue of separating but of understanding the place-

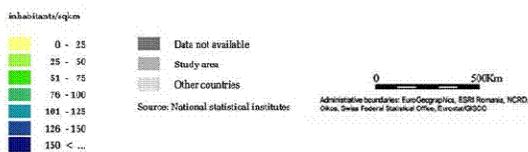
specific potential and opportunities for future development much better.

The orientation of the analysis of mountain ranges is therefore an objective to arrive at a presentation of mountain areas which allows communication to a wider public audience and still is open to reflect the differentiation within mountains. The distinction of European mountain ranges ([graph 4](#)) can be the base for more in-depth analysis and comparison of mountain regions. The presentation of the simple indicator of population density by massif averages ([graph 5](#)) and by mountain municipalities ([graph 6](#)) underscores the need for analysis at low levels to be added to general comparisons: it is not enough to calculate European mountains and massifs averages; they provide only a sketchy picture of the European spatial situation and developments. Contrasting the two graphs reveals quite clearly that differences within the same mountain range are often more significant than those between different mountain ranges. This means that for the case of population density we can recognise a concentration of the population at the edges of the mountain ranges. It adds to the description of the strong inter-relationship between mountain and lowland areas.

For further analyses a set of meaningful indicators are required. The study for the EC Commission (Nordregio 2004) accessed the availability and collected numerous indicators at LAU 2 level or, if not available at that level, for NUTS 3 regions. As for ESPON studies, it turned out to be very difficult to achieve complete data sets for all the countries studied. Nevertheless there is a very useful



Population density in mountain municipalities



Graph 6: Population density in mountain municipalities / Source: Nordregio 2004, p. 77

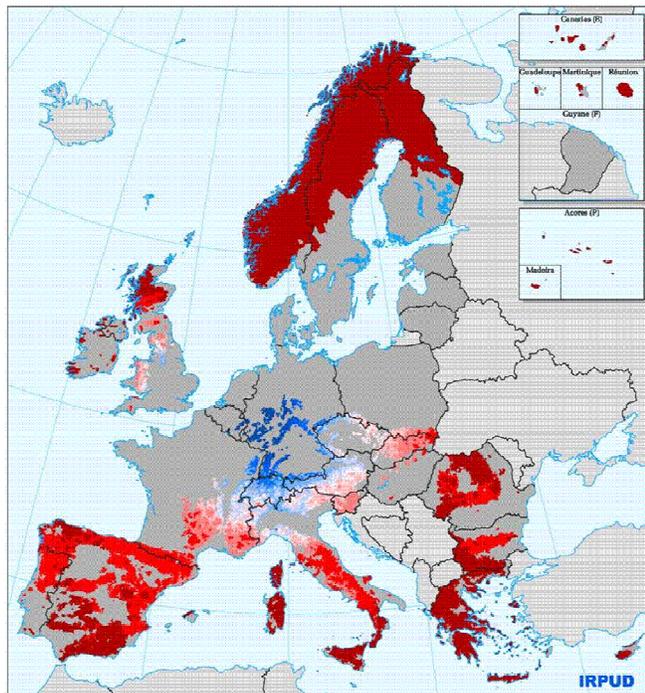
base of indicators for mountain regions summarised in the study's final report. Here, it should be highlighted that the choice of indicators is of central relevance for the interpretation of results. Peripherality is one of the major obstacles of mountain areas. However, it can be measured very differently. Whereas the European perspective ([graph 7](#)) is oriented towards the European core regions and shows good accessibility in mountain regions close to the "Pentagon" core area of Europe, the national perspectives ([graph 8](#)) give a completely divergent picture. According to the position and distance with regard to the national centre, low accessibility values can be found even in areas where European accessibility is excellent (and vice-versa).

Recognizing rural amenities – a potential of mountain regions

With a more integrated view of rural development it has been realized that it is important to address the rich variety of amenities of rural areas as a major development potential. As they range from pristine wilderness to carefully managed landscapes, and from ancient historical monuments to lasting cultural traditions, they imply a wide set of different aspects. Mountains are a specific type of regions where the amenity value has been seen early in tourism development which brought about concepts for protection of most valuable parts of it.

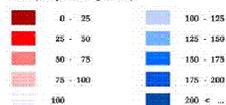
Agriculture plays an important role in maintaining multifunctional landscapes in many mountainous areas of Europe (Dax and Hovorka 2004). In Central and Northern European mountain regions animal husbandry and grassland management are of major significance for land use and decisive for landscape structures. Areas with a particular high nature value are widespread, as with high pastures, steep mountain meadows, dry grassland biotopes and damp meadows in some valleys sustained through extensive management systems. Mountain farms are also of great importance for forest protection and the management of (Alpine) pasture areas, which are extremely sensitive eco-systems. Following the great diversity of mountain regions also land use patterns are different and products in Southern countries include crop production and permanent cultures to a larger extent.

The unfavourable natural conditions for mountain farming enterprises and forestry are expressed above all in the steep gradients of the farmed areas, the shorter growing season, being exacerbated by extreme weather



Peripherality by car to population by mountain municipalities

Index (European average = 100)



Study area
Other countries

Source: IRPUD trans-European network GIS database
National statistical institutes

0 500km

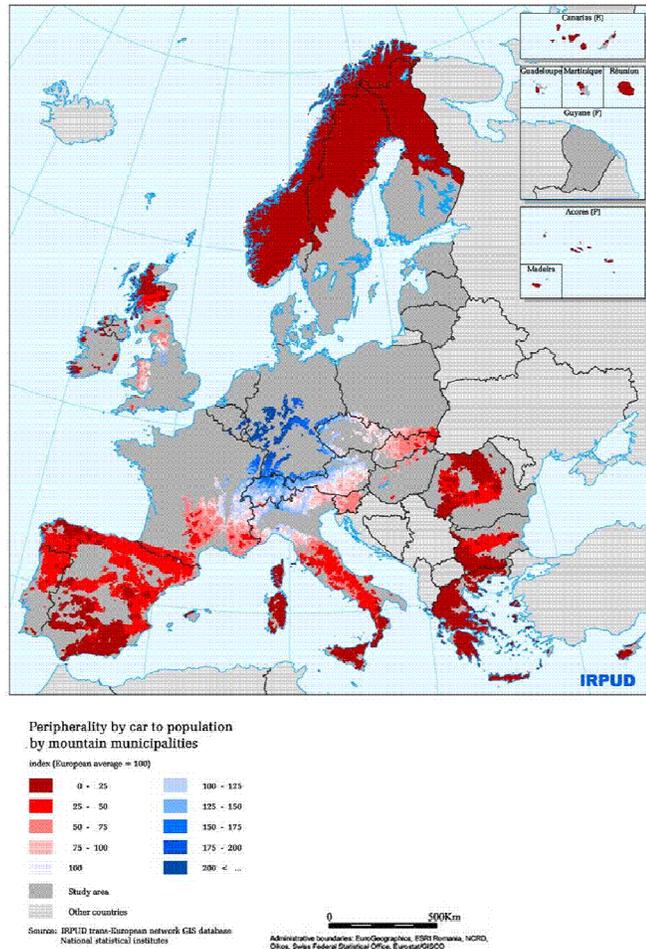
Administrative boundaries: EuroGeographics, ISTAT Romania, NCRD, Czech, Swiss Federal Statistical Office, Eurostat/ECDC

Graph 7: Peripherality, European Perspective / Source: Nordregio 2004, p. 107

conditions and implying an absence of alternative production possibilities. Often, an inadequate and expensive infrastructure, including high transportation costs and weak accessibility may also be added to this. In many mountain regions farm holdings are moreover characterised by a small-farming structure which is operated primarily by family labour input. The average size of mountain farms in EU-15 is as low as 12.3 ha UAA (against an average of 18.7 ha UAA for all farms in EU-15). In terms of Standard Gross Margin (SGM) the difference is even bigger: Whereas the average SGM per holding in mountain areas is 8.1 Economic Size Units

(ESU) this figure is up to 18.7 ESU for all the EU-15 farms. All these indicators refer to particular production difficulties and region specific problems that have to be addressed through efforts and strategies to strengthen viability of land use in mountain areas.

The fact that only for a minority of mountain farms is agriculture the main economic activity has driven farmers towards the recognition of a wide range of functions, going far beyond mere food-provision. Some of these wider tasks are linked directly to farming, but multifunctional mountain farming includes also objectives to sustain the management of externalities supplying services and values, reflecting a rising social demand (Crabtree et al. 2002). It is therefore central to take a comprehensive viewpoint on the tasks of mountain agriculture in order to cope with development problems.



Graph 8: Peripherality, national dimension / Source: Nordregio 2004, p. 108

It seems important that under the difficult production situations of mountain areas the provision of these tasks is linked to specific requirements of farm management with quite clear limits for intensification of production. Such production methods are particularly supported by the widely applied agri-environmental measures of CAP. In this regard, the priority of mountain farming strategies on quality development and region specific products represent a major asset and has a positive impact on farm household incomes. The activities deriving from such an approach reinforce the cooperation needs with other economic sectors and regional partners, and require observation and orientation towards enlarged markets.

The underlying perspective gained acceptance only in the 1990s, when a shift from conservation to nurturing "local assets" was realised for important parts of rural policy. The major aim of amenity policies is to exploit their value for rural development (OECD 1999, p.33), and to counteract thereby the vulnerability of these areas and the threat of marginalisation processes. It is made clear that the valorisation of amenities is the best incentive for the preservation, but beyond this, the goal is to help rural territories harness the value of their amenities. Amenities have become a comparative advantage for some territories, like mountain areas, in part because amenities are highly specific to their location and cannot be transferred to other places like other assets. A core set of rural

development policies in Europe have taken up the option to engage against abandonment of fragile rural areas, and have addressed mountain areas with specific instruments. The inclusion of mountain specific objectives is most advanced in the policy sectors where a close link to the resource base and the amenity provision is visible. In particular, agricultural policy, rural development activities and regional policy include relevant measures and policy priorities (EC 2003), all arguing to provide thereby instruments against specific marginalisation processes. It is widely acknowledged that marginalisation of mountain areas therefore cannot be tackled by measures of sectoral policies alone which refer to just one problem dimension.

To address the marginalisation threat to their mountain areas, many countries have elaborated primarily sectoral policies, laws and regulations for the use of resources. The underlying concepts are not any more based so much on considerations for preservation, but increasingly inspired by higher valuation and outside demand for the unique resources of mountain areas. Regional case studies and international work on rural amenity provision underpin the need to take account of the nature of rural amenities as public goods. In principle they share common characteristics of uniqueness, irreversibility and uncertainty (OECD 1999, Euromontana 2005). As rural amenities are linked to the particular area in which they exist, mountain areas are characterised by specific sets of amenities which reveal a great local variety and are particularly valued because of the overwhelming diversity of its natural and cultural systems. However, market mechanisms tend to be unfavourable for these, largely remote areas, as has been shown in a Euromontana study on the valorisation potential for positive mountain

externalities, carried out as input to the FAO SARD-M programme activities (Robinson 2007). In order to cope with marginalisation tendencies it is envisaged that combinations of market mechanisms and non-market approaches are required, particularly in remote areas. Regional development practices in mountain areas suggest that both an active core of local actors addressing the local market problems and harnessing the full development potential of the region as well as the appropriate policy instruments are essential to set up a significant development dynamic and withhold marginalisation.

Moreover, as has been recognised to provide a wide range of functions, going far beyond food production, these tasks include public goods which are particularly endangered in mountain areas. Particularly in this context, only the interrelation of these functions seems to provide a sound base to overcome the inherent economic problems and threats of disintegration. It appears therefore important to conceive policies and instruments which focus on the spatial aspects and limitations of the areas to establish viable farming structures. This view is strongly supported by the wider political context, including rising lowland interests and demand from outside the regions. Some of the instruments and mechanisms established in the CAP reforms (LFA scheme, agri-environmental measures, cross-compliance; Leader mainstreaming) and the Structural Funds implementation (mountain areas recognition in spatial strategies, trans-national cooperation) are examples of addressing specifically the mountain contexts.

Prospects for marginalisation are difficult to forecast since development in mountain areas is characterised by a large diversity and a great influence of local actors (Copus 2004).

Overall the quite serious trend of depopulation in large parts of European mountains will probably continue. The same holds true for mountain farming which is affected by market pressures and aspects of competitiveness, leading to specialization and concentration of production. Up to now CAP and Rural Development Policy has provided existing farm structures with limited perspectives, shifting support only gradually to less-favoured and remote areas, like mountain areas (Arkleton Centre 2005, Shucksmith et al. 2005). However, the rural development approach applied in recent CAP reforms implies considerable potential for applying strategies favouring mountain areas. A more explicit differentiation of support according to production difficulties might reflect better the multifunctional nature and abandonment threat of mountain farming. Since low-intensity farming systems of mountain areas reveal characteristics to a high extent benign to the environment, but endangered both by abandonment and intensification, there is an urgent need to highlight the importance of appropriate land management of these areas for landscape development and support structures through appropriate policy programmes.

The high level of integration of the farming population in off-farm labour markets, pluriactivity and the regional policy underscores the second prerequisite for achieving regional objectives of sustainability and long-term provision of social demands. Through the provision of positive externalities mountain farming contributes to maintaining settlement structure and shaping the cultural landscapes in areas which otherwise would lose significant parts of their development potential. Since by definition public goods are not rewarded in the market, there is an obvious case for transfers from society at large to reward those who maintain such public goods (Bryden et al. 2005). Thus the support for mountain farms is core for the positive direct and indirect effects in safeguarding the sensitive eco-systems and maintaining multifunctional landscapes in mountain regions. The debate on the socio-economic processes increasingly has to focus on the long-term provision of public environmental amenities to facilitate sustainable regional development and address the threats of land abandonment and marginalisation processes in mountain areas.

Reflecting the wide scope of economic activities in mountain regions

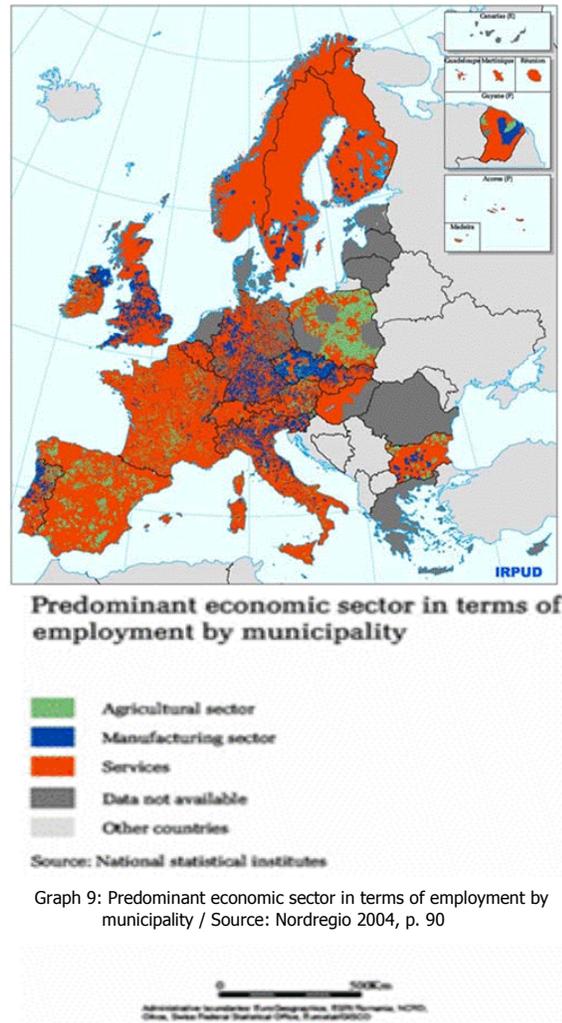
Mountain development has to be set in a regional development policy which is understood as a territorial concept that integrates the land use activities of agriculture, forestry, fisheries, environmental protection, along with a wide range of other sector policies. In a mountain development context very often the inter-linkages to and the relevance of the other main economic activities is neglected and underrepresented in the presentation. Similarly this report can make use of a wide set of analysis of land use based

activities and a particular focus on agriculture which reflects the historic predominance of that sector. However, even if primary sector employment is still proportionally higher in some mountain regions than in lowland regions, the share of employed persons in agriculture has decreased drastically also within the mountains. In most mountain regions this portion has dropped below 10% and attains just 4% for all European mountain ranges in average (Nordregio 2004, p.89).

The economies of Europe's mountain areas are therefore not at all characterised by primary sector employment, but are highly diverse at all spatial scales. Given the low employment levels of agriculture and the strong reference to the land use and environmental sensitivity of land management in these areas, pluriactivity is a traditionally common manner to combine diverse activities and functions. It particularly highlights the potential for diversification and cross-sectoral issues of innovative rural development approaches.

But the role of the secondary and tertiary sector activities is far more important from an economic viewpoint. For the old Member States the proportion of employment in the secondary sector is similar in mountain and lowland areas (European average 26 %). A small number of mountain ranges depart quite significantly from the average. These are some regions with an industrial tradition within the mountain areas, like those in the Czech Republic, UK, Slovenia, Slovakia and Bulgaria. In general, the data reflects a great variety of situations for the secondary sector's employment level, and particularly reflects the extent to which large cities with major industrial capacity are included in mountain areas.

The tertiary sector accounts for the greatest proportion of employment in Europe's mountain regions. This proportion varies from 43.6 % in the mountains of the Czech Republic to about 78.2 % in the Norwegian mountains (European average of mountain regions: 70 %, Nordregio 2004, p.102). The map indicating predominant economic sectors in terms of employment at the municipality level ([graph 9](#)) shows that there is no sectoral specificity for mountain regions: As in lowland areas, services are the predominant sector in most mountain municipalities. Its importance



tends to decline as the degree of peripherality increases: However this relationship is sometimes compounded by region-specific elements of employment structures, like intensive tourism locations in peripheral areas. In general, it has been the sector showing greatest growth especially in the more dynamic rural regions (Bryden et al. 2005, p.43).

Tourism development is the potential that is commonly associated with mountain areas. Whereas in a number of Central European mountain ranges there is a long tradition of these activities with a high share of tourism in the local economy, other mountain ranges have started recently to increase their

attractivity and harness more intensively the tourist potential. Special conditions relevant for winter tourism are recently endangered by climate change impacts and there is scope for new orientation in regional strategies. New approaches to attract people, for example sustainable tourism, ecotourism, cultural heritage discovery and niche markets are developed by many regions and can be successful despite remote location.

Main opportunities seen cover activities in the fields of recreation and tourism, based on natural and cultural heritage, an increasing interest in renewable energy and carbon sequestration and new ways of delivering quality services, including new service approaches for education, knowledge improvement and use of ICT (Bryden et al. 2005). Significant economic benefits can derive from the valorisation of these local assets and add to the attractiveness of the mountain regions.

Providing services to surrounding regions and society

It is increasingly realized that mountain regions' problems and future perspectives cannot be analysed in isolation from other regions. This spatially integrated view is to be supported by cooperation activities between mountain and other areas. In general the image of mountain spaces is largely limited to rural areas with a more or less differentiated variety of rural amenities. It becomes more and more clear that a correct, up-to-date reference to the current regional socio-economic tendencies and spatial strategies has to be communicated to non-mountainous society. Well beyond the seemingly idyllic past, one has to address the economic and environmental threats and so also take account of the potential of the area to fulfil social demands from outside.

Trans-regional cooperation has become a core topic of Interreg activities and has been widely

used in mountain border regions. Due to their intermediate locations there are some mountain ranges where the development of mountain regions, their foothills and surrounding areas is closely interlinked. As inter-regional linkages and social demands from the lowlands increase, cooperation becomes crucial to improving the wise management of natural resources and cultural heritage. This is important to achieve sustainable development processes and to keep the mountain areas innovative and attractive living spaces. It is particularly important to explore methods of exchanging experiences between mountain ranges. This would contribute to the implementation of cohesion aspects by attaching significant relevance to issues of mountain development and its integration into regional planning strategy considerations.

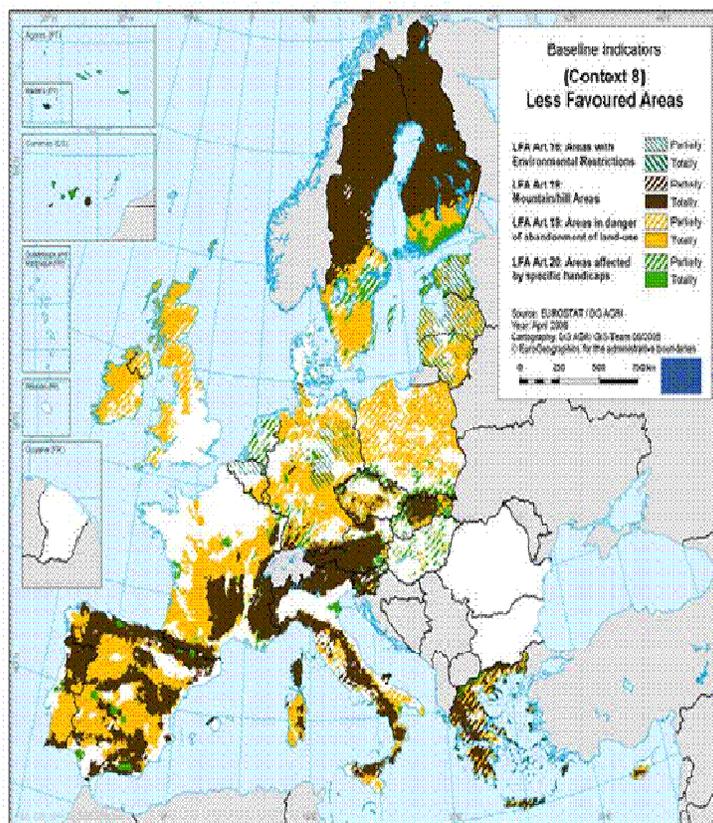
4. Policies in mountain areas

The elaboration of mountain policies

In many European countries mountain policies have been developed, starting already with some activities of forest policy in mountain areas of France in the 19th century (Barruet 1995, p. 231). In particular, over the last three decades respective mountain policies have been established and extended all over Europe which led to the development of European Community policy. The LFA scheme (Dax and Hellegers 2000, Dax and Machold 2006) developed since 1975 represents the core of mountain policy measures in agriculture ([graph 10](#)) aiming at compensating less-favoured production conditions in mountain areas and safeguarding

the development of cultural landscapes, and rural amenity in general, which are particularly valued in mountain regions.

However, the recent policy trends have shown the need for a more integrative approach which tries to apply a stronger territorial viewpoint towards mountain policies. These (new) policies have largely been inspired and enhanced by "bottom-up" activities and regional policies at a small geographical level in several European countries since the end of the 1970s. Such pilot schemes have also been developed by "alternative" groups in remote mountain areas (e.g. in Austria, Switzerland, France and Spain). The ensuing discussion of



Graph 10: Less-favoured Areas in EU/ Source: EC 2007, p.135

those first initiatives laid the basis for the respective policy reform and changes in attitude towards mountain policy (and also rural development) approach at the European level.

Since the reform of the Structural Funds in 1988 and the EU-document the "Future of Rural Society" (CEC 1988) mountain policy is generally understood to comprise both agricultural and also all other territorial specific policies aiming at mountain development. Also at that time the widely discussed report on mountain policy was published (Amato 1988).

The thrust of recent discussion of mountain policy is taking the need for such an integrated approach as granted and evaluation of mountain policies reflects this concern (Bazin 1999; OECD 1998 and 2002, Hovorka 1998, and Mühlhnghaus 2002).

The discussion of diverse resolutions and charters in favour of mountain area support, launched by the Council of Europe and the Committee of Regions (1997) of the European Union has also reflected the rising commitment for the issue. With the wave of mountain memoranda by national governments (Italy, Austria, France and Portugal) in 1996/1997 priority for mountain policy measures was aimed at the then starting discussions for CAP and Structural Funds reform, as well as 5th Framework Programme for RTD (1999-2002). In many respects this discourse was not just about the question of appropriate support schemes but also the necessity for providing adequate institutions at an intermediate level to facilitate mountain development. The

starting point was the concern to address spatial disparities and to enhance policies that focus on cohesion aspects as their core objectives.

Nowadays in many countries Structural Funds programmes and Community Initiatives, particularly Leader and Interreg are most relevant in mountain areas. Recent discourse has shifted towards improving the process of regional development programmes, implementation and in particular concentrate on issues like monitoring and new kinds of experiences of evaluation (techniques and models). Evaluation does not just mean formal assessment of achieving the programmes goals (and indicators) but also a means to actively provide an input to the implementation and, more generally speaking, the process of mountain development in itself. As such it tends to become a kind of dialogue tool and learning mechanism aiming at innovative local activities in mountain (and other similarly structured rural) regions.

Overview on current mountain policy in EU

There is a wide range of public interventions available to support development in European mountain areas. However, these interventions are hardly targeted directly towards "mountain" characteristics in themselves and they vary considerably, according not only to the importance and diversity of these areas, but also to the institutional setting of each country (centralised, federal, EU Member States, respectively New Member States or candidate countries). Moreover, institutions and the policy contexts have undergone rapid change in most of the New Member States particularly with regard to integration.

"Mountain policies" in the widest sense include general measures and policies with territorial

impacts relevant for some mountain issues (e.g. planning), sectoral policies which have a particular effect on the development of mountain areas (e.g., agriculture, tourism policy), relevant actions of programmes involving a high share of mountain zones (e.g. Interreg), and also explicit measures and policies directed at mountain areas in order to meet their particular needs as well as integrated mountain policies. Almost all countries with mountainous or hilly regions have some kind of implicit or explicit mountain policy or a mountain approach for certain policy issues. However, there are significant differences from country to country. The starting point was the concern to address spatial disparities and to enhance policies that

focus on cohesion aspects as their core objectives. There are four different types of application of mountain policies to be distinguished for the European countries (Nordregio 2004, p.147ff.):

- **Countries where no mountain policies can be identified:** Some countries are effectively without any mountains (e.g. Denmark, Baltic States, Netherlands) and some others are countries with very few or low mountains. Even where the situation in these regions is considered as different development policies are often voluntarily included in rural policies (e.g., Belgium, Ireland, Luxembourg) or included in regional plans (e.g., Poland). A particularity are countries which are largely mountainous (e.g., Greece, Norway, Slovenia) where mountain policy is effectively synonymous with general development policy.
- **Countries with sectoral mountain policies/measures:** These are principally countries with middle mountains and/or New Member States of the EU. The most frequent sector to which mountain-focussed policies are addressed is agriculture. This tendency emerged with the Directive (CEE 75/268) on mountain and less favoured areas and the subsequent development of LFA policy. With Agenda 2000 and the shifting of resources towards the Second Pillar of CAP the priority towards these measures was even reinforced.
- **Countries where mountain policies are addressing multi-sectoral development:** Originally the importance of mountain agriculture was the backbone of the Mountain Areas. But since then the relative contribution of agriculture to the mountain economy has decreased gradually and policies

have been widened to include other economic sectors (mainly tourism), public infrastructure or services, and/or environment. Nowadays the list of sectoral policies with specific adaptations is long, including issues such as training, education, regional development, land-use, and spatial planning, because of their transversal character. Austria, Germany and Spain belong to this group.

- **Countries where mountain policies are oriented at overall (regional) development:** In countries where a sustainable development approach is most advanced, the compensation of handicaps through agricultural policies has given way progressively to a more integrated policy. In a few countries, such policies emerged before the 1970s through the consolidation of sectoral policies and the approval of specific tools such as mountain laws and mountain funds. At present France, Italy and Switzerland have a formally integrated mountain policy, and Bulgaria and Romania have adopted similar integrated policy frameworks recently.

It is essential to mention that the concept of integrated mountain policy is not strongly defined and has to be consolidated. Thus the sectoral and territorial coordination of such policies is the major component of this concept. In summary, the majority of European countries dispose of mountain policies only implicitly: in general, these are mainly sectoral policies with specific adaptations. From the perspective of many public and private actors, they are also often essentially overlapping with rural or regional policies.

Impact of sectoral policies

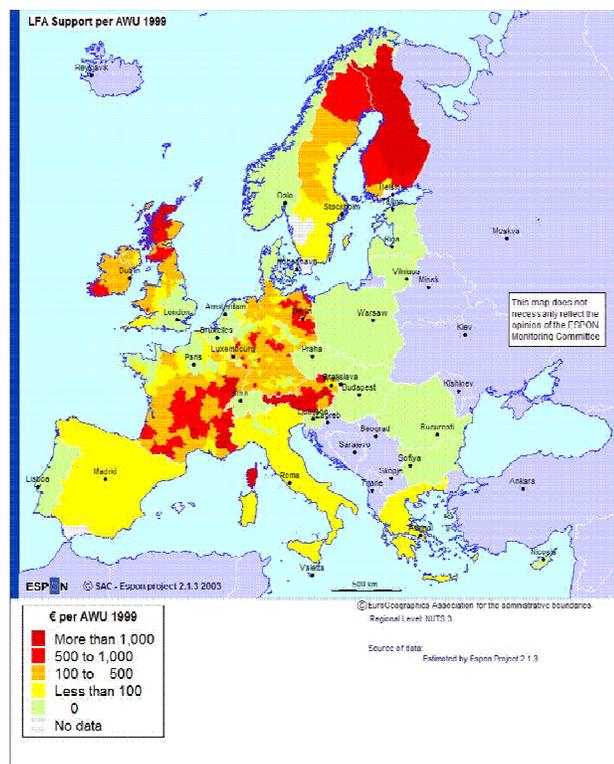
Actually it is difficult to isolate general trends and other general policy effects from the effects of specific mountain policies. Ideally the assessment of the impacts of policies and measures is only feasible in countries where explicit mountain policies exist, and has to be based on existing evaluations (Dax 2004). Consequently, such assessment studies are not available for the majority of countries. ESPON projects have started to carry out territorial impact assessment for various sectoral policies. The findings of the first programme demonstrate that the European Union displays an obvious core-periphery pattern (Eser 2006). Historically, there was a conceptual division of space between rural and urban areas which contemplated each of the two having an independent role in development. These categories need however to be understood as integrated territories since the level of exchange and interrelations increases. The specificities of the European territory and its diversity call for the consideration of the impact on specific territories such as islands, mountains, coastal areas or peripheral areas. It is increasingly acknowledged that all of them dispose of specific elements of endogenous potentials for development.

Agriculture is considered to be a crucial sector for mountain economies as it is responsible for large parts of the land use and for safeguarding scattered human settlements in mountain areas. However, for a long time it has ceased being the principal regional activity. Its situation varies greatly from one country to another, due not only to the geographical context but to its links with other activities e.g., part-time farming

within pluriactivity, and to the general social conditions. The products of mountain

agriculture are very diverse as well, depending on soil fertility, climatic conditions, traditions, and markets. But the handicaps that mountain agriculture has to face are evident to everyone: high production difficulties, low productivity and high production costs. Consequently, these agricultural areas are generally threatened by marginalisation processes which include negative consequences for the overall regional economic performance.

The Common Agricultural Policy (CAP) provides the framework of actions and the most extended set of measures addressed to mountain areas. Direct payments for mountain and other less-favoured areas were introduced in 1975 to support farming systems in Less Favoured Areas, and have been extended since then. The main results from LFA



Graph 11: LFA support per AWU / Source: Arkleton Centre 2005 P.110

application analysis highlight the following issues ([graph 11](#) and [graph 12](#)):

- **There are persisting national and regional strategies in policy implementation of the LFA scheme.** In some countries mountains have a particular priority, in others the focus is on less-favoured areas in general.

- **There is distinct North-South decline in LFA support** which has not levelled out through the increase of the scheme over the last decades.

- **In the new Member States there is a specific focus on LFA,** with some countries revealing a particularly strong relevance for mountain areas support.

- In general **agriculture in these areas is carried out under lower intensity** levels than at the national averages.

- The recent discussion and **concern for targeted support has increased the need for differentiation of payments,** i.e. the specific production difficulties should be reflected more directly in the amount of support for farmers and farm land.

- The policy assessment clearly show that **there is a strong demand for certain services provided though this kind of land management which is linked to geography.** Future policy reforms will have to take account of this and have to ensure the continuation of the provision of public goods in these areas.

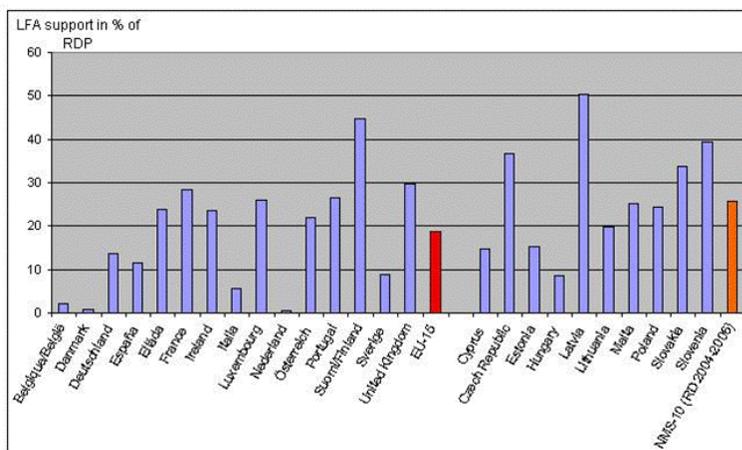
- However it becomes more and more **important to reflect and address the inter-relationships of this policy measure to other policy areas,** including an impact assessment on the implications for the regional

- economy and marginalisation threats.

economy and marginalisation threats.

Up to now, besides this unique measure, the design and implementation of the CAP has been little touched by the territorial concepts of balanced competitiveness, economic and social cohesion, and polycentricity set out in the European Spatial Development Perspective (EC 1999) and in the Third and Fourth Cohesion Report (EC 2004a, EC 2007c). Neither have the Agenda 2000 or the most recent CAP reforms been based on cohesion or territorial criteria. Although the goal of environmental sustainability has acquired increasing relevance since the reforms in the 1990s, this policy shift had only limited spatial effects (Dax 2006). Almost all measures have been horizontal across the whole nations or regions, except for less-favoured areas and areas designated for agri-environmental programmes.

With rising significance of the multifunctional tasks of farming, the integration of environmental concerns and the linkages to the rural economy, the contribution of agricultural policy to territorial cohesion has become a core issue. The regional dimension of agricultural production and support has been studied in detail in an EU-wide project on



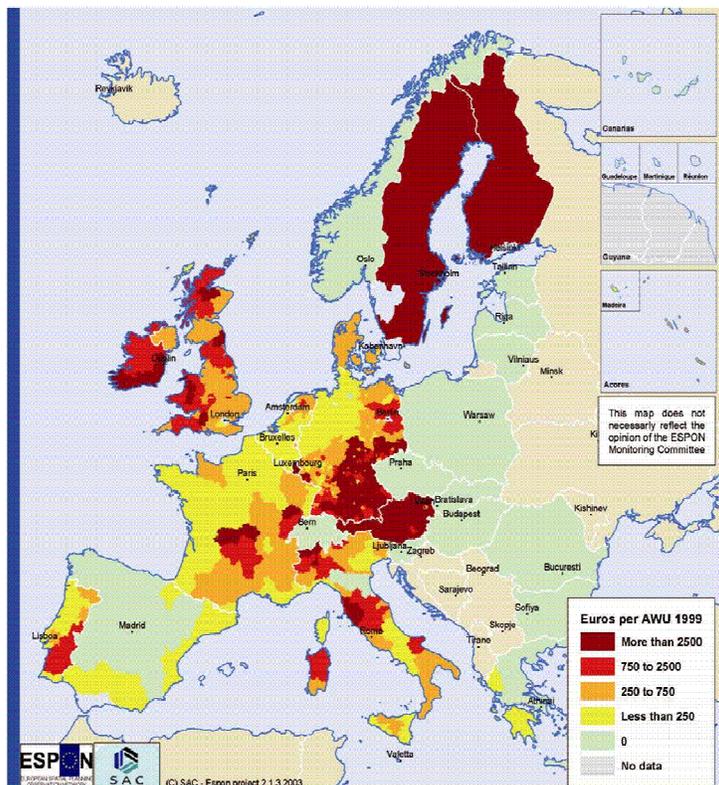
Graph 12: LFA support as portion of RDP / Source: Dax and Hovoka, 2007

the territorial impact of the CAP and rural development policy (within the European Spatial Planning Observatory Network – ESPON, project 2.1.3, Shucksmith et al. 2005). Though consistent data on agricultural support in the EU is hardly available for regional analysis, the main spatial findings provide quite clear evidence of effects of the different CAP components.

The first is related to the bulk of the payments provided by Pillar 1 support. The analysis suggests that Pillar 1 of the CAP appears to favour core areas more than it assists the periphery of Europe)².

The geographical incidence of Pillar 1 support (graph 13) can largely be explained by the distribution of farm types and sizes across Europe. These findings reflect the differing levels of market price support and direct income payments for different agricultural products leading to the following effects:

- Regions with larger farms tend to get higher levels of support, as do regions with a high percentage of land cover accounted for by irrigated land, complex cultivation and pasture.
- Regions with large areas of agricultural land dedicated to fruit or vine production



Graph 13: CAP, Pillar 1 Support per AWU / Source: Arkleton Centre 2005, P. 19

tend to have lower levels of Pillar 1 support.

- Moreover, Pillar 1 support is positively correlated with accessibility at the EU level: more accessible regions of Europe tend to get higher levels of support.

In comparison, Pillar 2 of the CAP (which comprises a number of quite distinct structural and rural development measures), might be expected to be distributed more in line with cohesion objectives. But surprisingly, at the EU level the incidence of Pillar 2 support (graph 14) is so far not favouring spatial cohesion and only has a limited compensation effect to Pillar 1 support distribution. As no data sets for the expenditure of CAP support at regional level could be made available by the Commission services, this finding had to rely on the two following data sources as a proxy to actual Pillar 2 support: The budgets of the Rural

² This may not be surprising, since Pillar 1 has never been claimed to be a cohesion measure. In contrast to market price support, direct income payments were found to be generally higher in areas with a low Gross Domestic Product (GDP) per capita and with high unemployment rates.

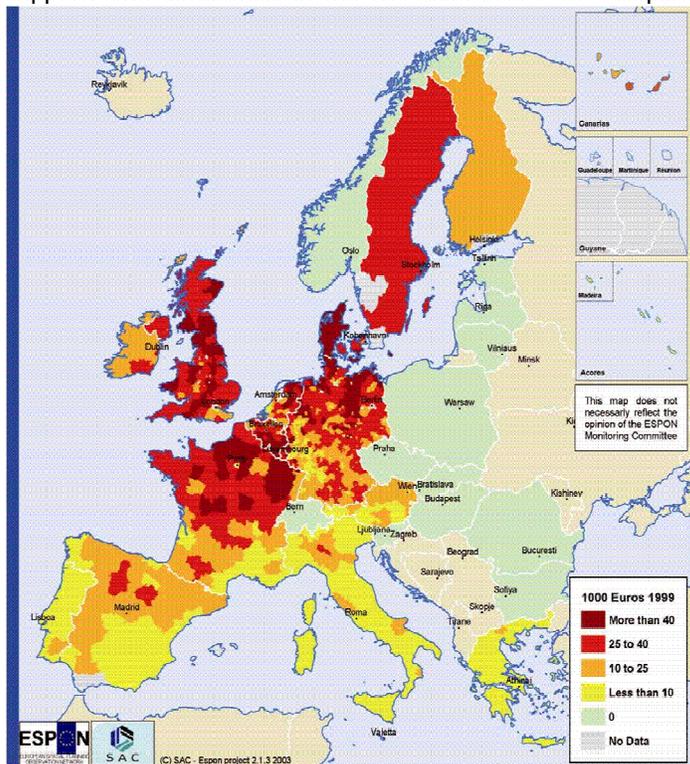
Development Programmes (RDP) would provide an indicator on the programmed funds (Figure 2), whereas support data from the Farm Accountancy Data Network (FADN) would disclose the regional distribution of actual payments. One has to take account that the FADN data does not include smaller farm units, but nevertheless accounts for the majority of agricultural production and CAP support. The differences in the two data sets

programme's priority (Dwyer et al., 2002). The richer regions of northern Europe tend to prioritise agri-environment and LFAs, whilst the poorer regions of the south and the accession countries prioritise agricultural development. The reason for the regional and national disparities lies mainly in the uneven allocation of RDP funds, based on historical spend, together with the co-financing requirements for Pillar 2 spending. The spatial

pattern of the policy application also shows that mountain regions just get higher support levels through the specific measures of Pillar 2 which aim at more environmentally friendly production systems. However in economic terms the production difficulties are only made up by these measures to a small degree.

When comparing up-take of Pillar 1 and Pillar 2 measures by farm size groups, a quite contrasting distribution between the two parts of CAP is recognized. The stronger relevance of Pillar 2 support for smaller farm sizes suggests that the different allocation criteria actually matter and that the orientation of Pillar 2 instruments towards more environmental sound farm management and diversification strategies is reflected in the higher

participation of small farm size groups³ in these measures. Even if this shift seems still insufficient, it characterises the potential to



Graph 14: CAP, Pillar 2 Support per AWU / Source: Arkleton Centre 2005, P. 20

might reveal also the tendency towards the integration of the spatial dimension. This means that overall the RDPs indicate a shift in Pillar 2 support allocation more in line with cohesion policy objectives.

There are marked differences between those countries and regions for which the RDP is used as a tool to promote environmental land management and those for whom modernisation of agriculture remains the

³ Farms were banded into five groups so that there were an equal number of regions in each category, with the following boundaries: 0 – 10.69 Economic Size Units (ESU), smallest farm units; 10.69 – 21.70 ESU; 21.70 – 40.76; 40.76 – 64.10; 64.10 +, biggest farm units.

address the regional dimension more explicitly (Dax and Hovorka 2007).

The thrust of Agenda 2000 policy reform concentrated on the shaping of a unified programme for rural development (concept of Second Pillar of CAP). This should be a particular focus of national and regional agricultural policies and develop to a significant element of policy.

Application of RDP is still driven by historic experiences and priorities and reflects national co-financing decisions. There is also a quite significant variety on the predominant measures selected for rural development

between the Member States. The distribution of funds towards the three axes and the Leader activities for the current programme period (2007-2013) reveals the continuity of the national strategies. About half of the funds are devoted to agri-environmental measures and Less-Favoured Areas support. In several countries (Austria, Finland, Sweden) these two measures even make up more than 75 % of RDP budgets. The expectation that the programme would open up to some degree to non-farming actors as well could hardly be realised and the level of 10 % of RDP budgets for rural economy measures (axis 3) is no decisive shift in the strategy.

Forest policies

Forests cover a large proportion of the mountains in Europe contrasting with distribution of arable land in these areas. The relatively easier terrain of forest areas in lowland areas (mainly in Scandinavia), which means that the costs of forestry infrastructure, harvesting, and transport to markets are significantly lower than in mountain areas, is a major reason why forestry in mountain areas is often not very profitable. Typically, mountain forests have a far high societal value for the protection of watersheds and against natural hazards, and for tourism and recreation, including hunting (Nordregio 2004, p.155ff.).

With regard to EU policies, the funding for forestry measures compared with agriculture is quite low and the Treaty of Rome determined that rules of the Common Market for agriculture do not include forests and forest products. Implemented policy has been modified from 1988 when the EU adopted a new strategy (Com. 88/255) and a "Forestry action programme". This highlights all the various roles of forests (production,

environment, and recreation), with the aim of encouraging the entire forestry sector. The programme is focused on five items: afforestation of agricultural land, better use of forests in rural areas, cork, forest protection, and accompanying measures. In 1992, regulation 2157/92 (amended in 1997) strengthened Community measures to better protect forest from atmospheric pollution and fires. Overall, an equitable balance has to be found between the diverse roles of mountain forests. With time, their multifunctional nature is becoming recognised, with an integrated forestry policy as part of rural development policy. In accordance with the subsidiarity principle – and to be more efficient – forest strategies and measures in Europe are implemented at quite different governmental levels (national, regional or local). Mountain forests are also the subject of specific resolutions adopted by the Ministerial Conferences on the Protection of Forests in Europe, and the mountain forest protocol in the Alpine Convention.

Public services and infrastructure

Supply and demand of public services have been subject to a dynamic change process in the past few years. The threat to the provision of services in rural and mountain areas directly affects the cohesion objectives. The Third Cohesion report specifies that “despite the difficulties of some regions, equality of access to basic facilities, essential services and knowledge – to what are termed ‘Services of General Economic Interest’ – for everyone wherever they happen to live is a key condition for territorial cohesion” (EC 2004a, p.33).

Services frequently subsumed under the analysis refer to basic services for the functioning of everyday life in an area (local food stores, kindergartens, schools, doctors and hospitals, homecare assistance, postal services, public transport etc.). Some of these basic services, such as post offices, phone services, Internet, energy, sewage and waste disposal systems are of crucial importance for business activities as well. It is therefore referred here to “services that serve the common good and for which there is a public interest in making them available, without necessarily having to be provided by the public sector” (Favry et al. 2006, p.18).

Nowadays the importance of supplying basic services has become a core issue almost in all rural areas. This importance is in contrast to the fact that the costs for basic services tend to be considerably higher than in more densely populated regions. Therefore thinning out of public services in regions can be observed mainly in areas with low population numbers and with a dispersed settlement pattern. The concern has especially increased within mountain areas, where the topographical difficulties even aggravate the low degree of costs that can be covered through service

charges. Several studies and analysis have been focused on regional contexts of mountains (EC 2003, Nordregio 2004, Machold and Tamme 2005, Stalder et al. 2006, Levret and Marot 2006)) and underpin the debate on providing services at regional/local level with a host of illustrating examples for regional trajectories of development. However, recent analysis of the situation in the Alps reveals that there is no standard problem pattern, but the recent European study *Euromountains.net* revealed that, “the relatively sparse population, complex topography and, in most cases, challenging climate of mountain areas mean that the provision of services there is generally more expensive than in other areas; possibly 20-30% above metropolitan areas. However, the proportion varies depending on many factors, particularly the area of interest” (Price 2007, p.29f.). Securing the level of services and a viable base for the local population relies particularly on effective transport and communications infrastructures. As one can acknowledge that with new technological innovations additional costs of provision in mountain areas may no longer be as great as before, there are new options for organising service provision. Yet this new opportunity remains to be realized and relevant measures await implementation in most mountain regions.

Overall the spatial distribution of these services across Europe can be considered balanced and all major mountain ranges are well served with such facilities. However, the number and density of such services within mountains is lower than in lowland areas, which leads to distinct travel time and accessibility patterns. Moreover, there appear clear differences in infrastructure service supply between northern Europe, central

Europe, and more remote areas of Europe (including New Member States of the EU) indicating differences in (quantitative) service delivery. Main findings of the analysis of public services point at the following issues:

- The main problems arising in peripheral areas are in public transport organisation, a speedy integration into new information and communication technologies networks, maintenance and improvement of (quality) education facilities, health care and provision for care of elderly persons.
- The population groups most affected by reduction of basic services are women, children, handicapped persons, seniors and elderly persons and persons without a motor vehicle.
- The liberalization of services benefits the larger enterprises in the regional centres, while the competitive situation of smaller and medium-sized companies at the periphery worsens. Moreover a considerable portion of rural employment is in basic service companies.
- Important social functions are covered by basic services which create places of communication and contribute to a more lively public space in rural areas.
- The erosion of basic services fosters a pessimistic and negative underlying sentiment among persons in the affected communities in rural areas, and particularly in peripheral locations of mountain areas.
- Cultural life and self-organized community work are especially important for residents to be able to create bonds with their (small, regional) towns.

The problem pattern emerging from the analysis indicates that major gaps are to be addressed in the field of mobility, especially for public transport availability, of new information and communication technologies, sufficient and high-quality resources for education and training, health provision and care for elderly persons. This concern has influenced regional policy in some countries with considerable portions of mountain areas already in the

1970s/1980s and has led to more endogenous development concepts. Local action programmes, including village renewal activities and later on the EU Community Initiative for rural areas, the Leader programme as well as Local Agenda 21 groups, underpin the commitment for the issue in peripheral areas and present a wide range of experience and a multitude of best-practice examples.

It will be important for future regional programmes to derive useful strategies for action which include in particular (i) coordination and cooperation action across municipalities, regions and sectors, (ii) and support and assistance for voluntary community work and for non-profit organisations. Such activities will only be successful if local commitment can be secured and participation can be extended beyond traditional stakeholders.

The broad social mandate to maintain and improve the functionality of rural areas can be derived from legislative and policy documents of many countries that are faced with peripheral regions. For the specific types of problem regions this has been discussed in a more comparative way in the preparation analysis of the Cohesion Fund reports, and a separate section has been assigned to regions with geographical handicaps, like mountain areas.

It is therefore important to highlight the effects of the changed provision of public services on the competitiveness of the mountain regions and to identify critical factors in the provision and strategies for action. The level of provision of services cannot be reduced to a purely economic dimension, but has to be understood as a core element for regional development. They are embedded in

a general policy debate and the discourse on what services the modern state should provide and what could be developed by private actors or private-public partnerships.

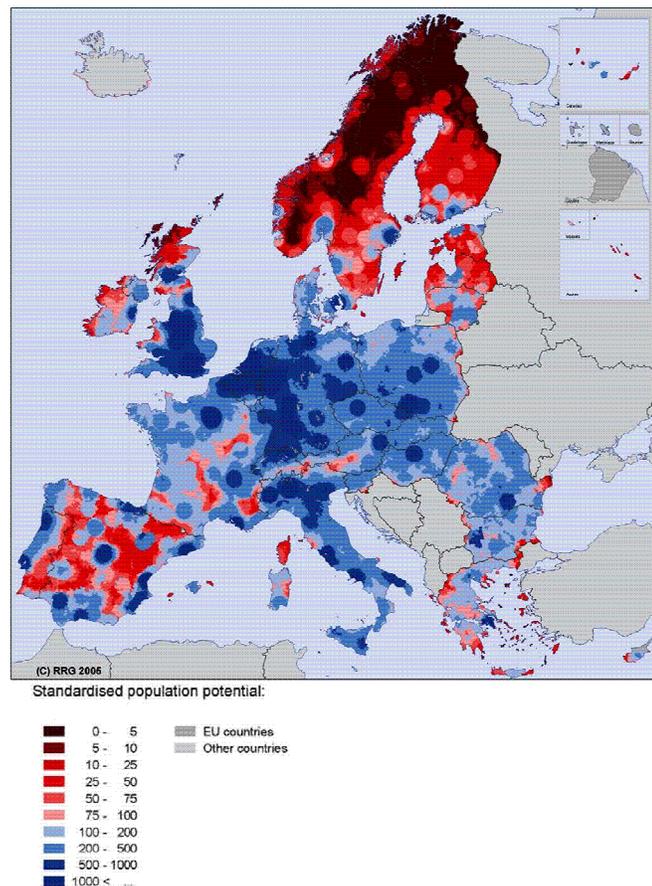
With regard to an assessment of the impact of policies it has to be mentioned that public services are indicated by a large number of actors as the prime requirement for improving viability of living conditions and a thriving economy within mountain regions. These policies are affected by different objectives and policy options as well. It is very difficult to assess the wide range of policies with their varying territorial impacts on regional development in a comprehensive way. A study

on the territorial impacts of Community policies and the costs of non-cooperation of various policies has addressed this issue and underscored the sectoral nature of many policies as well as the contribution of relevant policies to a strengthening of 'territorial dualisation', implying a differentiation towards areas of concentration and those of peripheral regions being trapped in marginalisation processes (Robert et al. 2001). Service provision therefore is not any more just an issue of cost effective services or innovative technical solutions, but core to the functionality of rural areas, including particularly mountain regions, and any regional development strategy.

Mobility and accessibility

A number of key challenges for people living in mountain areas relate to their comparative disadvantage with regard to all types of infrastructure and services. This disadvantage includes two sets of issues: peripherality and constraints to access to facilities within and close to mountain regions. These disadvantages are visible through different accessibility indicators that are based on the assumption that the "attraction" of a destination increases with size and declines with distance or travel time or cost. As mentioned above we have to distinguish national and European peripherality indicators.

In general there is a clear centre-periphery pattern across Europe with the highest values in the European core of Germany and neighbouring states. However, compared with the pattern for mountain municipalities in individual countries it shows quite a different characteristic. While certain areas, including



Graph 15: Population potential within 50Km radius / Source: Aalbu 2008

the mountain municipalities of northern Norway, most of Sweden and Finland, the Highlands and Islands of Scotland, and the Mediterranean islands, stand out as being peripheral at both European and national scales, other municipalities are much more accessible when the national level is considered.

The overall spatial distribution of infrastructures such as airports, universities and hospitals across Europe shows that at least local facilities can be accessed in most regions. Nevertheless local people are concerned with the accessibility to higher quality infrastructure facilities; in particular the distance to universities can dispose a considerable obstacle to increasing educational attainment in these areas. Albeit there is hardly any information on the quality of services concerned, this issue can be understood by considering the lower range of population potential to be reached from great part of the mountain ranges (Aalbu 2008, [graph 15](#)). Even if the major mountain ranges are well equipped with most of the facilities, the number and density of such services within mountain areas is however lower than in lowland areas, leading to longer travel time

Regional policy, Structural Funds

Following Structural policies reform in the mid-1980s a number of the regional objective areas were introduced (1, 2, 5b and 6). Most mountain areas with the greatest difficulties were included in Objective 1 areas or, if located in countries without substantial objective 1 areas, in one of the other spatial categories. For example mountain characteristics were explicitly included in the criteria for eligibility for Objective 5b. Although this direct link towards the objective areas was weakened in the following programme periods,

and worse accessibility patterns. In this regard, transition areas play crucial roles in providing access to such services. In many parts of Europe, facilities located in transition areas compensate for missing facilities within mountain ranges.

In addition, there are corridors through mountain ranges where infrastructure is concentrated. While the well-known centre-periphery picture emerges with regard to accessibility to the different type of infrastructure, there is also a great variety within massifs, and this is sometimes greater than the variety between massifs. The lack of one type of infrastructure in a massif may be compensated by an excellent supply of another type of infrastructure. There is a clear divide in infrastructure service supply between northern Europe, central Europe, and southern Europe, and between old and New EU Member States. Taking all these findings together, one can conclude that, in general, not all mountain ranges are handicapped by poor accessibility or lack of infrastructure. In contrast, one must look into each massif individually to find out the specific handicaps, and identify needs for action.

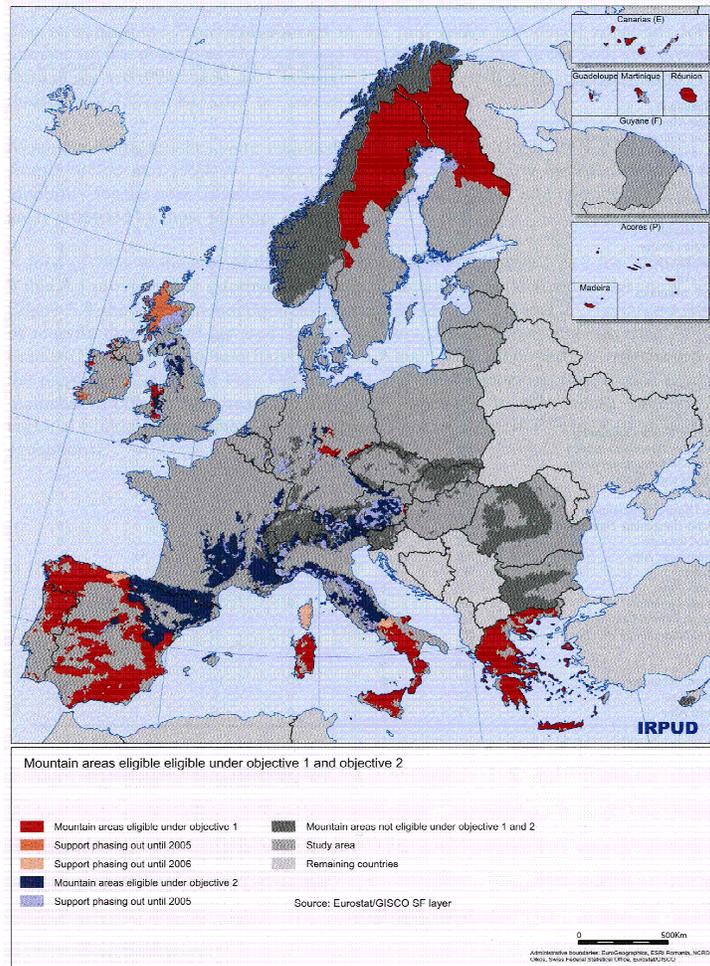
the location in mountain regions was implicitly taken into consideration in the areas proposed for Structural funds support by most Member States in these periods. Graph 16 shows the mountain areas which were eligible under objective 1 and objective 2 (2000-2006).

One can conclude that EU initiatives have been of interest in many mountain areas. This is even more relevant for Interreg which has supported transnational cooperation from the beginning and is therefore of relevance to

many mountain regions because of their transnational impact. Interreg allowed the initiation or reinforcement of programmes of cooperation on areas and issues which were more coherent than in national policies. There are examples of mountain-specific projects, as the "Euromountains.net" project, a co-operation of European mountain regions initiated by Euromontana.

The current Structural funds programme has a less clear spatial implication, and is therefore not as directly linked to mountain areas. Nevertheless it is important to take account of the geographical specific situations in the strategic considerations. Some countries have therefore highlighted the specific role of mountain areas in their spatial development and in their regional policy objectives by devoting a section of the national strategic document to mountain areas. EU programmes have implications for the various mountain regions, which may be very diverse. The regional assessment and the conclusions for the policy framework reflect therefore the national and regional position and the particular institutional framework. There are quite different approaches to take account of the challenges in mountain and peripheral areas. Despite these differences the trans-regional and trans-national cooperation activities were reinforced, not least with the support of various Interreg programmes (Dax and Parvex 2006). They underpin the need for cooperation

at the regional level to address the place-specific issues of many mountain regions which can often be expressed better through local and regional cooperation.



Graph 16: Massif areas eligible under objective 1 and 2 (2000-2007) / Source: Nordregio 2004 P. 172

Environmental development

The landscapes of most European mountain areas do not result any more primarily from natural processes, but have been shaped by human management over generations through farming, forestry, and other economic activities. The decrease in the total area of cultivated land, which in most countries is more rapid in mountain areas than in the lowlands, is accompanied by major ecological changes, particularly the expansion of scrub and forests on abandoned land. The construction of buildings, roads, and other types of infrastructure has to be added to these forces of change, especially in regions where tourism is highly developed. Climate change has already local effects, for instance through the melting of permafrost and glaciers, and can be regarded as a long-term driving force for changes of mountain environments.

Long-recognised natural risks in mountain areas, linked to their geological characteristics, slope, and climate, are therefore enhanced by human interventions in three main ways: changes in landscapes related to the abandonment of traditional activities; pressures related to the uncontrolled construction of infrastructure and high level of tourist use; and sensitivity to climate change. Beyond the risk aspects, these changes often pose threats to the specific cultural heritage of mountain regions, and the many endangered species, often endemic and/or relic, for which these areas are often a last refuge. As significant changes in mountain land uses and environmental characteristics can be expected in the future, the development and implementation of policies encouraging the preservation of mountain environments is a priority. Three main types of tools have been

implemented, relating to spatial planning, risk management, and nature conservation.

In almost all countries, there are no planning regulation and guidance tools specific to mountain areas. Classic instruments such as local master plans are sometimes established within the wider framework of regional level guidelines or plans. In these plans, there is a general trend away from an earlier focus on urbanised areas, and towards an integration of urban and rural land use planning in order to create a common framework covering all types of territories. This trend is particularly important for mountain areas, where non-agricultural uses often occur.

Risk management is a specific issue in mountain areas. The most common risks are flooding, landslides and mudflows, avalanches in high mountains, forest-fires in Mediterranean countries and, occasionally, seismic activity. The abandonment of traditional land uses often leads to an increase in natural hazards and a greater need for public control and prevention systems. Improved knowledge of vulnerability and risks at local level, of natural hazard processes, and of mitigation options is crucial to prevent such events or minimise their manifested effects. The integration of environmental tasks into an integrated policy concept is therefore a long-standing object of research and policy analysis for mountain development programmes (Euromontana 1998).

Across Europe, each country has its own system of environmental conservation, adapted for the different national conditions (especially with regard to the density of settlement) and the purpose and degree of protection. Designations within these systems

include national and regional parks, natural and nature reserves, forestry reserves, sites of special scientific interest, wilderness reserves, protected and cultural landscapes, classified sites, heritage monuments, and many others. Most of these were established from the 1970s

onwards, and new large protected areas are still being created. At the EU scale, the Natura 2000 systems, deriving from the Species and Habitats Directives, is the principal tool for nature conservation, though its application has been severely delayed in many countries.

Innovation examples and best practices

Many initiatives and projects have been realized in the European mountains, which take account of the need to develop innovative action and integrate local actors into the regional strategies. The analysis of the basic requirements for such approaches tends to address some framework consideration but

also highlights a multitude of best-practice cases. The inventory of examples is based on EU projects for analysis of innovative structures and project findings from regional EU programmes (Interreg and Leader) where implementation considerations are central. Main success factors include:

- A recognition of the specific production difficulties in mountain areas,
- The assessment of the multifunctional services of agriculture and forestry and the close interrelation to regional economies (including pluriactivity of farmers),
- The strategic development of high quality products nurturing the specific potentials and the regional origin of products,
- The demand and development of the cultural landscapes as the major element of attractiveness of the areas,
- The recognition of fundamental social changes and the need for economic, social and territorial cohesion of mountain regions.

In this regard rural development has to be understood as an altered policy concept which is not primarily serving agricultural policy but addresses and integrates all relevant policy fields. Recently OECD (2006) has coined the term "new rural paradigm" for the new perspective of rural policies. Within a multi-level governance structure this approach envisages to find and develop the local potentials and enhance rural amenities. Given the high relevance to mountain and peripheral areas many examples and case studies have been first applied in these areas and underpin the usefulness of the new concept for overcoming/coping with regional development problems. With regard to successful

implementation of programmes some key issues are remarkable:

- **They address all fields** from economic projects (farm diversification, restructuring, industry, tourism) to social ones (poverty eradication), and also address infrastructure, environment (biodiversity conservation, natural parks), training and expertise (for unemployed people, farmers, local actors, visitors) institutional arrangements (mountain associations, forum), co-operation (interregional conventions);
- **They involve all kind of actors** – public, associative, firms and

- entrepreneurs, inhabitants – and all kind of territories, with an emphasis on local and sub regional levels;
- Some are EU (Interreg, LEADER) or international initiatives (with non-EU countries), but **many are set in a national or regional context;**
- **There are certain differences between the old EU Member States and the New Member States** with regard to the main issues and priorities.

Integrated view on policies

The experience from the regional development initiatives suggest that both an active core of local actors addressing the local market problems and harnessing the full development potential of the region as well as the appropriate policy instruments are required to set up a significant development dynamic. The holistic approach is necessary to provide the full range of positive effects which are in the case of land use management often most relevant to other economic sectors and to non-

local people valuing these services. According to a system approach, single instruments involve the danger of neglecting interrelations and tend to fail in the internalisation of externalities. With regard to addressing the multitude of tasks of land-use systems in mountains there are some quite important implications of policy intervention (and non-intervention) that deserve particular emphasis (OECD, 1999).

- Mountain development requires active support through incentive policies that contribute to shaping the local/regional actors' behaviour.
- Regulatory measures are often necessary to take account of the value of landscapes, in particular with regard to aspects like non-use, option and existence values, and the maintenance of such valuable assets, particularly in the field of high nature value systems, for future generations.
- Amenities in mountain areas typically have an important, collective and territorial dimension, which implies that disadvantages of remote places like mountain areas can only be overcome by collective action.
- There is a significant coincidence between mountain areas and areas of nature conservation interest. Since low-intensity farming systems of mountain areas reveal characteristics to a high extent benign to the environment, but endangered both by abandonment and intensification, there is an urgent need to highlight the importance of appropriate land management of these areas for landscape development and support structures through policy concepts.

5. Recommendations for mountain policies and action

The analysis of mountain development from regional actors, research activities and policy implementation reveals common experiences for mountains in Europe. These address a vision that mountain regions are a considerable part of European (mainly rural) areas and greatly reflect the situation in peripheral contexts. As such they are an important case for the development of territorial cohesion objectives across Europe. Some key issues for mountain development, due to mountain characteristics, are summarized here. They particularly address the integrated view on ecological, social and economic features in these areas.

Key elements and principles for a policy approach to focus on sustainable development in mountain areas (Mountain Agenda 2002) and to prevent marginalisation tendencies would be:

(1) recognition of mountain areas as specific development areas

It is crucial for developing action for mountain areas to start from a widely recognised and accepted definition of mountain areas. The difficulty is that topographical and natural conditions often are different within short distances and contexts might be divergent for neighbouring areas. According to the objective of the delimitation a more restricted or a more extended definition is applied.

The most relevant typologies for mountain policy are used by DG Agri (for the application of the LFA scheme since 1975) and the calculation elaborated for DG Region within the mountain area study (Nordregio 2004) which aimed at setting a harmonised geographical

base and a set of relevant indicators for European mountain areas.

This recognition of the mountain area has to be referred to in specific labels taking account of the mountain situation or origin of its products. Mountain regions thus need a voice in policy and decision making.

This perspective also emphasises that support programmes should not be conceived with the prime target of compensation of difficulties, but be oriented at nurturing the potential that can be detected in mountain regions. In many cases, these opportunities are however not straightforward production schemes or services. In general they have to be located and generated, with the participation of local actors, to become real development assets.

(2) remuneration for services rendered to surrounding lowland areas

This implies particularly the concept of positive externalities which are not only effective for the local/regional context of the mountain areas themselves, but largely extend to non-mountainous areas in the lowland.

The calculation at the global level that about half of the world's population is linked to, and dependent on the provision of goods and services produced from, mountain areas underlines this linkage. Without doubt this greater relevance exceeding the mountain areas themselves is particularly true also for Europe. The analysis in the European Commission study (Nordregio 2004) focused on the delimitation issues and bordering areas outside the mountain areas in varying perimeters of 10, 20 and 50 km. A particular

high population density is often found in these surrounding areas, underpinning the attractivity for many people to settle close to the mountains to take advantage of the mountains' resources.

However, the use of these resources and an adequate remuneration of services provided by mountain actors are not always secured. There is a need for the local population within mountain regions to take hold of the potential and that remuneration should not be endangered by liberalisation policies.

The Alpine Space Programme under Interreg IIIB (now continued in Interreg IVB) addressed a series of aspects of providing services in the mountain range of the Alps and aimed at increasing service provision and remuneration in these regions through enhancing cooperation and exchange of experiences (www.alpinespace.org). The main action fields for this include the management of natural resources and biodiversity (environmental development), activities on risk prevention of natural hazards and cultural landscape development. All these shape the most important attractiveness elements and therefore become a core base for other economic uses of the space (e.g. tourism).

Euromontana has paid particular attention to the issue of positive externalities in two studies, the background paper for the Avimont seminar (Bryden etc. 2005) and connected case studies (2005) and the discussion paper by Robinson (2007) for the Adelboden Group within the FAO activity on SARD-M.

(3) diversification and exploitation of the local potential for innovation

In many regions, the local potential for innovation is to be found in small scale

activities. It involves a thorough analysis of the current activities, local actors and institutions, all economic sectors and the spatial specific relationships. An extensive overview on the scope of diversification activities and innovative action within the mountain areas is increasingly looked for in many mountain ranges. For example the research project "Future in the Alps", carried out by CIPRA (2008) over the last years has listed and analysed a wide range of activities of different types. The project has compiled a huge storage of knowledge available on the Alpine countries, filled with publications, projects and links. The particular aim is to enhance exchange between different mountain ranges and to support dissemination of best practice examples. Hundreds of examples have been collected to show the creativity of the regional economy, and more than 500 projects participated in the competition for the call of the Future of the Alps project to reward the most innovative projects.

To cite just some examples as a reference there are very interesting projects

- in the field of increasing the use of wood in construction,
- the development of new products within co-operations, e.g. by using organic plants and aromatic plants (www.plantes.ch)
- developing new markets through the focus on specific arts quality which are combined under a regional specific label (of crafts)
- new combinations of regional products and services, including agricultural products and new technologies
- use of natural resources (e.g. water) as a specific link for development of a region

Another well-known programme on diversification is the Leader programme which has achieved after three programme periods a wealth of experiences in many European

regions. In some countries, like Austria, Italy, Greece and others, the majority of Local Action Groups (LAG) are situated in mountain regions and hence reveal many best-practice examples. The EC publication (EC 2002) on innovative projects in the mountain regions already included a number of examples from mountain areas.

(4) cultural change without loss of identity

It is important to see mountains not primarily or exclusively as areas with long traditions that are far away from our modern life. In many respects some of the development potential is rooted in the traditions. However, this potential has to be realised by taking account of on-going cultural development.

A series of activities in many mountain regions is engaged in addressing the cultural heritage of these areas. For example the Alpine Space Programme (2000-2006) had an activity (measure 3.2) on "good management and promotion of landscapes and cultural heritage" where eight projects were selected to analyse the potential and find activities in this field. Also the new programme has an activity on "enhancing development options based on traditional sectors and cultural heritage" as an important element to enhance competitiveness and attractiveness of the Alpine Space.

Changes are expected to be particularly strong in a context of rapid integration, as can be seen for the new Member States. The Carpathian mountain regions (but also the areas in the Balkan mountains of additional countries or the mountains of Turkey) are particularly affected by social and cultural changes.

For example the Carpathian Foundation encourages the development of

public/private/NGO partnerships, including cross-border and inter-ethnic approaches to promote regional and community development and to help prevent conflicts (see Roma projects etc.

(<http://www.cfoundation.org/cf/web/hq/index.jsp>).

(5) sustainable management of mountain ecosystems and biodiversity

This is a central aspect of mountain development and programme orientation. In addition to the long-lasting activities of the Alpine Convention, one can follow in particular the trend to spread such action programmes to other mountain regions. The most clear and accurate example is provided by the initiative taken in the Carpathian region which is in its extent and the population living there almost similar to the Alpine Space.

The Carpathians are not just one of Europe's largest mountain ranges, a unique natural treasure of great beauty and ecological value, and home of the headwaters of major rivers. They also constitute a major ecological, economic, cultural, recreational and living environment in the heart of Europe, shared by numerous peoples and countries.

The Carpathians are an important reservoir of biodiversity, and Europe's last refuge for large mammals - brown bear, wolf, and lynx -, home to populations of European bison, moose, wildcat, chamois, golden eagle, eagle owl, black grouse, plus many unique insect species. Transition to a market economy, increasing and integrating role of the civil society and dynamic economic development imply profound changes and challenges. The Carpathians are shared by seven Central and Eastern European Countries, four of which have already joined the European Union. This increases the possibilities of sustainable

development based on the rich natural, environmental, cultural and human resources of the region, and for preserving its natural and cultural heritage for future generations.

The Carpathian Convention provides the framework for cooperation and multi-sectoral policy coordination, a platform for joint strategies for sustainable development, and a forum for dialogue between all stakeholders involved

(<http://www.carpathianconvention.org/index.htm>).

(6) taking account of spatial aspects to support cooperation and strategic approaches

Regional development of mountain areas depends on driving forces that go beyond the mountain areas themselves. As such the analysis of the economic base and perspectives for mountain regions has to address the relevant linkages to other areas. More and more the interrelations have entered into the core set of aspects for regional assessment.

A deeper analysis of local and regional developments reveals the divergent situations which can change within very small distances. In particular, the mountain area context requires sufficient consideration as well as the inclusion of local approaches as core actors, since socio-economic conditions and strategies might vary considerably. Although all administrative levels and geographical attributions from micro to macro level have a specific role, the regional authorities and actors have in many respects a pivotal role and can be seen as the strategic actors for project development. This reflects programme experience and improvements might be due to the capability to work on network structures.

It is crucial to note that pilot projects tend to be situated at a more local level, which implies the strong involvement of local actors. Up to now Alpine-wide networks of communities have been established where the local actors are important partners in the projects, and the continuation of local action examples will be important for extending small scale cooperation to other parts of the mountain area. Main activities include a network of municipalities engaged in a strategy to achieve more sustainable ways of tourism development, including public transport facilities, (<http://www.alpine-pearls.com/home.php>) and a network of municipalities focusing on alliances in the Alps to enhance sustainable development (<http://www.alpenallianz.org/de>) and a network of Alpine protection areas, ALPARC (www.alparc.org). The involvement of these small scale actors not only take account of the specific situations, but also contribute to increase participation and creativity at the local level.

(7) institutional development to focus on sustainable resource use

Development, and particularly regional development, is driven by a wide range of factors and has to be assessed by different indicators which reflect the various dimensions of the development concept. Development experiences often depend on the actors and institutional framework in which they take place.

An EU research focused on the specific requirements and some experiences related to the institutional development of mountain regions (Innovative Structures for the Sustainable Development of Mountainous Areas – ISDEMA, 2001-2003). In many respects it is not sufficient to conceive regional programmes, but necessary to establish an

institutional framework that is adequate to deal with the development of the mountain regions.

The process to establish an appropriate policy framework has to be undertaken over a long period and with a continuous commitment. Such a process can only be oriented towards common goals if societal consensus and institutional support provides a guiding reference. In this process development agencies, and the networking of local, regional and national institutions is crucial to concentrate on regional strengths and elaborate adequate strategies.

The focus of policy development would be seen in the following six areas:

- promoting efforts to secure land use and development of local resources
- accounting for the impacts of livestock, forest and hydropower in mountains
- creating regional networks of conservation areas
- improving knowledge about mountains through integrated research, monitoring, and education
- developing institutions and co-operation at level of mountain ranges and regions
- integrating mountains into projects and policies of development agencies

The analysis proves that the wide geographical and cultural diversity of European space is particularly expressed in mountain areas. The resulting territorial challenges distinguish it from other economic areas as different regional contexts can be discerned at low geographical levels. It is important to take account of this diversity and the cross-border dimension of spatial issues, relevant also for the mountain situations, when addressing territorial cohesion aspects. Following the demand of the European Parliament (2005) for

a multi-centric development a territorial cohesion strategy integrating the challenges and opportunities of the peripheral and mountain areas is called for.

When taking territory as a strategic factor in any targeted approach to sustainable development, it seems important to tackle the challenges of peripheral areas. Competitiveness, social cohesion and environment are the key aspects for the development of the cohesion policy. The mountain areas can be an important case for raising awareness and understanding the need for integration of all regions into this concept. It can be a case where diversity and wealth of the significant potential of the European mountain regions can be taken into account in an integrative manner. The basic requirements reflect general territorial development options. Crucial issues include in particular the interface between sector-specific and structural policies, the development of multi-level governance of territories and accessing the region specific contexts in the formulation of strategic considerations.

When aiming at the reduction of inter-regional disparities one has to integrate the challenges and opportunities of the worse-off areas. Some of the mountain areas belong to these. With regard to spatial integration there is an even more straightforward need for inclusion of mountain areas as they are often synonymous to peripheral situations. Economic, social and territorial cohesion can only be realized if structural disparities between regions are reduced. Accordingly it is up to the regions to develop spatial strategies, which reflect the European territorial development trends. Mountain regions can be important partners to address the regional disparities and to enhance the trans-regional cooperation which is at the core of cohesion processes.

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