# DIAMONT: Data Infrastructure for the Alps - Mountain Orientated Network Technology



### Interreg IIIB Project, Alpine Space Programme, EU

# Managing Alpine Land Resources -Regional development instruments

In the Alpine space with its limited share of permanent settlement area and fierce competition for the remaining land resources, an integrated management of these resources is a mandatory requirement of sustainable spatial development. A diagnosis that has been substantiated by a Delphi survey of experts on Alpine regional development within DIAMONT, identified urbanisation processes as one of eight main issues for Alpine development. This work package is dedicated to developing a collection of January 2008 instruments that could stimulate and steer sustainable regional development for this specific problem field within the Alpine Space.



The collected instruments are expected to be characterised and their acceptance and problem-solving capacity confronted with practical assessments in test regions. In this task, the work package provides a link from indicators and data in the DIAMONT project to applicable instruments. As instruments are always oriented towards a practical application, the work package thus attempts to touch ground and work with a closely defined, tangible policy field within the broad DIAMONT context of regional development.



### Work Package 9 (WP9)

## Managing Alpine Land Resources – Approaches and Instruments

Development and Optimisation of Indicator-Based and Qualitative Tools to Stimulate and Steer Regional Development

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Main activities and objectives: Setting up a database of regional development instru-

ments addressing land resource management in the Alps

Duration: October 2006 until December 2007

## Instruments for steering regional development a definition

In the context of spatial development, the term "instrument" is used as a generic term for all approaches that are intended to achieve spatial development objectives. Driving forces themselves also influence regional development, but in a less uncontrolled cause-effect-relationship. At a lower hierarchy, the term "measure" describes concrete actions in the process of implementing spatial development objectives. As an example, a tourism development concept would in this context be regarded as an instrument, while sign-posting hiking paths would be considered a specific measure within this instrument.

#### Finding a focus - land resource management

Broad and complex main trends in the Alpine space have been identified in the preceding work packages of DIAMONT. The task of WP 9 - developing relevant regional development instruments - requires a step to reduce this complexity for the benefit of accomplishing a comprehensive compilation of instruments for the chosen policy field. Another task of the project has been reflecting the objectives of sustainable development within this thematic area.

The "phenomena", identified within the DIAMONT expert Delphi survey (WP6), are assigned to different "regional development problems". In terms of relevance of these development problems, it became clear that the process of "increasing land demand for urban areas" is related to a high share of phenomena within all regional development problems.



In order to underline this broad significance of land demand for numerous fields of regional policy and to reflect debates on the increasing emphasis placed on the management and finite resource aspect of land, the perspective of the issue has been broadened within the project towards land resource management.

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### Sustainable management of land resources

Whatrelevancedoestheconceptofsustainabledevelopment have for the management of land resources? Taking up the three-pillar-concept of sustainable development, it becomes obvious that land resource management in its multidimensionality reflects many aspects of sustainable development. Discussing land resource management will inevitably bridge the gap to and between other policy fields.



Greenfield development...

In terms of access to public infrastructure and social services and related public and private costs, as well as quality of the built environment, the issue of spatial allocation of settlements and infrastructure is relevant for socio-economic development in the Alps.

The availability of land for development represents the economic aspect of land resource management, whereas ecological functions of soils and open space (filtering, habitat, water retention, micro-climate) are core issues of the ecological pillar of land management.



...and inner-urban potentials.

A linkage between general objectives of sustainability and the need for action in land resource management involves consideraing the ecosystem functions of land, prioritising inner-urban development, density and functional mix of the built environment, fostering interregional co-operation and co-ordinating settlement and traffic infrastructure for optimal and economical provision of public and private services. Furthermore, access to land for housing and economic development and safeguarding open spaces are key elements of sustainable land resource management.

A central challenge in addressing issues of land resource management lies in the fact that this policy area suffers more than most from fragmented sectoral responsibilities.

### **Relation towards objectives of the Alpine Convention**

Sustainable management of land resources in the Alpine region is reflected in the framework convention of the Alpine Convention and particularly in the implementation protocols on Spatial Planning and Sustainable Development, Soil Conservation and Transport as well as in the Alpine Convention's Declaration on Population and Culture.

## Driving forces of land resource demand

What are the drivers behind land resource demand and how can their influence be managed? In general, land resource demand is particularly triggered by socio-economic and technological change, individual preferences, infrastructure policies and subsidies, spatial planning, and municipal budgets and financing. Each of these drivers is embedded in a complex cause-effect-network, such as the polarised spatial development due to socio-economic changes. This leads to the abandonment of traditional agricultural areas and their respective settlements because of easier employment opportunities in services or industry elsewhere and to the opposite trend of concentrating economic power, labour market and public services in easily accessible core towns of the Alps.

Competition between municipalities represents an important driving force for increasing land resource demand and for deregulation of planning norms and objectives with the potential to initiate a downward spiral of economic efficiency and spatial qualities. This competition takes place between municipalities as well as across national borders.

# Which areas could expect a high demand for land resources?

Beyond the identification of Alpine-wide labour market regions carried out in other DIAMONT activities, the question is addressed how municipalities can be identified which face a set of driving forces that suggest increasing land demand? In a "problem-oriented clustering" of municipal data municipalities are identified where - based on scientific hypotheses and a restricted array of Alpine-wide statistical data - an increased pressure on land resources can be assumed.



Driving forces of demand for land ressources

# Instruments for land resource management – a step towards sustainable regional development

A major activity in this work package is the collection and screening of instruments for land resource management in terms of their contribution to regional development. The project partnership collected and delivered about 110 instruments in total, which are documented in an online database hosted by the Bavarian Ministry for Environment, Public Health and Consumer Protection.

The screening of existing development instruments in the Alpine countries and the analysis of the relevant literature led to a classification of instruments into five categories:

- laws and regulations,
- spatial planning,
- economic burdens and incentives,
- · voluntary approaches and agreements
- information and research.

As practical experiences are of particular interest for local stakeholders and practitioners, best practise examples for selected instruments complemented the data base.

### Assessment of instruments

Within the scope of this project, a qualitative baseline assessment of all collected instruments was carried out in terms of their relevance, acceptance, degree of implementation, feasibility and effectiveness. Even if it could not include all emerging criteria, this

approach delivers a coherent Alpine-wide assessment

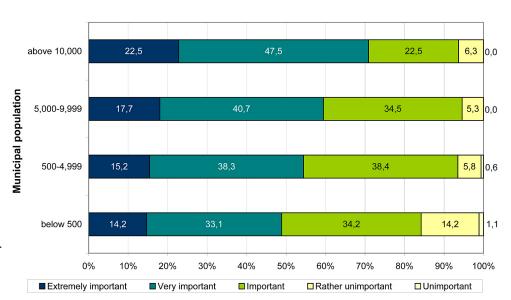
of all collected instruments. It is interesting to note that the highest-ranked instruments already exist.

# Mayors' perception in the Alpine Space

A survey among mayors from the Alpine region - conducted and administered by EURAC within WP 8 - produced questionnaire-based data from 1325 municipalities on the situation and the future importance of 24 policy areas in municipal policy and on the role of different

types of instruments for the future development of their municipalities.

Individual answers to these questions, as well as in combination with answers to other questions shed some interesting light on the perception of land resource management in the Alpine area and the assessment of relevant instruments. Local decision-makers see land resource demand as either extremely or very important in more than half of Alpine municipalities. Mayors expressing a high policy priority to land resource demand are also of a significantly more positive attitude towards instruments of regional development in general than those that assign below-average policy priority to the issue. Interestingly, medium-sized municipalities perceive their situation in regard to land resource demand most critical, while large, urban municipalities describe their situation slightly more positively.



Importance of land take in future municipal policy in dependence of population size (1325 municipalities)

#### Feedback from stakeholders on selected instruments

In the course of DIAMONT, test regions were selected for workshops with regional stakeholders. Within these workshops, participants were introduced to the issue of land resource management and its implications on regional development. Participants described a wide range of development problems related to the availability and the management of land resources. Generally, a functioning response network to these development problems would consist of four pillars:

- Instruments that establish a knowledge base regarding land demand and inner-urban potential,
- Instruments to activate land in appropriate places,
- Instruments that establish a regional balancing mechanism based on inter-municipal co-operation,
- Instruments that balance the interests and needs of different stakeholder groups through participatory processes.



Discussion of instruments with regional stakeholders in Traunstein (DE)

#### Deficits of instruments ...

The confrontation of regional stakeholders with DIAMONT results delivered deficits and perspectives for regional development instruments. In general it can be confirmed that in regard of sustainable land resource management, the bottleneck is inappropriate application rather than a lack of instruments.

Spatial planning instruments need to take better account of temporal and spatial perspectives, which often reach beyond average municipal legislative periods and terms of office, to strengthen the currently weak representation of landscape and nature conservation aspects and to improve incentives for the economic consideration of land and soil resources.

Economic instruments are restricted by counter-productive incentives. Furthermore, they require regional or national development objectives, which define market limits, for the implementation of market-oriented instruments.

Good examples of voluntary but binding inter-municipal commitments with regard to spatial development do not exist, except for areas such as water supply or public transport, even though they are at the centre of the debate within the research and planning community.

Information and research instruments have so far rarely been implemented, even though awareness of land resource management and relevant information basis have been recognised as crucial preconditions for its success and acceptance. These instruments have a significant potential for the future.

#### ... and future needs

Proposals for future action include strengthening the implementation of existing instruments, combining spatial planning objectives with other instruments, a new definition of the role of the municipal level together with the enforcement of regional levels, the promotion of a "land-awareness" climate among political stakeholders and monitoring land resource development.

Land resource management is facing new challenges, particularly in the Alpine area, which will amplify existing conflicts. Climate change adaptation needs will lead to further restrictions of the available area for settlement and infrastructure development, demographic change will set new preconditions for land demand and new perspectives for agriculture and rural areas might sharpen land use conflicts between settlement, infrastructure, agriculture and forestry. Therefore, a permanent optimisation of tools and instruments of land resource management will continue to be a core task and challenge of Alpine development.



The road to sustainable land resource management is long and winding...



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Bayerisches Staatsministerium für Umwelt, Gesundheit und Verbraucherschutz

