

Test-bed “National Park Gesäuse” (Austria – Styria)





Location of the test bed

The National Park Gesäuse is located in Styria (Austria) in the area of the Ennstal-Alps. With an overall area of 11.054 ha it is the third largest National Park in Austria.

Geographic description

The sea level amounts from about 490 m to 2.370 m; highest elevation is the “Hochtör”. The Park consists of 86 % natural area and 14 % protected area. 31% is alpine area, 13.5%

scrub-land, 50% woodland, 0.5% is open water and 5% is high pasture.

Geological setting of test bed

The Northern Limestone Alps are situated in the National Park and concerning common types of rocks Dachstein limestone and Ramsau dolomite are to be found there. The Park embraces two massifs: The Buchsteinmassiv and the Hochtorgruppe.

Relevance of test bed regarding MONITOR

In the National Park Gesäuse there are several conflict potentials given, not only nature protection but also natural hazards, traffic routes (railway), land use, tourism (ski-tours, mountain biking), economic activities or endangered areas. The National Park is a predestined study area for hazards and their consequences.

Some important basic data which is relevant for the Project already exists:

- Ortho-pictures (20 cm resolution of 2003; 40 cm resolution of 1998)
- Numerous botanical surveys (velevès) and soil analyses in the whole park
- Mapping of biotopes (Alps, Valley)
- Geology (1:25.000 of 1935)
- Several Studies
- Air photo interpretations
- Extensive mapping of over 600 founts

Furthermore some of project partners are integrated, namely the Lead Partner with the Torrent and Avalanche Control Service, the Austrian Federal Railway Service and the Agricultural Research and Education Centre Raumberg-Gumpenstein.

Main objectives of the analysis in the Test-bed

The prior objectives for the Test-bed Nationalpark Gesäuse are the assessment of the importance of avalanches for biodiversity, the determination of water balance and soil chemical properties by monolithic lysimeters and comprehensive soil analyses, the evaluation of basics (soil and vegetation) for a successful, site-adapted re-cultivation as land use management, to draft an optimal, site-adapted land use management referring to biodiversity, sustainability, water balance and natural hazards and last but not least to set-up of a continuous observation network to acquire information about potential changes of soil and vegetation which may be relevant for biodiversity, water balance and natural hazards.

Interfaces to the Project

Interfaces to the overall project are the allocation of data and information...

- ...with nature protection relevance (conflict potential conservation of nature – natural hazards),
- ...for water balance in different eco systems,
- ...of soil and vegetation concerning native re-cultivation,
- And the allocation referring to optimal, native land use management.

Previous Activities in the Test-bed

- Selection of suitable areas to analyze avalanches in the test-bed “Nationalpark Gesäuse”, mapping of these zones
- Botanical surveys (velvès) to acquire information about species richness
- Soil analyses to judge optimal land use management and to acquire information about soil chemical properties
- Deduction of an optimal land use management under special consideration of weather conditions

Planned Activities/Outputs

- Collection and GIS application of different conflict areas
- Further botanical surveys (velvès) and soil analyses
- Collection and mapping of hot spots (protected & endangered areas)
- Display of different interests
- Interpretation of natural and cultural impacts
- Strategy to implement the protective forests in the area of the National Park
- Comparison of development trend under consideration of meteorological and other data
- Comparison of instruments in different test beds (e.g land use planning instruments)

SWOT-analysis of the test-bed

Strengths:	Weaknesses:
<ul style="list-style-type: none"> ▪ Predestined study area for hazards and their consequences ▪ National and international projects and co-operation partners ▪ Officially recognised as a Category II park since 2003 ▪ Cooperation with experts, local politicians and public 	<ul style="list-style-type: none"> ▪ High conflict potentials because of economic interests against nature ▪ Conflict area tourism, natural hazards and traffic routes ▪ Integration of areas outside the national park ▪ Considerable amount of time and money ▪ Constant management

<ul style="list-style-type: none"> ▪ High qualified experts in the national park service ▪ Third largest of the six Austrian National Parks ▪ Integration of MONITOR project partners ▪ Natural and cultural variety ▪ Basic data 	<ul style="list-style-type: none"> ▪ Recourse of areas ▪ Networking ▪ Protection
<p>Opportunities:</p>	<p>Threats:</p>
<ul style="list-style-type: none"> ▪ Opportunities for the permanent development of involved rural areas ▪ Life Project (Strategies for nature protection for wood and torrents) ▪ Wide range of special offers and attractions ▪ National funds and other financial supports ▪ Optimization of land-use management ▪ Opportunities for further development ▪ Visitors interest in natural history ▪ Strategies for nature protection 	<ul style="list-style-type: none"> ▪ Different requirements of the stakeholders (nature protection against natural hazards, spatial planning, infrastructure, tourism) ▪ Motivation of the local and regional population and NGO's ▪ Political strategies and political trends