

Berchtesgaden
September 15, 2006

Some Perspectives for Implementing and Developing HABITALP in the Context of Coordinated Mountain Research



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Community Initiative



Interreg III B

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ISCAR



ISCAR

You have nice HABITALP-maps now!

What will you do after interpretation?



Three axes:

- 1) **Development of methodology and applications**
- 2) **Research topics (not exhaustive)**
- 3) **Current or proposed initiatives in international mountain research**



HABITALP will be able to serve as a performant tool in mountain reserach, by deveopping methodologies and applications in terms of :

- **Monitoring of long-term processes/changes**
- **Up-scaling information (local to regional)**
- **Down-scaling information (global to regional, regional to local)**
- **Modelling land cover/use changes**
- **Retrospective studies e.g. for new types of land cover**



- **Monitoring of long-term processes/changes:**
 - Repeating regularly areal photographs; ensure their comparability over time; stable categories (basic data set) and analytical procedures; only authorised changes
- **Up-scaling information (local to regional):**
To validate and verify the cartography by field data.
- **Down-scaling information (global to regional, regional to local):** To develop reference data e.g. to use satellite data for monitoring in a regional scale (Corinne +)
- **Modelling:** To develop tools for linking scientific data and models with Habitatlp data.
- **New types of land cover & retrospective studies:**
Adding new types of land cover changes will be used, when new types of land cover have to be identified or analysed in retrospective studies (e.g. artificial snow, disturbed areas).



- 1) Impacts of Climate change on land cover and land use (in mountain areas)
- 2) Impacts of global change on land use systems
- 3) Land cover/land use providing ecosystem services
- 4) Structuring the ecological continuum by ecological networks



1) Impacts of Climate change on land cover and land use (in mountain areas)

A large range of research will be lead in the context of changing meteorological conditions (drier, hotter, cooler, etc). Some HABITALP-related topics are:

- Adaptation of land use and vegetation to changing meteorological conditions
- Impact of changing disturbance regimes on landscape development
- Consequences of changing disturbance regimes in sustaining dwellings and infrastructures
- Linking climate models with vegetation sucesion models



2) Impacts of global change on land use systems

A main topic of mountain research will concern the impacts of globalisation on mountain societies, economies and ecosystems. Possible topics are:

- Impact / adaptation of global change on/in **land use practices**
- Modelling of **land use change** (scenarios) and their impacts on ecosystems
- Interaction between global and **landscape change**
- Adaptation of **landscape change in protected areas** by management measures (implementation of management plans; success control)



3) Land cover/land use providing ecosystem services

Natural resources, natural and modified by human use (as e.g. biodiversity, stabilisation of slopes, etc.) are recognized more and more as services for the society.

Possible topics:

- Balancing land cover and land use systems in terms of **landscape services or ecosystem services**
- Impacts of changing **disturbance regimes** on ecosystem services like biodiversity
- **Assessing the services** of different land cover/use systems (wilderness / cultivated forests, areas with/without skiing, etc.)



4) Structuring the ecological continuum by ecological networks

The development of ecological networks will be one of the main tasks of protected areas in future. Therefore, the current knowledge base has to be enlarged, e.g. in terms of:

- Understanding the ecological continuum (aggregation of habitats, interactions between habitats)
- Importance of the ecological continuum for biodiversity
- Identification and assessment of barriers in the ecological continuum (infrastructures, constructions, settlements)
- Developing concepts for establishing ecological networks on a local and regional scale



of potential interest for HABITALP

- EU-Framework Programme 7 Environment (> 2007)
- Global change research in mountain regions (GLOCHAMORE-follow-up): Network of European protected areas (started 2006)
- Ecological continuum project (in prep.; planned; 2006 – 2009)
- ClimChAlp (current Interreg IIIb project 2006-2008)
- Research Agenda for the multi-annual working programme 2005 – 2010 of the Alpine Convention (release end of 2006)
- COST Strategic Workshop „Mountain Research“ (2007)
- Scientific Council for ALPARC (planned)





EU-Framework Programme 7 Environment (frist call in 2007)

- Activity 1 (Climate change): Climate change impacts in vulnerable mountain regions will be a specific topic (1.1.5.). An integrated project is in preperation (Lead: Helmholtz Society, Prof. Seiler, cooperation with MRI).
- Activitiy 2 (Sutainable management of resources): Some topics like Forest management (2.3.) or Biodiversity (2.4.) have to be prooved.
- Activity 4 (Earth observation): Assessment tools for „Land use and mountains“ (4.2.4.).





Global change research in mountain regions (GLOCHAMORE-follow-up): Network of European protected areas (started 2006)

- Develop common projects (Workshop May 2006 in Zurich):
Global change impacts on: **Ecosystems, Tourism, risks, Landscape/disturbances, Snow, Institutional capacities for adaptation** (planned to be linked with FP-7-Projects),
Impacts of global change on mountain biosphere reserves (part of FP 7).
- Partners (for the moment) : Mountain Research Initiative (MRI), ISCAR, UNESCO, **Mountain Biosphere Reserves from Sweden, Germany, Austria, Switzerland, Spain, Slovakia.**





Ecological continuum project (in prep.; planned for 2007 – 2009)

- Integration of the HABITALP in test areas with HABITLTP existing data: Analyse of habitats, localisation of measures.
- Partners: WWF, CIPRA, ALPARC, ISCAR; cooperation with the Working Group „Ecological Networks“ of the Alpine Convention



**Research Agenda for the multi-annual programme
MAP 2005 – 2010 of the Alpine Convention
(release END OF 2006)**

- 4 key issues (Mobility/Traffic, Culture/Society, Tourism, Nature/Landscape). List with 22 topics.
- Contribution of Research to the working programme of the Alpine Convention.
- Develop research projects within key issue Nature/Landscape. Selected topics: Land management - services, land use – biodiversity, life styles – land use changes.



Research Agenda to the multi-annual Working Programme of the Alpine Conference (MAP 2005 – 2010)

Key issue 1:

Mobility, accessibility, transit, traffic

Key issue 2:

Society, culture, identity

Key issue 3:

Tourism, leisure, sports

Key issue 4:

Nature, agriculture & forestry, cultural landscape



Key issue 4:

Nature, agriculture and forestry, cultural landscape

Topics emphasized by the MAP of the Alpine Conference:

- Multifunctional agriculture and forestry
- Landscapes, habitats and species
- Spatial planning and regional policy
- Networking of protected areas

Topics of the Research Agenda suggested by ISCAR

- a. Influence of management strategies and cultivation methods on landscape functions and ecosystem services**
- b. Influence of land use changes on biodiversity**
- c. Interactions between social life-styles, land use changes and landscape structures**
- d. New approaches to identify, develop and and monitor ecological connectivity areas**



Key issue 4B: Global change, natural risks, resource management e

Topics emphasized by the MAP of the Alpine Conference:

- Climate change and natural risks
- Utilisation of water as a resource

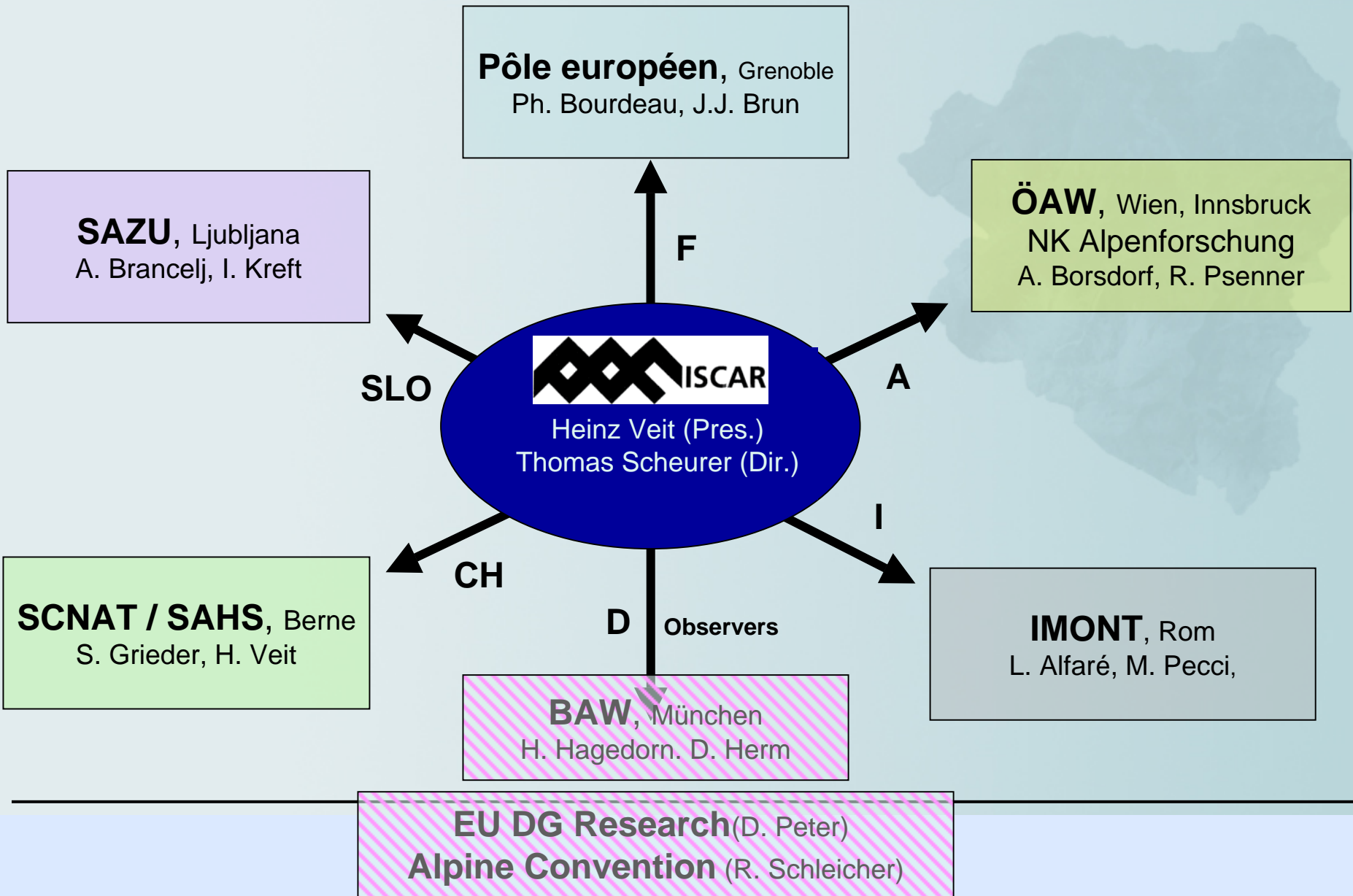
Topics of the Research Agenda suggested by ISCAR

- a. Regional climate change in the Alps: prediction and scenarios**
- b. Global change effects on vulnerability and natural risks in Alpine regions**
- c. Governance and management of water resources in changing water cycles**



- **ClimChAlp (current Interreg III b project 2006-2008)**
Intergration of HABITALP for modelling land cover/land use change for relevant habitats (case study Berchtesgaden; other?). Develop tools for assessing climate change impacts on land cover/use.
- **COST Strategic Workshop „Mountain Research“ in 2007**
To bring land cover/land use change topics on the agenda.
To develop future research topics concerning the topics mentioned above (in b).
- **Scientific Council for ALPARC (planned /optional)**
Development of alpwide projects concerning land cover/use change in protected areas: possible follow up of HABITALP in Interreg IV.







**AlpenForum
ForumAlpin
ForumAlpino
AlpskiForum
ForumAlpinum
2007**

**Landschaftsentwicklung im Berggebiet
Transformations de paysages en montagne
Trasformazioni del paesaggio montano
Smeri razvoja gorskih krajin
Landscape Development in Mountain Regions
Engelberg (Switzerland), 18. – 21. 04. 2007**

Preliminary schedule

	Wednesday 18.4.2007	Thursday 19.4.2007	Friday 20.4.2007	Saturday 21.4.2007
08.30	ISCAR-Meeting Programme Meetings	Plenary Session 2 (3h) Transformation processes	Plenary Session 3 (1.5h) Setting targets and co-operations	Excursions (half-day & full-day)
10.30		Workshops Session 2 (1.5h)		
12.30	Opening	Lunch	Lunch	
14.00	Plenary Session 1 (3h) Values and valuation		Workshops Session 3 (1.5h)	
16.00	Workshops Session 1 (1.5h)	Posters Sessions Science & Project Fairs	Plenary Session 4 (1.5h) Landscape's role in a changing society	
18.00		Reception by the Academies and NFP 48	Critics and Closing	
20.00	Dinner		Dinner	
22.00	Film presentations (public)	Official dinner	Film presentations (public)	

Organisation



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Research in the Alps ISCAR**

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