

# Mountains of our Future Earth

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**Perth Concert Hall**  
**Perth, Scotland, UK, 4-8 October 2015**

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## Conference Timetable

### Monday 5 October 2015

#### Conference opening

#### Gannochy Trust Auditorium, Perth Concert Hall

Robert Ross (student on the BA Applied Music course at Perth College, UHI) will play:  
Mist Covered Mountains, The Hawk that Swoops on High and Kilworth Hills

#### Opening Session Monday 5 October, 9.00 – 9.30

#### Gannochy Trust Auditorium, Perth Concert Hall

**Margaret Munckton**, Principal, Perth College, University of the Highlands and Islands

**Rolf Weingartner**, Chair, Mountain Research Initiative

**Christian Körner**, Founding Chair, Global Mountain Biodiversity Assessment

**Dennis Ojima**, Acting Director, Colorado hub of the Future Earth Secretariat

9.30 – 10.00

Gannochy Trust Auditorium,  
Perth Concert Hall

**Chair: Martin Price**, Director, Centre for Mountain Studies, Perth College UHI

**Plenary: Julia Klein**, Associate Professor, Department of Ecosystem Science & Sustainability, Colorado State University: Transdisciplinary approaches to mountain environment and livelihood sustainability from local to global scales

10.00 – 10.30 Tea and coffee - Foyer, Perth Concert Hall

### Parallel session 1 - Monday 5 October 10.30-12.30

**Linking past land use legacies and future land use trajectories in mountain regions**

Gannochy Trust Auditorium,  
Perth Concert Hall

**Chairs: Jacek Kozak** (Jagiellonian University),  
**Urs Gimmi** (WSL)

- 1-1 Land-use change impacts on ecosystem services provision in the European Alps  
*Ulrike Tappeiner, Lukas Egarter Vigl, Uta Schirpke, Erich Tasser*
- 1-2 Patterns and driving forces of forest dynamics in Switzerland (1850-2000)  
*Christin Loran, Matthias Bürgi*
- 1-3 The influence of historical, current and future management on landscape patterns in mountain pasture-woodlands  
*Rebecca Snell, Harald Bugmann*

- 1-4 Comparing long-term past forest cover change and its drivers in the Swiss Alps and the Polish Carpathians  
*Katarzyna Ostapowicz, Janine Bolliger, Achilleas Psomas, Niklaus E. Zimmermann, Matthias Bürgi, Bronwyn Price, Urs Gimmi, Monika Dobosz, Ewa Grabska, Krzysztof Ostafin, Marcin Szwagrzyk, Agnieszka Wypych, Zbigniew Ustrnul, Jacek Kozak*
- 1-5 19<sup>th</sup> century land use legacies affect 21<sup>st</sup> century rates of forest loss and agricultural abandonment in the Carpathian Mountains  
*Catalina Munteanu, Tobias Kuemmerle, Nicholas Keuler, Daniel Müller, Pal Balázs, Martin Boltziar, Monika Dobosz, Patrick Griffiths, Lubos Halada, Dominik Kaim, Géza Király, Éva Konkoly-Gyuró, Jacek Kozak, Katarina Kysucka, Juraj Lieskovsky, Matej Mojses, Krzysztof Ostafin, Katarzyna Ostapowicz, Oleksandra Shandra, Volker Radeloff*
- 1-6 Birch Re-growth in a Western Norwegian Treeline Ecotone  
*Kerstin Potthoff*
- 1-7 Changes in the Relationship between Borders and Pastoral Mobility in Mountain Regions of Central Asia  
*Andrei Dörre*
- 1-8 Exploring Landscape Change in Mountain Environments with the Mountain Legacy Explorer On-line Image Analysis Toolkit  
*Mary Sanseverino, Michael Whitney, Eric Higgs*

## **Protected areas as model regions for sustainable development**

**Norie-Miller 1,** **Chair: Axel Borsdorf (IGF, Austrian Academy of Sciences)**  
**Perth Concert Hall**

- 2-1 Ecological Indicators for Monitoring Biodiversity in Nanda Devi Biosphere Reserve - World Heritage Site, Western Himalaya: Climate Change Perspective  
*VP Uniyal, Shazia Quasin, Pritha Dey*
- 2-2 The elevation gradient as a natural-rural-urban transition in the La Campana-Peñuelas Biosphere Reserve, Central Chile  
*Andres Moreira-Muñoz, Alejandro Salazar-Burrows, Camilo del Rio*
- 2-3 Protected areas, local knowledge and regional development: are we able to move from theory to practice? A case study in Trás-os-Montes, Northeastern Portugal  
*Ana Maria Carvalho, Silvia Nobre*
- 2-4 Perceptions of Biosphere Reserves - Prospects of Innovation or Constraints for Farmers. Agricultural perceptions of farmers in biosphere reserves in Austria and Switzerland  
*Adelheid Humer-Gruber*
- 2-5 The Fassa Valley Network of Nature Reserves (Trentino, I). Re-direct local development by strengthening protected areas in the Dolomite region  
*Cesare Micheletti, Loredana Ponticelli*
- 2-6 Mountain protected areas in Southern Chile. Challenges and opportunities for local development  
*Benedikt Hora, Carla Marchant*

## Wednesday 7 October 2015

9.00 – 10.00

### Plenary session

**Gannochy Trust Auditorium,  
Perth Concert Hall**

**Chair: Rolf Weingartner**, Chair, Mountain Research Initiative

**Courtney Flint**, Associate Professor of Natural Resources Sociology, Utah State University:

Framing the human dimensions of mountain landscapes

**Monique Fort**, Professor Emeritus, Department of Geography, Paris Diderot – Sorbonne-Paris-Cité University:

Managing mountain natural hazards in developing and developed countries

**10.00 – 10.30 Tea and coffee break - Foyer, Perth Concert Hall**

### Parallel session 6 - Wednesday 7 October 10.30-12.30

#### Mountain forests: stresses, disturbances and ecosystem services (1)

**Gannochy Trust Auditorium,  
Perth Concert Hall**

**Chair: Georg Gratzer (BOKU)**

- 33-1 From monocultures to mixed-species forests: is tree diversity key in providing ecosystem services on a landscape scale?  
*Laura Schuler, Harald Bugmann, Rebecca Snell*
- 33-2 Management for old-growth characteristics and late-successional biodiversity in temperate montane forests  
*William Keeton*
- 33-3 Whitebark pine ecosystems in western North America: bird-pine mutualism, ecological function, and widespread decline  
*Diana Tomback*
- 33-4 The role of herbaceous understorey for the dynamics of montane forest landscapes  
*Timothy Thrippleton, Harald Bugmann, Kathrin Kramer-Priewasser, Rebecca Snell*
- 33-5 Factors affecting the conservation of Juniper Woodlands in Al Jabal Al Akhdar, Oman  
*Laila Al Haddabi, Reginald Victor*
- 33-6 Household heterogeneity and factors influencing farmers' decisions to plant trees on their farms in Uttar Pradesh, India  
*Rajiv Pandey, Jawaid Ashraf*
- 33-7 Degradation of the highest mountainous ecosystems in Sri Lanka through industrial emissions  
*Priyantha Yapa*

- 38-3 Spectral reflectance of supra-glacier debris cover and light-absorbing impurities derived from ground-based and satellite measurements in the Caucasus Mountains  
Maria Shahgedanova, Stanislav Kutuzov, Mohamad Nobakht
- 38-4 Repeat photography of Bolivian glaciers - a first step towards a glacier photo archive  
Dirk Hoffmann
- 38-5 High-speed colonization of bare ground - Permanent plot studies on primary succession in recently deglaciated glacier forelands in the Eastern Alps  
Thomas Fickert, Friederike Grüniger
- 38-6 Quantifying feedback mechanisms that maintain ecosystem state in late snow-lie communities.  
Christopher Andrews, Jan Dick
- 38-7 Alpine river ecosystems as indicators of climate change  
Leopold Füreder, Felix Lassacher, Stefan Schütz, Georg Niedrist, Alexandra Mätzler
- 38-8 Tracing glacier melt water contributions to human water use in the tropical Andes  
Wouter Buytaert, Bert De Bievre, Simon Moulds, Luis Acosta, Carlos Olmos, Marcos Villacis, Carolina Tovar, Koen Verbist

## **Sustainable tourism development (1)**

**Perth Museum**                      **Chairs: Carolina Adler (ETH Zurich), Gary Grant (University of Canberra)**

- 39-1 The Lavazé project (Trentino-South Tyrol, I). A landscape approach for a high altitude alpine resort.  
Loredana Ponticelli, Cesare Micheletti
- 39-2 **Rural tourism initiatives in Northeastern Portugal: analysis of 2007-2013 regional incentives promoting tourism**  
**Silvia Nobre, Francisco Torrão, Ana Maria Carvalho**
- 39-3 Promoting Eco-tourism for Biodiversity Conservation and Sustainable Development in Nanda Devi Biosphere Reserve (NDBR), Central Himalaya, India  
Rakesh Kumar Maikhuri
- 39-4 The Mountaineering Experience: Determining the Critical Factors and Assessing Management Practices  
Mary Benjamin, Michael Quinn
- 39-5 Destination Development Master Plan for 'The Ancient Kingdom of Kham', Dege County, Garze Tibetan Autonomous Region, Sichuan Province, China  
Harry Measure, Garry Grant

## Rural tourism initiatives in Northeastern Portugal: analysis of 2007-2013 regional incentives promoting tourism

Silvia Nobre<sup>1</sup>, Francisco Torrão<sup>2</sup>, Ana Maria Carvalho<sup>1</sup>

<sup>1</sup>*Mountain Research Centre, Scholl of Agriculture, Polytechnic Institute of Bragança, Bragança, Portugal,* <sup>2</sup>*CoraNE, Bragança, Portugal*

The Rural Development Programme (PRODER) (2007-2013) established in Portugal aimed at the development of the territories potential, investing in their renewal and restoration through a better and more efficient use of natural, human and financial resources.

This presentation will focus on PRODER Axis 3, whose general objective is to improve the quality of life in rural areas, and especially on Measure 3.1, which promotes rural economy diversification and job creation. Among the different funded activities we will pay particular attention to those promoting rural tourism (RT) and focused on actively participating in a rural lifestyle.

The target of PRODER interventions are the rural areas characterized by demographic low density with high agricultural employment and natural and structural conditions which give them the status of less-favoured areas (LFA). They are also territories which have economic and social development rates lower than those of the remaining regions, low-level of industry and services companies and less investment dynamics.

This is the case of the Portuguese Northeastern region, known as *Terra-Fria Transmontana* (municipalities of Bragança, Miranda do Douro, Mogadouro, Vimioso and Vinhais), whose management of PRODER funds is made by CoraNE - *Associação de Desenvolvimento dos Concelhos da Raia Nordestina*, a non-profit association created in 1995 and formed through an institutional partnership between several regional entities.

### Rural Tourism Incentives: Agritourism and Country Houses

PRODER measure 3.1 includes three items aiming at the diversification of activities on agricultural holdings. Specifically items 3.11 and 3.13 are closely related to RT.

Within item 3.1.1 are foreseen Agritourism projects, in which non-agricultural initiatives are associated with existent agricultural holdings. It intends renovating and rehabilitating essential rural buildings, providing accommodation in a scenic location, ideal for rest and relaxation, as well as developing complementary actions promoting agriculture and taking advantage of holdings full potential. These projects consider farming as a leisure component, involving guests, voluntarily or through thematic programmes, in the farm tasks.

Country Houses (item 3.1.3) model differs from Agritourism because other supplementary requirements are not imposed, i.e., to be a farmer or a owner of a farm is not needed. Any individual or collective entity may apply for this incentive that supports the establishment of tourism micro-businesses and the development of recreational activities in Country Houses.

As regards to PRODER 2007-2013, in the *Terra-Fria* territory were submitted, approved and developed 16 Agritourism projects, an investment of €2,857,560 with a total funding of €1,529,782. Furthermore, 28 Country Houses projects were also approved, corresponding to a total investment of €4,334,832 with a funding of €2,331,477.

The funding rate depended on the number of permanent jobs created by each project and varied between 40 and 60% (according to 1, 2 or more than 3 created jobs). Projects developed by sole traders predominated, but there were some applications from single-member companies and enterprises. Projects were quite identical considering the types of investments proposed: the biggest investment is related to buildings restoration and stationary equipment, followed by furniture, household appliances, renewable energy, and finally entertainment, promotion and advertising.



In June 2014, when all the projects submitted were approved, implemented and in operation, CoraNE promoted a meeting with promoters of tourism projects funded by PRODER 2007-2013. The objective was mainly to hear about RT promoters' initiatives and to understand why the scope of the total investments done was less than predicted. At same time, to list a set of actions mentioned by the participants to overcome the existing constraints. About 20 RT promoters attended the sessions, as well as several tourism entertainment agents and food services operators.

Participants' contributions made it possible to conclude that the significant number of funded RT projects increased the offer of local accommodation. However, such offer is still insufficient and not networked, thus restraining attractiveness and new visitors' acquisition. The lack of tourism entertainment and of organized tourism products has limited the use of the available regional potential. In addition to housing and landscape, initiatives combining several services and routes are needed, highlighting not only the existing natural, cultural, material and immaterial resources, but also local produces. There is no organized, systematic and strategic promotion, directed at specific market segments and emphasizing the diversity of touristic opportunities to overcome the problem of seasonality.

An important organizational work should be carried out around the binomial product-market and its promotion. Systematic practices of cooperative work among the main local actors are fundamental.

A set of key actions and measures were also identified, such as: strengthening the capacity of local accommodation; providing different tourism products and opportunities; accessing markets and establishing effective promotional and selling strategies; promoting training and acquiring skills to prepare and implement local development and diversification into non-agricultural activities; ensuring governance and enabling stakeholders participation in order to an integrated management of different products