

**International Open Science Conference  
'Global Change in Mountain Regions'**

**Perth, Scotland (United Kingdom), 2 to 6 October 2005**

**Declaration on Global Change Affecting Mountain Biosphere Reserves,  
the 'Perth Declaration'**

We, the participants of the International Open Science Conference on 'Global Change in Mountain Regions', and in particular representatives of National Committees of UNESCO's Man and the Biosphere (MAB) Programme, managers of Mountain Biosphere Reserves and World Heritage Sites, members of the scientific community working on global change issues, and representatives of international organizations, assembled in Perth, Scotland (United Kingdom) from 2 to 6 October 2005:

*Recognizing* the need for further efforts to restore and preserve sustainable conditions for human well-being and nature in a changing world according to multi-lateral directives, agreements and frameworks relevant to sustainable mountain development such as Chapter 13 of Agenda 21, the World Summit on Sustainable Development Plan of Implementation and in particular Paragraph 42, the Mountain Partnership, the work programme on Mountain Biodiversity and Article 8(j) on Traditional Knowledge, Innovations and Practices of the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC), Chapter 27 of the Millennium Ecosystem Assessment, and other relevant international instruments;

*Expressing* our gratitude to the European Commission (FP6) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for having provided funds from 2003 to 2005 for the 'Global Change and Mountain Regions (GLOCHAMORE)' project for a series of five international workshops and the Open Science Conference in Perth to detect signals and to address consequences of global change in mountain regions, and especially in Mountain Biosphere Reserves;

*Recalling* that the five international workshops addressed pertinent global change themes as follows:

- Global Change Research in Mountain Biosphere Reserves (Entlebuch, Switzerland, 10 to 13 November 2003);
- Global Environmental and Social Monitoring (Vienna, Austria, 9 to 11 May 2004);
- Projecting Global Change Impacts in Mountain Biosphere Reserves (L'Aquila, Italy, 29 November to 2 December 2004);
- Sustainable Land Use and Natural Resource Management in Mountain Regions (Granada, Spain, 14 to 17 March 2005);
- Process Studies Along Altitudinal Gradients to Serve Conservation and Sustainable Development (Samedan, Switzerland, 27 to 30 July 2005);

Further recalling the volumes of proceedings emanating from four workshops mentioned above, which are collections of papers presented by and for the global change scientific community and Mountain Biosphere Reserve managers, thus providing a valuable source of reference for GLOCHAMORE.

Appreciating that the workshops have benefited from the substantial and organizational support of the Mountain Research Initiative (MRI), the Department of Conservation Biology, Vegetation and Landscape Ecology of the University of Vienna (CVL), the individual local organizers and the consortium members of the European Commission funded project ‘Global Change and Mountain Regions (GLOCHAMORE)’;

Further appreciating that the Open Science Conference on ‘Global Change in Mountain Regions’ has benefited from the substantial and organizational support of the Centre for Mountain Studies at Perth College (CMS), and the GLOCHAMORE consortium members including MRI;

Recognizing that global change, and in particular global warming, has and will have serious impacts on policies, the biophysical environment, and the socio-economic conditions and livelihoods of people, particularly in fragile mountain environments, but also in the adjacent lowland areas;

Being concerned that global change affects *inter alia* species composition and diversity, habitats and the occurrences of rare and endangered species as well as invasive species in high altitude mountain areas, thus jeopardizing the conservation value of mountain protected areas and the function and services of their wider environments;

Further being concerned that global change will modify the storage, release and distribution regimes of snow, ice and waters in mountain regions, thus jeopardizing lower altitude settlements through glacial lake outbursts, rockfalls or debris flows, and affecting freshwater supplies for the lowlands;

Accepting that global change occurs at rates unprecedented in recorded human history for which highland dwellers must develop adaptation strategies in various economic sectors including agriculture, forestry, pastoralism, tourism and recreation so as to ensure equitable livelihoods for lowland and highland communities;

Emphasizing that global change processes can best be understood through interdisciplinary and integrated studies involving natural and social scientists as well as input from protected area managers who often have long-term experience, institutional mandates and functions;

Noting that many Mountain Biosphere Reserves within the World Network of Biosphere Reserves have been designated as ‘living laboratories’ for their conservation value, scientific infrastructure and role in promoting sustainable development for local people, develop long-term time series and data sets on species, land cover and land uses, and maintain records of human impacts on mountain environments needed to study global change impacts;

Committing to the eleven research principles that have been developed by the Swiss Commission for Research Partnership with Developing Countries (KFPE), namely to (1)

decide on the objectives together, (2) build up mutual trust, (3) share information, (4) develop networks, (5) share responsibility, (6) monitor and evaluate the collaboration, (7) disseminate the results, (8) apply the results, (9) share profits equitably, (10) increase research capacity, and (11) build on achievements;

*Call upon* national and international entities and authorities, protected area and site managers, and the scientific community working on global change impacts in particular in mountain areas, to consider and implement, where appropriate, the results of the GLOCHAMORE international workshops and the Open Science Conference;

*Express* our commitment to continue work initiated during the GLOCHAMORE Project, in particular as the impact of global change on mountain regions can only be assessed with scientific rigour over an extended period of time;

*Declare* that we, the representatives and managers of Mountain Biosphere Reserves in association with the respective National Committees of the UNESCO Programme on Man and the Biosphere (MAB), wish to continue collaboration with the scientific community and other relevant stakeholders on global change issues related, but not exclusively restricted, to the following Mountain Biosphere Reserves, several of which have also been designated as World Heritage Sites, and have constituted a global research network during the current GLOCHAMORE Project Phase:

- Australia: Kosciuszko Biosphere Reserve;
- Austria: Gossenköllesee Biosphere Reserve and Gurgler Kamm Biosphere Reserve;
- Canada: Waterton Biosphere Reserve;
- Chile: Araucarias Biosphere Reserve;
- China: Changbaishan Biosphere Reserve;
- Colombia: Cinturón Andino Biosphere Reserve;
- Germany: Berchtesgaden Biosphere Reserve;
- India: Nanda Devi Biosphere Reserve ;
- Kenya: Mount Kenya Biosphere Reserve;
- Kyrgyzstan: Issyk Kul Biosphere Reserve;
- Mongolia: Uvs Nuur Basin Biosphere Reserve;
- Morocco: Oasis du Sud Marocain Biosphere Reserve ;
- Peru: Huascarán Biosphere Reserve;
- Russian Federation: Katunskiy Biosphere Reserve; Sikhote Alinskiy Biosphere Reserve and Teberda Biosphere Reserve;
- South Africa: Kruger to Canyons Biosphere Reserve;
- Spain: Sierra Nevada Biosphere Reserve;
- Sweden: Lake Torne Biosphere Reserve;
- Switzerland: Entlebuch Biosphere Reserve and Swiss National Park and Biosphere Reserve;
- United States of America: Denali Biosphere Reserve; Glacier Biosphere Reserve and Niwot Ridge Biosphere Reserve;

*Further declare* that we, the global change scientists, will link available knowledge systems and conduct research in the above-mentioned Mountain Biosphere Reserves, focusing on monitoring, process studies and modeling, thus providing scientific advice to

Mountain Biosphere Reserve managers that will help to enhance the overall management of these sites in the light of global change processes on topics related, but not limited to species composition and diversity, glaciers, regional climate, land use and land cover, freshwater, hazards, grazing, tourism, conflict mitigation and governance, and applying scientific methods, such as the 'Global Observation Research Initiative in Alpine Environments' (GLORIA), the World Glacier Monitoring Service (WGMS), the Mountain Invasion Research Network (MIREN); and Biosphere Reserve Integrated Monitoring (BRIM) and other relevant socio-economic methodologies;

*Invite* relevant national and international funding agencies, the private sector, as well as regional and international intergovernmental organizations such as the European Commission and UNESCO, to provide funding for continued collaboration between the scientific community and Mountain Biosphere Reserve managers so as to provide scientifically sound information on the effects and mitigation of global change impacts on mountain environments and the sustainable management of mountain and adjacent lowland communities.