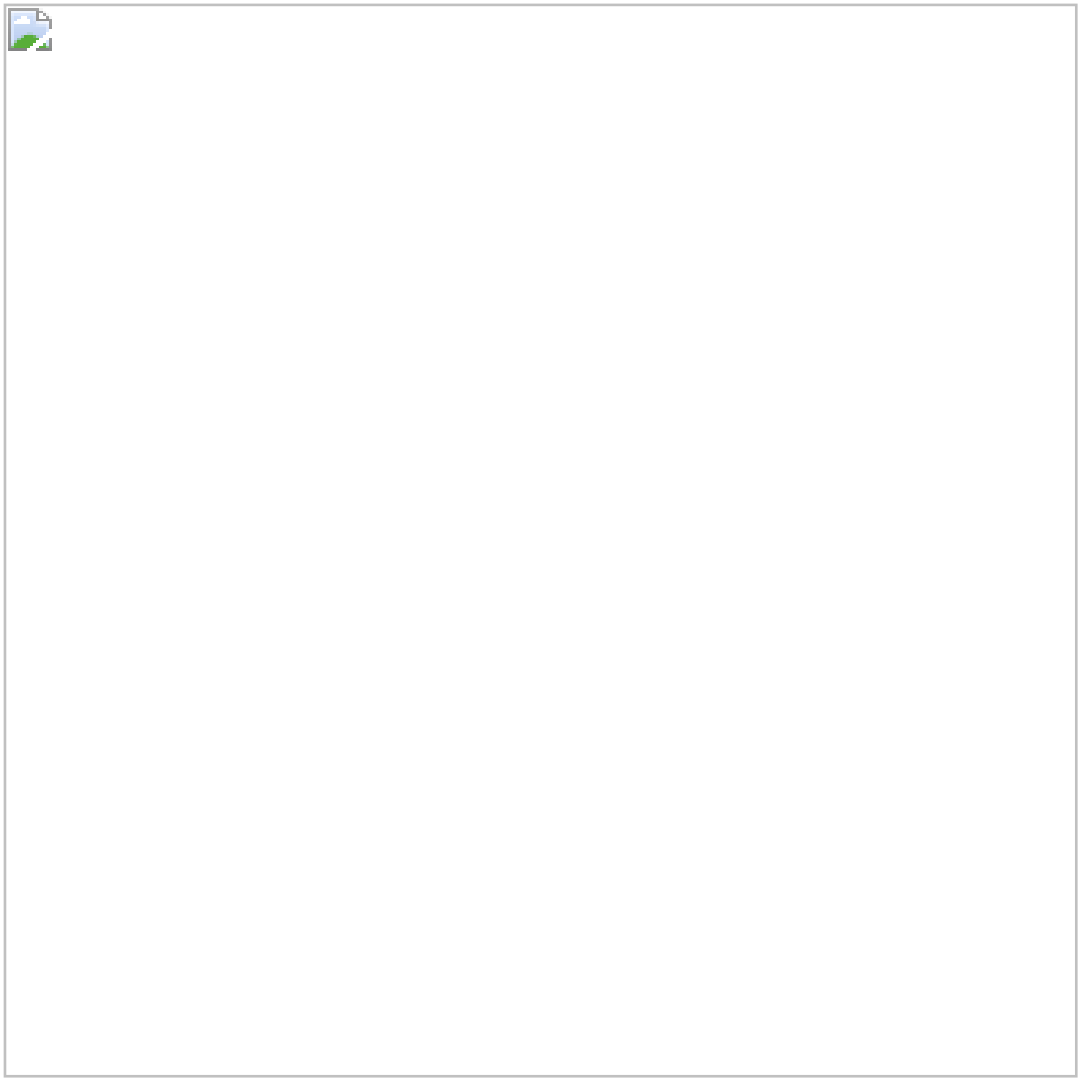

United Nations University Marks the International Year of Mountains

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United Nations University Marks the International Year of Mountains

UNITED NATIONS UNIVERSITY

The United Nations University (UNU), in close collaboration with the Graduate School of Environmental Earth Science at Hokkaido University (where the Secretariat of the International Year of Mountains 2002 Japan Committee is based), organized several activities to mark the start of the International Year of Mountains 2002.

Launching of IYM2002 in Japan

On 31 January 2002 UNU hosted a public forum entitled "Mountains: Environment and Human Activities," which was followed by an International Symposium on Conservation of Mountain Ecosystems on 1 February 2002. In conjunction with these events, the UNU mountain photograph exhibit "Mountain Prospects" was launched in the UN Gallery at the UN House.

The core themes of the symposium were:

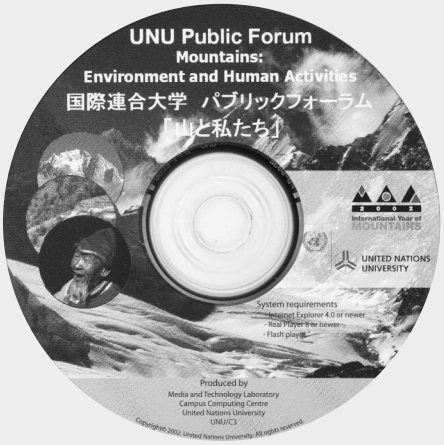
1. People in mountains: social and livelihood aspects.
2. Sustainability of mountain biodiversity and natural resources.
3. Development of Japanese mountain studies.

More than 2 dozen lecturers and panelists shared their expertise. A key aim of the event was to contribute to improved understanding of the status of different mountain systems in relation to global change, the pressures these mountains are exposed to (including their consequences on natural, human, and economic resources), and the responses of indigenous social groups and mountain societies.

The UNU International Symposium on the Conservation of Mountain Ecosystems also adopted a "2002 Tokyo Declaration for the International Year of Mountains," reproduced below. More information on the Symposium and IYM2002 in Japan is available at www.unu.edu/mountains2002/.

The Symposium and photo exhibit

The photo exhibit was extended to include photographs by the Japanese Crown Prince, Mr Ryutaro Hashimoto, former prime minister of Japan, the Japan Association of Alpine Photographers, Mr Yoshikazu Shirakawa, Alpine photographer/designer of UN stamps for IYM2002, and Prof Jack D. Ives, senior advisor to UNU.



Dr Thomas Schaaf represented UNESCO, Dr Thomas Hofer represented the Food and Agricultural Organization (FAO), and over 400 participants registered for the public forum, including Mr Ryutaro Hashimoto, ambassadors from 20 countries, senior Japanese public servants, and representatives of 5 major mountain clubs in Japan.

Opening remarks were delivered by Prof Hans van Ginkel, Rector of UNU, Mr Tetsuhisa Shirakawa, Director General for International Affairs, Ministry of Education, Culture, Sports, Science and Technology, and Mr Noriyasu Yamada, Director General, Minister's Secretariat, Ministry of the Environment, Japan. The main addresses given at the UNU public forum are available on a CD-ROM, which also includes several illustrations from the "Mountain Prospects" photo exhibit, with an explanatory summary written by Prof Jack Ives.

UNU's early commitment to mountains

In his remarks, Prof van Ginkel mentioned that the importance of mountain ecosystems and communities is increasingly understood in today's world, characterized, as it is, by high mobility, rapidly growing interaction, and exchange of information. This explains why the United Nations Conference on Environment and Development (UNCED) adopted Chapter 13 of Agenda 21 at the Earth Summit in Rio de Janeiro in 1992. The ongoing research carried out by Swiss, UNFAO, and especially UNU researchers shed much light on the need for specific attention and concerted action to promote sustainable development in mountain regions. This led the UN General Assembly in November 1998 to designate 2002 as the International Year of Mountains.

Prof van Ginkel noted that mountains have been recognized by the international community in the last decade as one of the world's most vulnerable biogeographical areas, characterized by susceptibility to land degradation, variable climates over short distances, heterogeneous habitats with often unique fauna and flora, and a crucial role as water towers of the world.

Yet these valuable storehouses of natural resources are continuously suffering not only from deforestation and soil erosion but also from loss of population, indigenous cultures and traditions. In addition, mountains are the home of a high proportion of the world's malnourished people. Many research projects have identified mountains as priority ecosystems where biodiversity needs to be conserved. Uncer-

tainty about these fragile ecosystems may well require far-reaching short-term measures to save critical biodiversity.

Through its programs focusing on "Highland–Lowland Interactive Systems" and "Mountain Ecology and Sustainable Development" since 1978, UNU has contributed much to the knowledge and insights on which Chapter 13 of Agenda 21 is based. Since then, UNU has been actively participating in the UN's Inter Agency Group, which focuses on mountains and is coordinated by FAO.

UNU also focuses closely on mountains in several related activities. For example, the UNU project "People, Land Management and Environmental Change" (PLEC) concentrates on several mountain regions in developing countries in Asia and Africa to develop practices for conservation and sustainable use of biodiversity in managed ecosystems. A recently developed program on managing land degradation in dry areas also focuses on land degradation and biodiversity conservation efforts in selected mountain ecosystems. Mountain forests and headwater resources will be part of a new UNU forest initiative.

Mountain ecosystems endangered

According to an analysis conducted by UNU, degradation of mountain ecosystems—home to 600 million people and the source of water for more than half the world's population—threatens to seriously worsen global environmental problems, including floods, landslides, and famine. Climate change, pollution, armed conflict, population growth, deforestation, and exploitative agricultural, mining, and tourism practices are among a growing list of problems confronting the "water towers of the world," prompting warnings that catastrophic flooding, landslides, avalanches, fires, and famines will become more frequent and that many unique animals and plants will disappear.

Prof van Ginkel believes that the International Year of Mountains is both an opportunity and an invitation to the scientific community to foster better and more effective aid and development policies by improving the world's understanding of environmental and other problems facing mountain regions. "Mountain ecosystems are essential to the well-being of the global environment," he noted at the Symposium. "Yet there is a serious problem of widespread over-simplification of mountain-related issues and a tendency to try to solve problems that are not properly defined. At best, this means wasted effort and funds. At worst, it can cause even more damage to these fragile ecosystems."

The need for research and data

Mountains are home to about 10% of the world's people, whereas another 40% live in adjacent watershed and lowland areas. Hence, half the global population is directly or indirectly dependent on mountain resources and services. Yet each mountain region features a complex array of strengths and problems. "It is possible to generalize, however, about the absolute lack of information needed for effective policy formulation," according to Prof Jack Ives, senior advisor to UNU and a mountain ecology expert. "What data policy makers do rely on often relates to mountain ranges in the developed world, inappropriately applied to developing countries. Notions based on scant scientific data are accepted as truths. For example, while there are serious problems in the Himalaya, massive deforestation has not occurred across the entire mountain system. Such misinformed assumptions have led to simplistic, and often counter-productive, remedies."

"In addition to gathering and sharing more and better data and information worldwide, there is an urgent need to strengthen capacity in mountain areas in developing countries in such studies as meteorology, hydrology, ecology, and soil sciences," said Prof Ives. He added, "These must be firmly linked as well to the human sciences—anthropol-

War, exploitation, and degradation threaten freshwater sources for half the world's population. Half the world's people depend on healthy mountain ecosystems.

UNU greatly appreciates the support given to IYM2002 events by the Ministry of Education, Culture, Sports, Science and Technology of Japan and by the Ministry of the Environment and the Forest Agency of Japan. UNU has also cooperated closely with Hokkaido University and the mountaineering community in Japan, the Institute of Geography at the University of Berne, Switzerland, and UNESCO/MAB in Japan.

FIGURE 1 Yi lady with baby, northwestern Yunnan, China. The Yi people are one of the many ethnic mountain minorities who inhabit this diverse mountain region. (Photo by Jack D. Ives)

ogy, social science, and human geography. The management of mountain regions and watersheds in a way that embraces and integrates many sciences is a key to success. Another is the promotion of alternative livelihood opportunities for mountain people in developing countries, to alleviate the poverty at the root of so many of their health and environmental problems."

War and natural disasters: a heavy toll in mountain regions

War and natural disasters have long plagued mountain regions. The UN-FAO reports that almost all of the world's conflicts today—23 out of 27 wars—are being fought in mountainous regions. Researchers have determined that natural disasters in mountain regions worldwide were responsible for the loss of almost 1.6 million lives between 1900 and 1988, the foremost causes being floods and earthquakes. Other figures show that combat in mountain regions—about 105 wars and conflicts between 1945 and 1995—resulted in 11.1 million casualties, including 7.8 million civilians.

Prof Ives notes that, although natural disasters are usually well reported, the world community has tended to ignore mountain warfare in all its forms, "including the atrocious treatment of mountain minorities." The transformation of mountain minority peoples into stateless refugees must be arrested.

Involvement of UNU in specifying policy recommendations

The UNU project "Sustainable Mountain and Forest Development" has made it possible to continue challenging conventional thought related to the environment and to overturn strongly but inappropriately established paradigms. For example, after many years of research in

2002 Tokyo Declaration for the International Year of Mountains

We, the participants in the UNU International Symposium on the Conservation of Mountain Ecosystems, held in Tokyo (Japan) on 1 February 2002,

1. Acknowledging with gratitude the United Nations General Assembly Resolution A/RES/53/24 to declare the year 2002 as the International Year of Mountains, thus drawing the world's attention to the need to foster sustainable mountain development;
2. Recognizing that mountains are fragile ecosystems with unique natural and human resources as stipulated in Agenda 21, Chapter 13;
3. Noting with concern that human pressure on mountain resources from extraction of mineral resources, soil erosion, touristic exploitation, etc., continues to affect the mountain environment adversely, particularly with regard to endemic, rare and endangered species of wild fauna and flora in mountains and also depletes mineral resources;
4. Noting further with concern, that climate change can seriously affect water regimes in highlands as well as lowlands, which can pose problems with the quality and quantity of available freshwater resources for human consumption and agriculture and increase competition between different interest groups in which mountain dwellers are usually the disadvantaged members, leading to an increase in the potential vulnerability of mountain people;
5. Noting also that ca. 500 million people in mountains live below the poverty line (80% of the world's mountain population);
6. Recognizing that environmental management of mountains needs to take holistic approaches in conserving the environment, while at the same time providing sustainable incomes for mountain dwellers, including appropriate compensation for their services;
7. Affirming that scientific studies on mountain systems, management of natural resources and monitoring of mountain environments are essential for fostering sustainable development in line with conservation and development objectives;
8. Conscious that mountain dwellers, especially women, are the main stakeholders and often the true managers who ensure the sustainable development of mountain environments and participate in the utilization and management of mountain resources;
9. Conscious also that mountain dwellers safeguard important cultural diversity that needs to be maintained and allowed to evolve further in a world moving towards globalization;
10. Aware that there is a considerable gap in knowledge and perception of mountains between academia and the general public, for whom the mass media serve as the main source of information regarding mountains;
11. Aware also that mountains and areas under the influence of mountains accommodate and provide a livelihood not only for poor communities, as often perceived, but also for a significant proportion of

the urban population of the world, whose resource consumption has a heavy impact on utilization and management of mountain resources; and

12. Realizing that mountains, including the human inhabitants and the natural environments in mountain areas, especially in developing countries, are highly susceptible to serious and increasing physical violence and destruction, for example from armed conflicts, due to their particular geographical features;

Declare that:

13. UNU should continue its work with mountain populations to appraise their situations, to identify gaps in knowledge, needs and constraints, and to help them work towards more sustainable development;
14. Every effort should be made to support mountain research and monitoring in the field of environmental conservation and sustainable mountain resource use;
15. Capacity-building and education targeted at all levels and segments of mountain populations and minorities traditionally dependent on mountain resources must be further strengthened so as to counteract the looming marginalization of mountain dwellers;
16. Cultural diversity in mountains needs to be maintained and developed, as it can be a powerful means for counteracting social, economic and environmental degradation in mountains;
17. Holistic and trans-disciplinary management schemes for environmental conservation and sustainable development be applied in mountain regions (as is the case in biosphere reserves);
18. More efforts should be made to disseminate proper and correct information to the public by working with the mass media as well as by improving the coordination of activities between researchers and practitioners;
19. Greater attention should be given to the urban aspect of mountains, through additional research and monitoring of highland–lowland interactions;
20. Empowerment of poor local communities, especially of women, should be supported in order to facilitate sustainable development of mountains in a self-supporting manner;
21. The issue of conflicts and resulting destruction of mountain ecosystems and livelihoods should receive more serious consideration from academia and policy-makers; and
22. The possibility of new approaches to mountain issues should be explored, for instance, by identifying hotspots and creating and discovering successful approaches applicable to different problems and contexts of sustainable mountain development.

We therefore call upon UNU, UNESCO, FAO, UNEP, UNDP and other concerned international and national organizations and NGOs to facilitate mountain research, monitoring, capacity-building, sustainable development, conservation of mountain ecosystems, and maintenance of cultural diversity in mountains so as to create linkages and synergies among mountain scientists, mountain communities, policy/decision-makers, practitioners and the general public.

the Himalayas, Thailand, and the mountains of Yunnan (China), the assumption that massive deforestation since the 1950s was the cause of extensive soil erosion, downstream flooding, and sediment transport with siltation was demonstrated to be incorrect. Likewise, the assumption that minority subsistence farmers in mountains were the cause of environmental degradation was also shown to be incorrect. Bangladesh experiences catastrophic flooding when torrential rains occur within the country (not in the Himalayas).

- Mountain minority people worldwide, who are among the poorest of the poor, have a great wealth of environmental knowledge. Their opinions and experiences need to be combined with scientific knowledge to obtain a better understanding of mountain processes.
- Cultural diversity, a prevailing feature of mountain life, must be considered as complementary to biodiversity if sustainable mountain development is to be achieved.
- Widespread conflicts in mountain regions, including conventional warfare, terrorism, guerrilla insurgency, and repression of minority peoples, must be tackled far more vigorously than heretofore.
- Management and use of the natural resources of mountains, especially water, must be undertaken in such a way that mountain people share in the benefits.
- Much greater attention must be given to achieving equality of access to resources for both men and women.

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