United Nations University Marks the International Year of Mountains

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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.

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 Symposium and photo exhibit

The photo exhibit was extended to include photographs by the Japanese Crown Prince, Mr Ruturao 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 Ruturao Hashimoto, ambassadors from 20 countries, senior Japanese public servants, and representatives of 5 major mountain clubs in Japan.

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, UNU, 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.

UNU’s early commitment to mountains

In his remarks, 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 biodi-
versity.

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 activi-
ties. For example, the UNU project
“People, Land Management and
Environmental Change” (PLEC) con-
centrates on several mountain
regions in developing countries in
Asia and Africa to develop practices
for conservation and sustainable use
of biodiversity in managed ecosys-
tems. A recently developed program
on managing land degradation in dry
areas also focuses on land degrada-
tion and biodiversity conservation
efforts in selected mountain ecosys-
tems. Mountain forests and headwa-
ter 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 agri-
cultural, mining, and tourism prac-
tices 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 invit-
ation to the scientific community
to foster better and more effective
aid and development policies by
improving the world’s understand-
ing of environmental and other
problems facing mountain regions.
“Mountain ecosystems are essential
to the well-being of the global envi-
noment,” he noted at the Sympo-
sium. “Yet there is a serious prob-
lem of widespread over-simplifica-
tion 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
damage to these fragile ecosystems.”

**War, exploitation, and degradation threaten freshwater sources for half the world’s population.**

Half the world’s people depend on healthy mountain ecosystems.

**The need for research and data**

Mountains are home to about 10% of
the world’s people, whereas
another 40% live in adjacent water-
shed and lowland areas. Hence, half
the global population is directly or
indirectly dependent on mountain
resources and services. Yet each
mountain region features a com-
plex array of strengths and prob-
lems. “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 develop-
ing 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 moun-
tain 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 meteor-
ology, hydrology, ecology, and soil
sciences,” said Prof Ives. He added,
“These must be firmly linked as well
to the human sciences—anthropo-

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**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 mountain engineering community in Japan, the Institute of Geography at the University of Berne, Switzerland, and UNESCO/MAB in Japan.
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

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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 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.

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.