

# Mountain Forum Bulletin

January 2008



## Climate Change in Mountains: Impact and Adaptation

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### Environmental Awareness Among Children and People

*Global Mass Community Welfare Organisation*

Innovative approaches to environmental education are the best way to raise environmental awareness among children, villagers and those living near forest and mountain areas. We need to help children become friendlier towards nature, the environment and climate change.

With this in mind, Global Mass Community Welfare Organization (GMCWO) plans to conduct a key project on "Children's Environmental Awareness" to help children and people identify environmental issues in their surroundings and develop possible solutions for the problems.

An important aspect of the project is to sensitise teachers to the gravity of environmental issues and to use the issues as a means to take up activities with children.

There is a dire need for environmental awareness among children and villagers. The methodology adopted by the Global Mass Community Welfare Organization is to arrange and provide interesting, relevant and appropriate information related to the major environmental concerns in the mountain area of Azad Jammu & Kashmir region through multimedia projectors, laptop computers, lectures, poster competitions and various drama performances related to environmental threats, their causes and their remedies. GMCWO conducted formal meetings with teachers to give them the direction for a plan of action and informal meetings with children to assess the impact of awareness created among them.

To expand the scope of the project, GMCWO compared and evaluated the level of understanding developed among the children with that of children in other schools. The result was positive among the children as well as the teachers and people, toward the creation of environmental awareness and understanding of their surroundings.

Further, GMCWO has prepared an attractive Microsoft Power Point slide presentation following the environmental chapters in the science syllabus books from the 6th to 10th classes. The effort also played a part in creating an overall understanding of hygiene and sanitation conditions prevailing in the village and how each one of the children and villagers can contribute towards improving the prevailing conditions and environment in the village.

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Global Mass Community ([gmcak.tripod.com](http://gmcak.tripod.com)) is an independent non-profit global campaigning organisation that uses non-violent, creative confrontation to expose global environmental problems and their causes.

### Mitigation of Climate Change in the Western Himalayas

*Pragya*



*Snow fences in Lahaul Valley, Indian Himalaya. Photo: Pragya*

Pragya is an Indian NGO based in Delhi. The organisation specialises in working in high altitude areas of the Indian Himalayas (above 8,000 ft), and is the only NGO to have a presence in every Indian Himalayan state. Pragya is currently implementing a project called Water Access and Wasteland Development in the Western Himalayas, which combines natural resource management strategies and infusion of appropriate technology, along with social mobilisation, to mitigate the growing problems of water and ecosystem stress in this region.

Water has never been an abundant resource in the Western Himalayas. Despite the vast reserves stored in snow and glaciers amongst the peaks, which are the ultimate source of the great rivers which water the Punjab, the Western Himalayan valleys receive minimal rainfall, and nearly all their water comes from glaciers and snowmelt. The Intergovernmental Panel on Climate Change (IPCC) has predicted that the pattern of climate change could be up to three to five times higher in high altitude areas than lowlands, which suggests that the Himalayas are likely to experience large temperature rises - large enough to greatly reduce the size of, or melt completely, most of the glaciers and mountain snow from which the Western Himalayan valleys receive their water.

The well-known fact that glaciers in the region have significantly shrunk over recent decades has not reduced the overall amount of water available as yet, but changes in the patterns of precipitation throughout the year mean that snow tends to melt more quickly in the spring and early summer, leaving a reduced flow of rivers and springs later in the summer, which is the growing season. The increasingly erratic and unpredictable precipitation patterns, added to the reduction of meltwater which will no doubt eventually occur once the glaciers are exhausted, make the careful and sustainable management of water resources vital for the future of Western Himalayan communities.

The Water Access and Wasteland Development Project is concerned with both the supply and the uses of water, and it aims to develop procedures for integrated water management at a watershed level.

## Member Initiatives

The springs from which villages traditionally drew their water, many of which have begun to dwindle in recent years, are being rejuvenated by techniques such as afforesting the slopes above the outlet with native trees, shrubs and herbs, and installation of harvesting technologies such as snow pits, snow fences and check walls still higher up. All of these measures reduce water runoff when the snow melts in spring, and promote absorption of water into the soil. Snow harvesting techniques are also being used at many sites which a few years ago were suitable for crops, but due to the increasing scarcity of water have become parched wasteland and scrub. By increasing the moisture content of the soil these lands can become suitable for growing high value cash crops such as medicinal plants, which, being mostly perennial, bind the soil and reduce surface runoff, and can significantly increase the incomes of marginal farmers.

The project is also catalysing the development of norms and processes for careful use and equitable distribution of water in households and villages, and also between villages which share the same water source. This includes establishing community-based institutions to oversee the implementation of these procedures, and settle disputes (the number of which have been growing in recent years, as resources diminish) by consensus. Apart from water, these institutions will also have a role in managing other common property resources (CPRs) such as forests and rangelands. In these fragile ecosystems the cultivated sphere is closely linked to the "wild", which itself plays a vital role in sustaining the livelihoods of local people. The growing number of disputes regarding woodcutting and grazing rights in recent years show to what extent the CPRs are also becoming degraded, and how serious the consequences of this are for populations who depend on them.

With droughts already common and expected to increase, the project is also setting up seed banks and local credit systems to help farmers recover after the drought period is over. These measures are important firstly because they will reduce the hardship of individual farmers and their families in difficult times, but also on a broader level because they will prevent the ruin of farmers which would cause mass exodus from the

region and abandonment of the land, a cycle of further land degradation and more impoverishment. As climate change progresses, holding on in regions which have always been marginal becomes increasingly difficult: our challenge will be to develop ways of facing these problems to ensure the future prosperity of mountain communities.

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Pragma is a non governmental development organisation working with the indigenous communities in the Indian Himalayas since 1995. Pragma interventions are addressing different need areas of these communities, and involve both research and implementation projects. Projects address issues of biodiversity conservation, traditional knowledge preservation, empowerment of indigenous communities and marginalised groups, infusion of appropriate technologies including renewable energies and microenterprise development. To find out more about Pragma's projects, please visit <http://www.pragya.org>.

## IUCN-Med Workshop, December 2007 - Mediterranean Mountains in a Changing World

IUCN-Med



Mixed forest, Middle Atlas. Photo: Pedro Regato, IUCN/WWF.

At the World Conservation Congress held in Bangkok in November 2004, the IUCN members approved the resolution 3.039 "The Mediterranean Mountains Partnership", calling all concerned national, regional and local institutions to develop action plans for each of the major mountain ranges in the region, with the aim of achieving the conservation of their biological, landscape and cultural diversity and boosting sustainable development. IUCN members expressed the wish that these action plans should be recognised as a political and institutional basis for cooperation at national and trans-national levels.

The IUCN Centre for Mediterranean Cooperation (IUCN-Med) through the support of the Italian Ministry of Environment, has taken the task to facilitate the implementation of resolution 3.039 through a consultation process with regional organisations and experts who are active in conservation and development of Mediterranean mountain systems. The final objective of this exercise is to reach an agreement on strategic guidelines for the development of Mediterranean Mountains Action Plans.

On 10-12 December 2007, IUCN-Med has thus brought together Mediterranean member organisations and experts in a regional workshop at its headquarters in Málaga on conservation and development challenges for Mediterranean Mountains. The workshop coincided with the UN designated "International Mountain Day" on 11th December, as a good opportunity to raise public awareness about the opportunities and constraints in Mediterranean mountain conservation and development in a changing world. A field day was organised in the "Sierra de las Nieves" Natural park and Biosphere Reserve, as an opportunity to raise awareness about the recently created Trans-continental Biosphere Reserve involving key mountain hotspots for biodiversity around the Strait between Spain and Morocco.

IUCN-Med has been preparing a draft working document on key conservation and development issues for the Mediterranean mountains, which served as a blueprint to introduce themes and guide discussions during the workshop. The priority themes identified were:

- The Ecosystem Approach in Mediterranean mountains conservation and development;