

Winter 2008 - 2009 Edition

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A word from our CEO and President

Dear Friends of TMI,

We would like to thank everyone who supported The Mountain Institute in 2008. Your generosity helped make our work possible during these challenging economic times. We all depend on mountains, and now, more than ever, mountains depend on us for their protection and care. We know that climate change is real and has the potential to create dramatic changes in the natural order of life on our planet. Mountain ecosystems are some of the first in the world to experience these changes. It is hard not to sound alarmist when one is, in fact, alarmed, but at The Mountain Institute we are transforming this concern into action by intensifying our responses through our multi-disciplinary and multi-dimensional programs.

In this newsletter, we are highlighting projects that help mountain communities adapt and build resilience to the unprecedented changes that are occurring as a result of climate change. One of the most conspicuous changes has been the declining availability of fresh water, which, among other problems, inhibits food production. In central Nepal, TMI is providing immediate relief to drought affected communities through food aid and enterprise development. Other projects, such as the Polylepis Forest Restoration project in Peru and the Reading the Landscape program in Appalachia, are focused on developing long-term solutions and resilience strategies, including water catchment schemes.

Although awareness of the global importance of mountains is growing, mountain issues still tend to be diminished because mountains themselves seem deceptively strong. They are not. They are extremely vulnerable. Much more can be done to engage large downstream populations, organizations, and governments to conserve and understand their dependence on highland resources.

We must all work together now to develop the policies, investments, and participatory approaches to enable mountain people, and the billions affected downstream, to understand, harness and manage the interrelated and complex issues confronting the world's mountains in the 21st century.

Please join us in this vital effort!

The 2008 Mountain Hero Award Ceremony

The 2008 "Celebration of Mountains" took place October 23rd at the Cosmos Club in Washington DC. With more than a hundred of our closest friends, TMI celebrated the many achievements of Ms. Junko Tabei, the first woman to summit Mt. Everest in 1975 and the Seven Summits in 1992.

Following a presentation on glacial melt in the Himalayas from Dr. Alton Byers, we were treated to stories of Ms. Tabei's impressive climbing achievements and her work with the Himalayan Adventure Trust of Japan (HAT-J). Through this organization, Ms. Tabei has led worldwide conservation efforts at Mt. Fuji, and has successfully generated awareness about the important role of mountain conservation in the fight against climate change.

Thank you to everyone who contributed to the success of this special evening. Mark your calendars for next year's event, to be held the third Thursday in October 2009!



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International Headquarters

3000 Connecticut Ave. NW, Ste 138

Washington, DC 20008

summit@mountain.org

P: 202.234.4050

F: 202.234.4051

Mountains sustain life on earth. In a world facing unprecedented change, The Mountain Institute is committed to protecting its mountains. Through empowering mountain communities and conserving mountain ecosystems, TMI ensures that mountains will continue to provide the essential resources -- natural, cultural and inspirational -- needed for mankind's survival on a healthy planet.

The Mountain Institute is an international NGO and is tax exempt by the Internal Revenue Service under code section 501(c)(3). Gifts are tax deductible as to the extent of the law.

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Combined Federal Campaign # 10858

Design: Jesus Villeda

Writer/Editor: Elizabeth Blair

Copy Editor: Melanie Hatter

Content: TMI Staff

Photos: TMI Staff (unless otherwise specified)



Responding to Food Scarcity: Developing Economic Resilience in Nepal

Medicinal and aromatic plant nursery preparations

With support from the United Nations' World Food Program (WFP), The Mountain Institute has been able to help local communities construct more than 150 village-level projects in mid-Western Nepal since February 2008. These projects are designed to assist communities that are coping with food scarcity resulting from droughts, floods, and other environmental and social problems that are often exacerbated by climate change.



Farmer plowing in Dolpa

The "Lake to Lake: Food For Enterprises" Program is being implemented in three districts in mid-Western Nepal, and has already distributed over 1,000,000 kg of rice to more than 9,400 drought-stricken families. "Lake to Lake" draws on

the WFP's Food For Work (FFW) mechanism, as well as TMI's own adaptation, Food For Enterprise (FFE). These mechanisms not only reduce dependence on climate sensitive sectors like agriculture, but they also actively re-establish food security through projects that build badly needed infrastructure and rehabilitate degraded ecosystems. The food for enterprise projects are central to environmental and economic resilience in the face of climate change.

One of the most successful projects is the effort to improve community trails and wooden bridges. Since February 2008, 38 bridges have been completed, and more than 140 km of trails have been improved.

Well-constructed trails and bridges are critical to mountain enterprise development and food security, as well as climate change adaptation. Not only does this transportation infrastructure allow food to reach remote mountain communities, but it also provides access to government services, health care, education, and markets. In one instance, the project reduces the distance to a remote hospital by nearly three hours for more than 1,500 families. Additionally, these improvements minimize the safety and environmental hazards of tourism, which provides another enterprise opportunity that is less sensitive to climatic shocks than traditional income sources.

The initial implementation phase will take place over a five month period in cooperation with the Dolpo Institute, a local NGO partner. To ensure success, TMI is providing the Dolpo Institute with technical and administrative assistance, as well as training in various skills to improve the capacity of local staff.



Recipients of food aid in Dolpa

Environmental Education and the Changing Appalachian Landscape

Through its environmental literacy program, “Reading the Landscape,” TMI’s Appalachia Program teaches more than 300 students a year about the region’s natural resources and the way in which they are managed. The curriculum was developed for local schools and allows teachers to select specific topics that meet West Virginia’s academic requirements in a range of disciplines. These topics are then integrated into a field trip, as well as in-school activities for lesson reinforcement. The program includes experiential activities such as stream sampling, cave exploration, orienteering with map and compass, plant identification and collection, and astronomy.



Students in West Virginia learn about stream sampling

From these experiences, students not only learn basic knowledge and skills, but also develop an understanding of the role that these essential environmental resources have in global problems like climate change. Central to the program is its unique ability to instill in students a sense of ownership and responsibility for the local environment.

“With natural resources central to our economy, it is essential that our citizens understand the region’s ecosystems and ecology,” Dr. Brent Bailey, “as well as their role in participating in decisions about how our resources are managed.” Because “Reading the

“West Virginia’s abundant natural resources offer a perfect outdoor learning laboratory for exploring science, service, and stewardship.”

Dr. Brent Bailey
Director, North American Programs

Landscape” provides students with awareness, as well as a sense of ownership for the environment, it creates the foundation for a long-term commitment to responsible environmental management. In this sense, the project prepares students to deal with the pressing challenges presented by climate change.

In June 2008, TMI received a generous grant from the Toyota USA Foundation for the “Reading the Landscape” Program. This grant will allow TMI to reach a greater number of students and to target key educational priorities through field trips and in-class activities. It will also allow us to expand the number of professional development opportunities that we provide for teachers involved in the program.

To learn more about “Reading the Landscape,” or to get involved, please contact learning@mountain.org.



Dr. Brent Bailey, center, receives the check from Jeff Moore, VP, WV Toyota plant in Putnam County.

From left to right: Congresswoman Shelley Moore Capito; Josh Nease, TMI Staff; Dr. Brent Bailey; Jeff Moore; and WV’s First Lady Gayle Manchin.

Fighting Climate Change in the Andes

Polylepis forests are considered to be one of South America's most endangered forest ecosystems. They are of critical importance to the region's biodiversity and water resources. In addition to providing medicinal plants and other non-timber forest products to local people, these forests are major carbon sinks, an essential resource in the fight against climate change. Unfortunately, less than three percent of the Polylepis forest in Peru is thought to remain today, because traditional Incan management systems were abandoned in favor of widespread burning for pasture and over-harvesting.

The conservation and restoration of these unique high-altitude forests is an essential part of developing environmental resilience and adapting to climate change. As part of the ecosystem and livelihood improvement programs in the Andes, the Polylepis program not only focuses on environmental restoration, but also on developing sustainable methods of income generation. In one valley near Huascarán National Park, for example, TMI has worked with local community members to improve the quality and volume of milk production by revitalizing low-lying pastures in exchange for the members' active involvement in the restoration of biodiversity-rich Polylepis forests in the upper valley.

Since April 2006, more than 5,000 Polylepis seedlings have been grown and planted, and the level of



Andean Landscape in Peru



A Polylepis tree in the Andes

participation and satisfaction among local *campesinos* has been especially high. In another valley, unsustainable pressures on high-altitude alpine and Polylepis have been reduced by establishing grazing enclosures near low-altitude villages. Because the project has emphasized sustainable management of these enclosures, the quality and availability of grass has greatly improved. As a result, local farmers actually prefer to graze their cattle in the nearby, low-altitude enclosures, instead of the fragile, high-altitude regions.

Both of these projects incorporate livelihood improvement components within conservation interventions, which can be a determining factor in the success of conservation efforts and climate adaptation strategies. Likewise, our projects focus on the importance of building the capacity of local communities in designing, managing, and monitoring conservation projects, as well as general financial management and fund-raising. All of these skills are required to build environmental, economic, and social resilience to the challenges of climate change.

Climate Resilience through Pottery and Textiles on the Tibetan Plateau

Tibetans from the eastern region of the Tibetan Plateau are primarily subsistence farmers, practicing a mixed economy of upland agriculture and animal husbandry. The challenges presented by high altitudes and limited access to land and markets have been exacerbated by the effects of climate change – reduced snowfall, unreliable water resources, and changes in seasonal growing patterns. This, combined with recent environmental restrictions, requires the serious development of alternative livelihood strategies.



Artisans/study tour participants.

Nixi Pottery

In one livelihood project, TMI's China staff has been working with master Tibetan potters in Nixi to conserve the beautiful ancient craft of black pottery, while developing this historic trade into an income generating opportunity that is resistant to the climatic changes that have affected agriculture. Recently, TMI provided artisans in the Nixi community with the opportunity to engage with other artisans throughout China, to learn new techniques and identify effective marketing and distribution systems to improve sales.

This study tour has already had a significant impact on the Nixi pottery industry, as artisans have begun to incorporate new techniques and produce new products, like brush holders and vases, to meet consumer demand. Another important benefit has been an increase in local employment for women. After observing the burnishing skills of women in other regions, the Nixi artisans have created opportunities for local women in this historically male-dominated trade.

All of these changes are designed to reduce the Nixi community's reliance on the climate sensitive agricultural sector.

Textile Production

Another Tibetan project also draws on a historic cultural trade to develop new income-generating opportunities. Tibetan women possess a variety of traditional handicraft skills, especially in the manufacture of animal fiber products, but these products have generally been manufactured for self use. There is a large market for genuine handicrafts made with local resources, but most women are unaware of the potential and how to tailor products to the consumer.

TMI's project uses a village-based approach to train Tibetan women in the manufacture and commercial sale of sheep and yak fiber products, such as blankets, sweaters, and headwear. This project utilizes the animal herds that are already maintained by Tibetan villages, and has the ability to provide year-round income with minimal capital input.



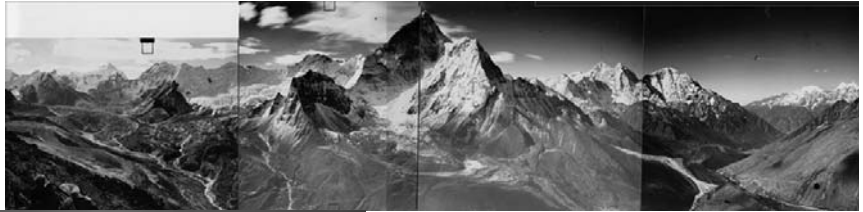
Nixi craftsman works on black pottery



Local Nixi weaver creating traditional textiles

Changing Landscapes, Changing Lives

A Unique Look at the Way Climate Change has Affected the Everest Ecosystem and Communities Over the Past 50 Years



"Ama Dablam and Imja Valley" - Top: Photographed by E. Schneider, courtesy of the Association for Comparative Alpine Research, Munich, 1955-61; Left: Photographed by Alton Byers, 2007

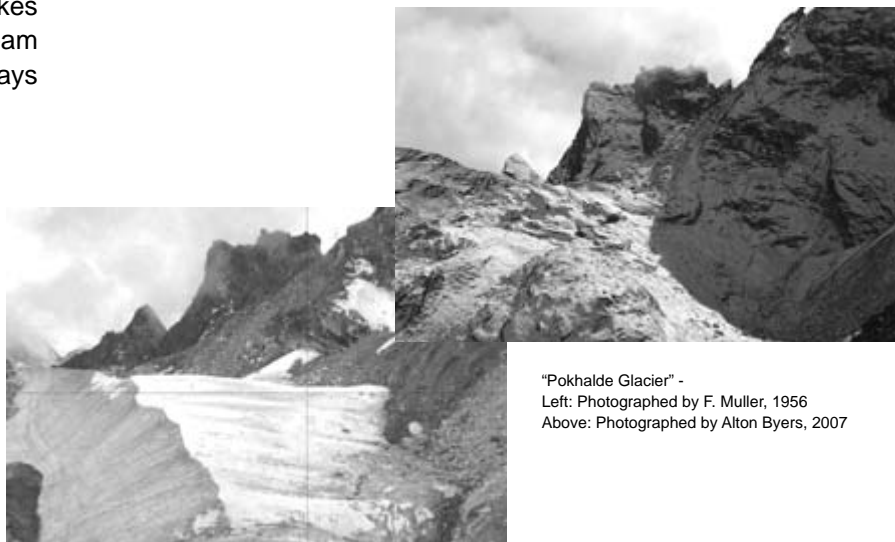
Dr. Alton Byers, Director of the Alpine Conservation Partnership project and a Senior Technical Expert at The Mountain Institute (TMI), has developed a unique photographic exhibition entitled "Himalaya – Changing Landscapes", designed to capture the effects of climate change on film. The exhibition was developed in collaboration with the International Centre for Integrated Mountain Development (ICIMOD), and was inspired by the work of early climber-scientists, such as Fritz Müller and Erwin Schneider. Using their work from the 1950s, Dr. Byers replicated dozens of photographs, illustrating drastic changes in the region's glaciers and landscapes over the past fifty years.

"Only five decades have passed between the old and the new photographs and the changes are dramatic. Many small glaciers at low altitudes have disappeared entirely and many larger ones have lost much of their volume. Some have formed huge glacial lakes at the foot of the glacier, threatening downstream communities in case of an outburst flood," says Byers.

"Changing Landscapes" showcases Müller and Schneider's original photographs juxtaposed with Byers' replications on large, four-meter panels. These panoramas show stunning evidence of the effect that climate change has had on glaciers in the region. Mountain ecosystems are some of

the most vulnerable in the world, and the Himalayas are no exception. Like other mountain regions, the Himalayas have already started to experience the range of negative impacts from climate change, from melting glaciers to unpredictable and extreme weather patterns.

Together with partners like ICIMOD, TMI is working on programs designed to help mountain communities adapt to these challenges and to buffer the impact of climate change through ecosystem conservation and restoration. "Changing Landscapes" is designed to build public awareness about the importance of such work. The exhibition will next be shown at an outdoor event in Kathmandu's Durbar Square in Nepal, during ICIMOD's 25th anniversary celebrations, December 2008. To learn more about "Changing Landscapes" as well as future exhibition locations, please visit www.changing-landscapes.com.



"Pokhalde Glacier" - Left: Photographed by F. Muller, 1956 Above: Photographed by Alton Byers, 2007



TMI is scaling up! To learn about our efforts, as well as our newest initiatives in Asia, North America, and South America, please see our 2008 Prospectus. This publication can be found online, or you can order a hard copy by contacting Elizabeth Blair at 202.234.4050 x103, or by e-mail at ebblair@mountain.org.



Our new web site is up just in time for the holiday season! There are several new ways for you to help mountain ecosystems and communities around the world. Learn more about these gift-giving options and our many projects by visiting our Web site, www.mountain.org.

Check Out Our New Web site!



The Mountain Institute
3000 Connecticut Ave, NW, Suite 138
Washington, DC 20008