



Editorial

Source: Mountain Research and Development, 35(1) : 3

Published By: International Mountain Society

URL: <https://doi.org/10.1659/mrd.3501>

Dear Readers,

As we are writing, sustainability ranks high on the research and development agendas. On the one hand, Future Earth has just published its Strategic Research Agenda 2014 (www.futureearth.org/media/strategic-research-agenda-2014). The agenda outlines priorities for global-change and sustainability research and provides guidance for solution-oriented research aiming to support the social transformation towards more sustainable development. The global research community has thus begun to acknowledge the need for research where scientists link disciplines and coproduce transformation knowledge with stakeholders. In many ways, MRD's policy has made the journal a forerunner of the stipulated "step-change in research." On the other hand, the final intergovernmental negotiations on the Sustainable Development Goals (SDGs; sustainabledevelopment.un.org/sdgsproposal) will dominate the development debate in 2015. It is expected that the SDGs will be adopted by the UN member states in September 2015 in New York. The current draft SDGs explicitly mention the importance of conserving mountains as providers of crucial ecosystem services and goods in Goals 6 and 15, and most of the other SDGs will also be relevant to improving mountain people's livelihoods in the coming decades. Both international efforts will be key to promoting sustainable development in mountains and will of course be reflected in the orientation of MRD and the articles it publishes. In the present issue of MRD, several papers address aspects related to Goal 8 "Promote sustained, inclusive and sustainable economic growth..." and Goal 15 "Protect, restore and promote sustainable use of terrestrial ecosystems..."

The MountainDevelopment section begins with a paper by Choudhary and co-authors, who show how an action research project in Uttarakhand, India, empowered farmers producing Malta oranges to take advantage of economic opportunities by improving their terms of engagement in a poor value chain. In the next paper, Haller and Einsiedler explain how periurban small farmers are losing fertile agricultural land due to uncontrolled urban sprawl and present a participatory method based on landscape visualization that helps to capture farmers' preferences regarding urbanization. In the following paper, based on a literature review and experiences in Bulgaria, Greece, and Italy, Mitrofanenko et al emphasize the potential that intergenerational practice offers to address the challenges of protected area management in mountains and thus of SDG 15. Finally, the GPS-based protocol developed by Fry and coauthors in Peru provides a low-cost methodology to create digital elevation models (DEMs) with a high spatial resolution for remote mountain areas without access to electricity and for projects with small budgets.

In the MountainResearch section both Madelrieux et al and Jurt et al show how mountain family farms in European countries have developed strategies to adapt to socioeconomic dynamics and to changing national agricultural and mountain policies, in order to maintain or enhance the basis for sustained economic development of their farms (Goal 8). Madelrieux et al capture the patterns of change of family dairy farms based on their adaption strategies in the northern French Alps, while Jurt et al show that many transhumance farms in Switzerland—despite often difficult conditions—are also continuously adapting their practices to increasing political pressure, to improve their economic performance and overcome constraints such as rising costs of meeting new animal welfare regulations. These socioeconomic papers are followed by 2 studies focusing on productivity issues of mountain ecosystems (knowledge for SDG 15): Mainali and coauthors document how 5 major alpine forest communities have responded to current climate variability in the central Himalaya in Nepal, and Wang et al show that the application of a mixture of N and P can help to restore degraded grassland communities in Tibet.

Both Future Earth and the SDGs emphasize the importance of observation: while Future Earth insists on the need to enhance understanding of physical, ecological, and social mechanisms that reinforce global and regional environmental change, the SDG Goal 17 calls for high-quality and disaggregated data for monitoring the progress of the SDGs. Improving data availability and accessibility is also a concern of the 2 members of the International Mountain Society that present their activities in the MountainPlatform section. The Mountain Research Initiative (MRI) sees an opportunity for the mountain research community to harness the lessons and power of at least "medium data" to develop a stronger, evidence-based understanding of both the generalities and the specificities of mountain systems. CONDESAN's aim is to develop observation platforms that integrate social and environmental monitoring tools and thus lead to more robust resource management decisions in the Andes.

MRD will be taking up the theme of observation in its November 2015 Focus Issue (MRD 35.4) on "Observing Mountains and Sharing Knowledge," in the hope of further contributing to Future Earth's research agenda and to the development agenda of social transformation in mountains and beyond.

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