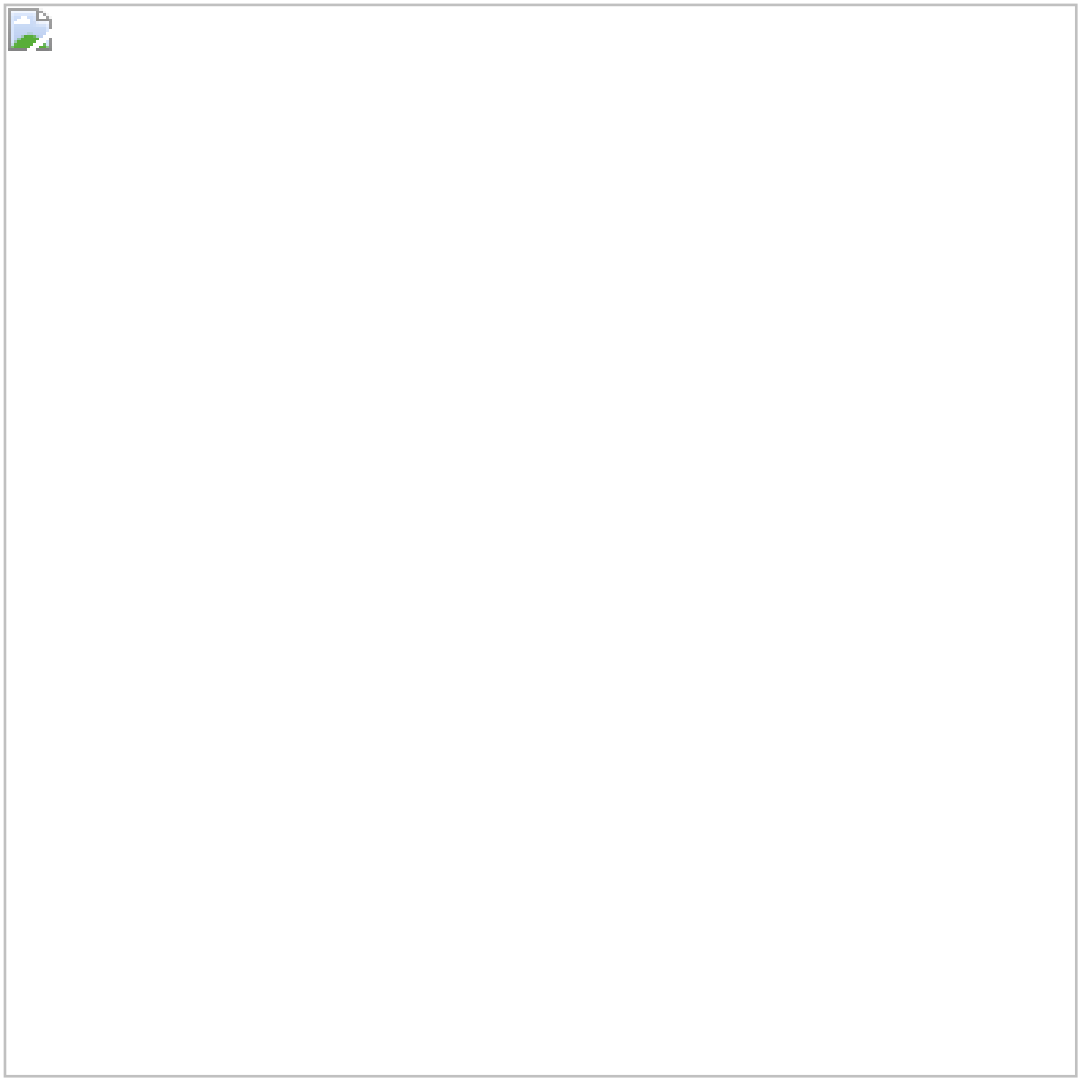

Editorial

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Dear Readers,

This issue of MRD begins with a MountainDevelopment paper by Dörre and Goibnazarov presenting how self-governed small-scale irrigation in the remote Pamirs of Tajikistan has helped a local rural population maintain its productivity in spite of interventions and external regulations. Physical and social components are intimately linked, and self-governance is guaranteed by a strong sense of community ownership, as well as flexibility that allows for adaptation to several drivers of change. The paper argues that without taking into account such local hydrosocial arrangements, interventions may cause more harm than benefits.

The first paper in the MountainResearch section, by Lanari et al, also discusses irrigation, but its focus is on a very different concern: dwindling water resources in the Mount Kenya area, where medium- and large-scale commercial horticulture has developed since the 1990s. The authors show that water needs now far exceed minimum river flows, leading to use of water stored in dams and groundwater; they recommend long-term monitoring and efficiency policies to mitigate water conflicts. In the next paper, Pérez-Suárez and co-authors discuss the impact on soil ecosystem services of extensive grazing in a protected mountain forest in Mexico. While soil organic matter, soil organic carbon, and other indicators have slightly lower values in grazed soils, the overall impact of agropastoral use does not affect soils in a way that warrants fortress conservation—banning any human use in this sensitive ecosystem. The next article analyzes the capacity of specific native vegetation to recover after the redeployment of topsoil that was removed and stored as a post-mining ecological restoration strategy in the Peruvian Altiplano. Based on the results of experimental analyses, Flores-Alvarez et al show the limitations of the current applications of topsoil removal, storage, and redeployment to restore the Altiplano's native vegetation, and provide practical recommendations to improve this cost-effective restoration strategy. In their article, Zerihun Girma and colleagues present the results of another vegetation analysis, this time in Ethiopia: the authors describe vascular plant species composition, relative abundance, and distribution, and discuss anthropogenic threats to plant species' survival in Arsi Mountains National Park. Their results lead them to suggest enforced conservation in view of the pressure of overharvesting and livestock grazing.

The next paper presents the results of a Nepal-wide modeling analysis of treelines under climate change scenarios. Chhetri and co-authors conclude that temperature-related climatic variables and elevation explain the greatest amount of variance in the distribution of the 3 dominant treeline species studied, and that suitable habitat for these species is likely to increase throughout the region, with a northward and upslope advance. The final paper in the MountainResearch section, by Wilson et al, also examines the potential impact of global climate change on regional conditions in mountains. Their focus is on the future of snow and water availability in an area with a well-established skiing industry already dependent on snowmaking today, the White Mountains of New Hampshire, USA. They discuss the relationships between temperatures, water, and snowmaking infrastructure based on 50 years of past data and predict an increasing need for large volumes of water to make snow in less time, ie at the time of fixed holiday seasons.

The MountainPlatform section begins with an article reporting on a joint workshop on potential European Alpine sites of the Globally Important Agricultural Heritage Systems (GIAHS) Programme, organized by the Swiss Interacademic Commission for Alpine Studies (ICAS), the International Scientific Committee on Research in the Alps (ISCAR), and the Slovenian Academy of Sciences and Arts; the participating experts agreed to increase efforts to protect traditional Alpine agricultural landscapes, threatened by various trends in the recent past. The second article in this section was prepared by the Mountain Societies Research Institute (MSRI) of the University of Central Asia. In their current report, they present their transdisciplinary research for development activities in the field of food systems, food security, nutrition, and agrobiodiversity in Kyrgyzstan, Tajikistan, and Afghanistan—showcasing projects in Badakhshan and the high Pamirs of Tajikistan. Transdisciplinary approaches taken up by IMS members is proving to make a difference to mountain communities and mountain environments.

We hope our readers will enjoy this issue of MRD.

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