



Editorial

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Dear Readers,

Almost half the people in Asia depend, directly or indirectly, on mountain ecosystem services for freshwater, hydropower and other livelihood activities. Maintaining healthy ecosystems and associated services is now a key aim of development and research agendas. Globalization (of markets, information, capital flows, and conventions) is an underlying driver of land use changes and the transition towards urbanization and regionalization. The direction, size, and speed of these transitions are influenced by research and policy. For mountain ecosystems, we must balance current human needs and longer-term environmental sustainability: land use and infrastructure changes in mountain regions often increase the share of energy, water and nutrients devoted to human needs but decrease the share available for other species. The Rockefeller Foundation has enabled us to examine these links by generously supporting a Mobile Workshop—a multi-disciplinary research expedition that traversed the heart of the Montane Mainland Southeast Asia (MMSEA) eco-cultural region. The present special issue of MRD presents key findings of this knowledge exchange and creation process.

Land use that combines poverty reduction and conservation is rare, but there are efforts in MMSEA to develop appropriate policy interventions in these socially and ecologically complex mountain systems. Some examples of these approaches are presented in the Development section using case studies from the uplands of Vietnam, Thailand, Laos, and China. A common theme in all these studies—whether they be baseline monitoring, social analysis, market development, technology adaptation, or land use modification—is the involvement of local communities in development policy and research. In addition, long-term photographic comparison of land cover reminds us that we must never ignore natural changes, since climate change may be as important as human activities in driving land use change.

Government land use policy has directly affected numerous upland communities in MMSEA. The papers in the Research section analyze specific land use changes and, importantly, tie these changes to the on-the-ground realities facing local communities. In NW Yunnan, China, afforestation has reduced farmland area and landscape fragmentation, making households more dependent on cash income; however, while forest cover may have increased, the quality and definition of this forest is debatable, and this has ramifications for regional assessments and traditional rural practices. Similar trends are observed in upland northern Laos, where permanent intensive agriculture has increased at the expense of traditional upland agriculture.

Probably the most graphic example of agricultural land use change observed during the workshop was the huge expansion of rubber in Xishuangbanna and northern Laos. While rubber is delivering greater economic benefits and modernization, this is balanced against the loss of agrobiodiversity, livelihood flexibility, and the dilution of local cultures and identities. It seems clear that development strategies for upper watersheds must engage with all stakeholders, future markets, and political structures, and be based on multi-level scenario analysis.

We are very pleased to be able to publish such a rich set of contributions in Mountain Research and Development—contributions that offer direction, potential, and hope for improved stewardship by mountain peoples of ecosystems that provide vital environmental services for local and downstream societies.

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