

SESSION 13

Permafrost and Society: how do changes in permafrost systems interact with social and cultural dynamics, economies, industries, and food systems

The Permafrost-Agroecosystem Action Group: first results and future goals

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Abstract

Permafrost-agroecosystems encompass northern social-ecological systems which include both cultivation of arable permafrost-affected soils, and animal husbandry practices. These heterogeneous food and cultural systems are being affected by a warming climate. Examples include increasing opportunities for growing crops through longer growing seasons, as well as impacts on animals' local and long-distance migratory movements and their food sources. Furthermore, climate change driven permafrost thaw and thaw accelerated by land clearance is rapidly changing the biophysical and socioeconomic aspects of these systems. Therefore, an international collaboration encompassing experts from North America, Europe and Asia is working on increasing our understanding of permafrost-agroecosystems and contributing to the adaptation, resilience, and sustainability strategy of these rapidly evolving systems.

The International Permafrost Association Permafrost-Agroecosystem Action Group is composed of ~30 members from 7 countries. The objectives of our action group are to share knowledge and build networking capacities through meetings and webinar presentation as well as to collaborate on publications and produce the first geospatial dataset of permafrost-agroecosystems. Our poster presentation provides an overview of the group's activities including providing case studies from a range of high-latitude and high-altitude areas as part of a group manuscript in preparation and an update on our mapping activities.