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Soil-ecological field courses in Siberia: opportunities for land use across bioclimatic zones on the edge of human influence

Pavel Barsukov (1) and Christian Detlef Siewert (2)

(1) Institute of Soil Science and Agrochemistry, 630090 Novosibirsk, Russia Federation, (2) Hochschule für Technik und Wirtschaft Dresden, 01326 Dresden, Germany

Since 1995, soil-ecological field courses across bioclimatic zones in West Siberia have been organized by scientists from Russia and Germany on an annual base to meet growing demands for better land use practices in terms of its sustainable development. They are focused on virgin landscapes and soils undisturbed (or just slightly changed) by anthropogenic influences. The visited landscapes range from latitudinal zones of taiga to steppe within the West Siberian Plain and from altitudinal belts of mountain tundra to deserted intermountain depressions in the Altai mountains right to the Mongolian border.
The main teaching events are organized in a form of field seminars at about 20 key sites along the distance of almost 3000 km. Every field seminar consists of detailed description of one key site utilising the same scheme for each of them. It includes information on climate, relief, geological substrate (soil parent material), vegetation, soil fauna and concludes with soil profile morphology and soil properties. Therefore we give information during our field courses in such way that soil with its soil forming factors plays an integral part to combine these different environmental disciplines considered. Our final goal is to extend this knowledge based on natural soil formation, soil functions and dominant vegetation types to facilitate the understanding of the interrelations between land use, local culture, social structure, life style trends and economic needs as a prerequisite for sustainable land and society development.
The presentation will describe the main features of our field courses, the organization and changes in the content over the years. Short description of the field course route, teaching approaches, the dynamics in the number of participants and evaluation results will also be presented. To explain the success of our field courses, we suggest that the specific organization methods and collaboration approaches, the motivation of participants by several factors and the applied interdisciplinary teaching approach should be considered. We hope our experience will facilitate similar teaching in other regions of the world and support a future sustainable use of local human and natural resources.