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Herders coping with hazards in Kyrgyzstan and Mongolia: A new research approach based on GPS-tracking

Initiative: Zwischen Europa und Orient - Mittelasien/Kaukasus im Fokus der Wissenschaft

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With climate change, Kyrgyzstan and Mongolia are increasingly experiencing natural hazards. The livelihoods of herders are particularly affected by natural hazards, which render them vulnerable to poverty. The proposed project has two objectives: (1) to extend the available knowledge on how herders in Central Asia cope with natural hazards and (2) to improve the research capacity (concerning both methodology and data) within the Central Asian region. This project will collect and analyze a new database, bridging the disciplines of geoinformatics, development economics, spatial statistics, and geography. Using Global Positioning System (GPS) technology, the project will track the movements of semi-nomadic herders in Kyrgyzstan and of nomadic herders in Mongolia. Moreover, it will collect a socio-economic survey from the same herding households that particularly captures households' exposure to natural hazards and the coping strategies applied by households. The novelty of the approach lies in combining geographic location data of (semi-) nomadic households with socio-economic survey data and assessing the data jointly. The project will investigate to what degree mobility, land use patterns, the geographic environment at a household's location, and access to markets mitigate the effects of natural hazards. The analyses will be comparative, combining insights and methods in Kyrgyzstan and Mongolia, thereby fostering trans-boundary cooperation in research.

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