



## **Avalanche risk assessment for the link Osh - Bishkek, Kyrgyzstan**

Kydyr Nazarkulova

Kyrgyz State University of Construction, Transport and Architecture

The Bishkek-Osh road is main North-South ground transportation connection between the two major cities of Kyrgyzstan. One of the causes for frequent interruptions and closures between November and May is the avalanche risk due to local terrain characteristics and orographically induced precipitation maxima during winter. As a first step towards more effective prediction and implementation of mitigating measures the development of a digital avalanche inventory ('avalanche cadastre') has been initiated. This is aiming at modeling regional risk, and prioritizes the implementation of protective infrastructures in the most avalanche-prone zones. In addition, this helps with continuous monitoring of avalanche behaviour and the assessment of potential influence of climate change.

For the parameterisation of models and support of decisions, details about avalanche incidences need to be collected. Historical data collected during Soviet time serve as an important baseline, complemented by more recent data. Overall, developing such a geo database shall be useful and effective for future planning at the Ministry of Emergency Services.

This paper demonstrates important parameters to be collected and critical role of historical data as a baseline. Geodatabases are being developed on ArcGIS and used locally for planning preventive measures.