

2020 International Summer School on Rockslides and Related Phenomena in the Kokomeran River Valley (Kyrgyzstan) (ICL Kokomeran Summer School)

Rockslides and rock avalanches are among the most hazardous natural phenomena in mountainous regions. Though relatively rare, in comparison with landslides in non-lithified soils, they threaten large areas due to the enormous amount of material involved (sometimes up to billions of cubic meters), high mobility of debris and ability to create large natural dams, which result in inundation of the valleys upstream and catastrophic outburst floods downstream. The aim of the International Summer School is to demonstrate rockslides of the planar, rotational, wedge and compound types, most of which had converted into flow-like rock avalanches, sometimes with the extremely long-runout. Some of these slope failures formed natural dams, either intact or deeply eroded. Various methods of their identification, mapping, dating, as well as of the detailed examination and analysis of internal structures and grain-size composition of rockslide deposits are demonstrated.

Numerous rockslides and rock avalanches ranging from a few millions to more than 1 billion cubic meters in volume are concentrated in the Kokomeran River valley (Central Tien Shan) within a limited area of about 100x50 km at a one-day trip distance from Bishkek - capital city of Kyrgyzstan (Fig. 1). Most sites are located near a road along the Kokomeran River and require several hours driving and few kilometers long hiking with up to 300-500 m up to reach them.

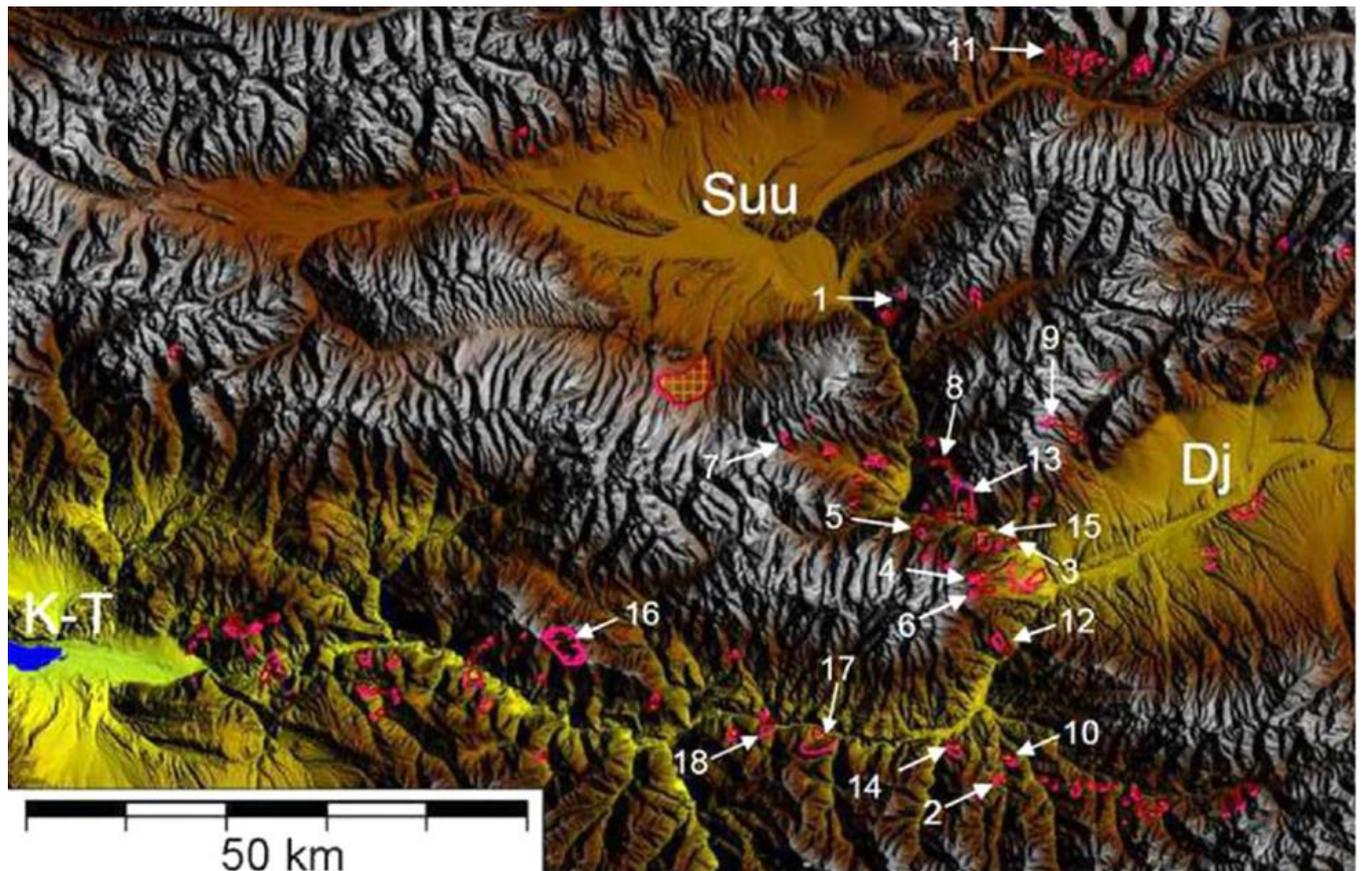


Figure 1. Large landslides and rock avalanches in the Kokomeran River basin and adjacent part of the Naryn River basin. Suu, Dj and K-T - the Suusamy, the Djumgal and the Ketmen-Tiube intermountain depressions. Selected features most of which are demonstrated during the training course: 1 - Seit; 2 - Ak-Kiol; 3 - Mini-Kofels; 4 - Northern Karakungey; 5 - Kashkasu 6 - Southern Karakungey; 7 - Chongsu; 8 - Sarysu; 9 - Ming-Teke; 10 - Lower Ak-Kiol; 11 - Snake-Head; 12 - Lower-Aral; 13 - Kokomeran; 14 - Ornok; 15 - Displaced Penneplain; 16 - Kyzylkiol caldera-like cavity; 17 - Karachauli; 18 - Lower Kokomeran

Due to the arid climate and sparse vegetation, rockslide morphologies are well preserved and recognizable. Some rockslide deposits up to 400-m thick are deeply dissected by erosion which opens their internal structure to detailed study. Evidence of valley inundation caused by rockslide damming and of associated outburst floods could be found in the valley as well (Strom, Abdrakhmatov, 2009, 2018; Strom, 2014). Along with the bedrock slope failures several very large landslides in weakly lithified Neogene and Quaternary deposits can be found in the

adjacent neotectonic depressions. Besides providing an exceptional learning experience, it is a very beautiful mountainous area inhabited with kind and hospitable people.

Besides numerous rockslides and landslides, the study area provides impressive manifestations of the Neotectonics and Quaternary tectonics such as active faults, one of which was ruptured during the 1992 M7.3 Suusamyр earthquake, and numerous examples of tilted and folded pre-Neogene planation surfaces. One of the topics of the training course is to describe the paleoseismology of the region, paleoseismological interpretation of rockslides in particular.

The annual International Summer School supported by ICL (<http://www.iclhq.org>) has been organized since 2006. Since 2017 it has been supported also by the UNESCO Almaty Cluster Office. Previous field training courses were attended by participants from Argentina, Austria, Belgium, China (including Hong Kong), Czech Republic, France, Germany, Great Britain, India, Italy, Japan, Kazakhstan, Korea, Kyrgyzstan, New Zealand, Norway, Poland, Russia, Slovakia, Slovenia, Switzerland, Spain, Taiwan, Tajikistan, USA and Uzbekistan.

The 2020 training course will be carried out from August 01 to August 15, 2020. The participation fee is EURO 500 (or equivalent amount in US dollars, Russian roubles or Chinese yuan), which includes all costs at the site: camping (in tents; though some tents can be provided by the organizers, participants are asked to bring their own tents and sleeping bags), food, local transportation, detailed full-color guidebook. Electricity will be available in the base camp. Fee should be paid in cash at the participants' arrival. Cash receipt vouchers and certificates confirming attendance at the ICL field training course will be provided.

Organizers will provide help obtaining visas if necessary. Please check if you need visa to come to Kyrgyzstan or not. List of countries which citizens do not need visas to visit Kyrgyzstan is available at <http://www.centralasia-travel.com/en/countries/kirgistan/visas>. Those who have to apply for visa should send the copy of his/her passport to Prof. Kanatbek Abdrakhmatov before June 1st, 2020. Participants should have their personal medical insurance.

Participants should arrive to Bishkek not later than August 01 (early morning). They will be picked up at the arrival desk of the Bishkek airport. Bishkek is connected with Moscow, Istanbul, Urumchi, Dubai, Ulan-Bator, Delhi by direct flights. Arrival via Almaty airport is possible as well. Organizers can help arranging the hotel/hostel for the participants who will arrive earlier than August 01 or will depart after August 15. Cost of the hotel/hostel in Bishkek selected by organizers for one night from August 14 to 15 is included in the registration fee.

The detailed full-color Summer School guidebook can be downloaded from the ICL homepage: <http://iplhq.org/> (Download **GUIDEBOOK**).

Those who are interested, please contact:

Dr. Alexander Strom,
Chief expert of the Geodynamics Research Centre,
Volokolamskoe Shosse, 2, 125080, Moscow, Russia
e-mail: strom.alexandr@yandex.ru
tel: +7 910 4553405

Prof. Kanatbek Abdrakhmatov
Director of Institute of Seismology, National
Academy of Science,
Asanbay 52/1, Bishkek 720060, Kyrgyzstan
e-mail: kanab53@yandex.ru
tel: +996 777 403480

References

- Strom, A., Abdrakhmatov, K. 2009. International Summer School on rockslides and related phenomena in the Kokomeran River valley, Tien Shan, Kyrgyzstan. In: Sassa, K., Canuti, P. (eds.) Landslides - disaster risk reduction. Springer-Verlag, Berlin Heidelberg, 223-227.
- Strom, A. 2014. Rockslides and Rock Avalanches in the Kokomeran River Valley (Kyrgyz Tien Shan). In: Snjezana Mihalic Arbanas, S.M., Arbanas, Z. (eds.) Landslide and Flood Hazard Assessment, Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb and Faculty of Civil Engineering, University of Rijeka, 245-250.
- Strom, A., Abdrakhmatov, K. 2018. Rockslides and Rock Avalanches of Central Asia: Distribution, Morphology, and Internal Structure. Elsevier. 449 p. ISBN: 978-0-12-803204-6.