

World Centre of Excellence (WCoE-2017-2020)
Progress Report Form 2018
01 January 2018 to 31 December 2018

1. Short Title of WCoE **Harmonization of Landslides Data and Local Communities Capacity Building for Landslide Risk Reduction**
2. Name of Institution (Name of leader and email) **University of Belgrade, Faculty of Mining and Geology, Belgrade, Serbia**

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3. List of core members

Asst. Prof. Milos Marjanovic, PhD

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Uros Djuric, PhD student

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4. Progress report of activities up to 31 December 2017 (up to 30 lines)

Collecting and harmonization of pre and post event (May 2014) landslide data, by using professional geotechnical reports according to the International classification and standards were conducted for Valjevo area in Western part of Serbia. **Collecting and analyzing rainfall data**, by using available data from national Hydro-meteorological survey (www.hidmet.gov.rs). Cross-correlating rainfall and landslide data was conducted for western part of Serbia. **Capacity building for local/national authorities** was part of new project realized within World Bank framework activities on the transportation and risk management sectors in Serbia (*Mainstreaming Climate Resilience in the Transportation Sector in Serbia-open file report*). **Landslides - land use planning**, stimulating use of landslide data in planning at local/national level was provided by open data reports of landslide susceptibility assessment for Valjevo (Western Serbia) area. Supportive activities for Sector for Emergency situation in Serbia, Ministry for Interior - Landslide susceptibility map of the Republic of Serbia.

5. Plan of future activities (up to 30 lines)

Collecting and harmonization of pre and post event (May 2014) landslide data, by using professional geotechnical reports according to the International classification and standards. *Expected result* is a collection of landslide reports with standardized contents, gathered from road

and infrastructure and similar geotechnical project reports. *Work phases* are as follows: Phase 1 - collecting reports from archives before the May 2014 event (dating up to 15 years back) by cooperating with several companies with geotechnical agenda (such as The Highway Institute, The Roads of Serbia etc), Phase 2 - collecting reports from these companies in their future work.

Collecting and harmonization of landslide data from local and national authorities, similarly as above, but from governmental and local authority sources, with different, more basic data content, and with accent on new, unreported landslides. The BEWARE project platform provides opportunity to local communities to report new landslides.

Collecting and analyzing rainfall data, by using available data from national Hydro-meteorological survey (www.hidmet.gov.rs). *Milestone* would be cross-correlating rainfall and landslide data.

Capacity building for local/national authorities, in the case that BEWARE project follow-up (*milestone* of the BEWARE project was training local staff in collecting/updating landslide data, Sector for Emergency Situation, Public Enterprises).

Landslides - land use planning, stimulating use of landslide data in planning at local/national level.

Open landslides data and reports, making collected data available for preview and download through interactive web portal, thereby raising awareness and stimulating various agencies and individuals for cooperating in landslide database updating.

6. Publication (in Landslides, proceedings, meeting reports, or WEB)

- Krušić J., Andrejev K., Abolmasov B., Marjanović M. (2018). Preliminary results of the Selanac debris flow modelling in RAMS - a case study. Proceeding of the 3rd Regional Symposium on Landslides in the Adriatic-Balkan Region, Ljubljana 2017, 11 - 13 October 2017 Ljubljana, Slovenia, pp95-100. Geological Survey of Slovenia. ISBN 978-961-6498-58-6
- Abolmasov B., Marjanović M., Đurić U., Samardžić Petrović M., Krušić J. (2018). IPL Project 210 - Massive landsliding in Serbia following Cyclone Tamara in May 2014 - progress report. Proceeding of 2018 IPL Symposium on Landslides, Organized by International Consortium on Landslides (ICL), 03 December 2018, Kyoto, Japan. Eds. Sassa K., Dang K. pp 47-51. ISBN 978-4-9903382-0-6
- Krušić J., Samardžić Petrović M., Marjanović M., Abolmasov B., Miljković S. (2018). Preliminary results of numerical modelling of debris flow - case study Leva reka, Serbia. Proceedings of the 16th Danube-European Conference - Geotechnical hazards and risks: Experiences and practices, vol. 2, Skopje, Macedonia. Willey and Sons. pp 707-712.
- Marjanović M., Abolmasov B., Đurić U., Krušić J. (2018). Assessment of landslide-related hazard and risk on the road network of the Valjevo city, Serbia. Proceedings of the 16th Danube-European Conference - Geotechnical hazards and risks: Experiences and practices, vol. 1, Skopje, Macedonia. Willey and Sons. pp 365-370.

- Marjanović M., Krautblatter M., Abolmasov B., Đurić U., Sandić C., Nikolić V. (2018). The rainfall-induced landsliding in Western Serbia: A temporal prediction approach using Decision Tree technique. *Engineering Geology* 232: 147–159. ISSN 0013-7952 <https://doi.org/10.1016/j.enggeo.2017.11.021>
- Krušić J., Marjanović M., Andrejev K., Abolmasov B. (2018). Assessment of landslide susceptibility using expert AHP method for the Ljubovija Municipality. 17th Serbian Geological Congress, May 17-20, Vrnjačka Banja, Serbia, 625-629 (in Serbian)
- Đurić D., Mladenović A., Pešić-Georgiadis M., Marjanović M., Abolmasov B. (2017). Using multiresolution and multitemporal satellite data for post disaster landslide inventory in the Republic of Serbia. *Landslides* 14 (4): 1467-1482. DOI 10.1007/s10346-017-0847-2, <https://doi.org/10.1007/s10346-017-0847-2>
- Abolmasov B., Marjanović M., Đurić U., Krušić J., Andrejev K. (2017). Massive Landsliding in Serbia Following Cyclone Tamara in May 2014 (IPL-210) In: K. Sassa et al. (eds.), *Advancing Culture of Living with Landslides, Proceedings of 4th World Landslide Forum, Ljubljana 29 May-02 June 2017*, Vol. 1. pp. 473-484. Springer International Publishing. DOI 10.1007/978-3-319-59469-9_4
- Andrejev K., Krušić J., Đurić U., Marjanović M., Abolmasov B. (2017). Relative Landslide Risk Assessment for the City of Valjevo. In: M. Mikoš et al. (eds.), *Advancing Culture of Living with Landslides, Proceedings of 4th World Landslide Forum, Ljubljana 29 May-02 June 2017*. Vol 3. pp. 525-523. Springer International Publishing. DOI 10.1007/978-3-319-53483-1_62