

World Centre of Excellence (WCoE-XX) 2017-2020 Progress Report Form 2019

1 January 2018 to 31 December 2018

1. Short Title of WCoE: **Implementation of National Slope Master Plan**

2. Name of Institution (Name of leader and email)

Name of Organization

The Institute of Telecommunication and Global Information Space (ITIGS) of the National Academy of Science of Ukraine (NASU)

Name of Leader

Oleksander Trofymchuk

Affiliation: position

Director, Doctor of Engineering, Prof., Corresponding Member of the NASU

Contact: postal address, fax, phone, email

13, Chokolivsky Blvd., Kyiv, 03186, Ukraine,

Fax : +38 044 245 8838; e Tel. +38044 245 8797; -mail: itelua@kv.ukrtel.net

3. List of core members:

Iurii Kaliukh, Leading Researcher, Doctor of Engineering, Prof.;

Evgenii Yakovlev, Leading Researcher, Doctor of Engineering, Prof.;

Viktoriiia Berchun, Researcher;

Iaroslav Berchun, Ph.D. student.

4. Progress report of activities up to 31 December 2018 (up to 30 lines)

Since 2015 the «Landslide hazard zonation of Carpathian region of Ukraine using GIS» IPL 191 project has been implemented. The main goal of the project was to develop the tools for landslide hazard forecasting with the purpose of minimizing of an impact of landslide activation on people and tangible objects including constructions, transportation services, pipelines etc. Objectives: to determine the landslide-hazardous slopes over Carpathian region of Ukraine; to develop a database containing the engineering-geological information relevant to descriptors (passports) of landslide sites; to develop targeted GIS on landslides in Carpathian region of Ukraine. Two Ukrainian construction standards for scientific and technical monitoring of construction objects and construction for building in the areas sensitive to landslides was completed and introduced into Ukrainian building practice in 2017-2018. Ukrainian ICL Department conducted training programme in 2017-2018

concerning above questions according to the new State Construction Norms for more than 1000 designers from all regions of Ukraine will allow them to correct design monitoring system of construction objects and landslides territory, in particular, to correct design of landslides protection structures in the areas sensitive to landslides.

At the moment Dr Olexander Trofymchuk is the supervisor of PhD student Iaroslav Berchun, whose PhD study is devoted to landslide initiation mechanism in Neogene clay and Dr Iurii Kaliukh is the supervisor of PhD student Alexander Ischenko, whose PhD study refers to stress-deformed state of retaining walls in towns.

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

PhD student Iaroslav Berchun will finish PhD Thesis.

Being a member of the "Landslides and Cultural & Natural Heritage" thematic Network of the ICL (head is Claudio Margottini, Vice President of the International Consortium on Landslides), we planned new project for 2020-2023. It is devoted to study of a single monument placed within active landslide system, in isolation to one that values a multidimensional, multiregional and inter-disciplinary approach.

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

Ivanik O., Kaliukh I., (2018) The monitoring and early warning system of the livadia palace building constructions placed on the active central livadia landslide system, Crimea, Ukraine. XII International Scientific Conference "Monitoring of Geological Processes and Ecological Condition of the Environment" 13–16 November 2018, Kyiv, Ukraine.

Kaliukh I., Farenjuk G., Farenjuk I. (2018) Geotechnical issues of monitoring, calculation and engineering protection of landslide hazardous areas of Ukraine. In: Wu W., Yu HS. (eds) Proceedings of China-Europe Conference on Geotechnical Engineering. Springer Series in Geomechanics and Geoengineering. Springer, Cham

TXT-tool 2.380-1.1: Monitoring and Early Warning System of the Building Constructions of the Livadia Palace, Ukraine / O. Trofymchuk. I. Kaliukh, O. Kliomenkov/ In book: Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools. - 2018. – P. 491-508.

Vibrodinamic monitoring of pile foundation engineering on landslide hazardous site in dense urban development conditions / I. Kaliukh, O. Lebid, V. Dunin, Y. Berchun, S. Samoilenko / Ekologichna Bezpeka. – 2018. – № 2 (26). – C. 54-64.

Note:

Please fill and submit this form by **30 March 2019** to ICL Network <icl-network@iclhq.org>

Less than 2 printed pages.

Activities are recommended to submit to the ICL-IPL activities of Landslides: Journal of International Consortium on Landslides.