INTERNATIONAL DOCTORAL SUMMER SCHOOL NATURAL DISASTERS: OPPORTUNITY FOR IMPROVEMENT OF UNDERSTANDING OF NATURAL DISASTERS AND THEIR PREVENTION

Authors: Mojca ŠRAJ1, Mitja BRILLY1, Klaudija SAPAČ1, Johannes HÜBL2, Roberto RANZI3, Andreja ŽGAJNAR GOTVAJN4, Franc LOBNIK5, Matjaž LOBNIK6

1 University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia, mojca.sraj@fgg.uni-lj.si; 2 University of Natural Resources and Life Sciences, Vienna, Austria; 3 University of Brescia, DICATAM, Brescia, Italy; 4 University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia; 5 University of Ljubljana, Biotechnical Faculty, Ljubljana, Slovenia; 6 Piktorama d.o.o., Ljubljana, Slovenia

Forum topics
☐ Energy in 21st Century ☐ Cultural Heritage in Digital World
☐ Engineering Capacity Building ☒ Disaster Risk Management & Governance for Resilient Communities
☐ Construction 4.0 ☐ BIM Lifecycle, Facility & Asset Management

Abstract: (250 to 500 words: for each heading use the bullet points or narrative - the submission including graphics should not exceed one page)

Problems - Issues / Challenges-Needs
- stemmed from the fact that natural disasters do not respect borders and they should be treated as such,
- brought together international experts and doctoral students from various fields (e.g., civil and environmental engineering, soil science, landscape architecture, water engineering and management, agriculture, natural resources management, spatial planning),
- was mainly related to floods, droughts, earthquakes, and landslides.

Solutions - Methods / Results - Findings
- Summer school was conducted as 3 week course by blended learning method (activities of 1st week took place at a distance through the website www.let-group.com, 2nd and 3rd week as face-to-face learning in classroom).
- It was organized as a joint initiative of 3 universities (University of Ljubljana, University of Natural Resources and Life Sciences Vienna, University of Brescia) and 1 private company (Piktorama d.o.o.).
- Activities included: watching of pre-recorded lectures and consolidation of knowledge through website, active participation in 4th World Landslide Forum, excursion to various locations of past natural disasters in Slovenia, oral presentation of research work of all students; presentations were broadcast live to website, discussions on student presentations and lectures given by professors in the classroom.

Novelty - Value / Relevance to ...
- The results of the survey among students and lecturers show that for most of them this summer school was the first experience with blended learning/teaching.
- Based on the experience with Natural Disasters summer school 76% of the students and all lecturers would use the blended learning methodology in the future if they had opportunity.
- Presentation of natural disasters related research work to colleagues from different countries worldwide with a different backgrounds (look at the same problem from a different point of view) can have a positive impact on the development of more effective measures to protect against natural disasters and gives the opportunity for development and improvement of ideas for ongoing and future research work.

Forum statement
"International doctoral summer school Natural Disasters is an example of good practice in exchanging experience and opinions of experts from various fields and for developing new ideas about natural disasters prevention."

Keywords: (up to 5 keywords)
natural disasters; blended learning; doctoral summer school

Graphics: (please use the gray area bellow for representative graphics or graphical summary: select the gray area bellow and paste your graphics)