Društvo za geotehniku u Bosni i Hercegovini
Друштво за геотехнику у Босни и Херцеговини
Geotechnical Society of Bosnia and Herzegovina
GEO-EXPO 2016
Banja Luka, 7.-8. 10. 2016.

Hideaki Marui[5]
Eisaku Hamasaki[6]
Gen Furuya[7]

INSTRUCTION AND ESSENTIAL OUTPUTS OF THE CROATIAN-JAPANESE RESEARCH PROJECT ON LANDSLIDES

Summary:

This paper highlights instruction and essential outputs of the Croatian-Japanese joint resarch project on landslides. The main objective of the project is to develop an appropriate landslide hazard zoning technology and a formulation technology of land-use guildelines through basic scientific study of landslide mechanism and through landslide risk identification in consideration of Croatian societal and natural conditions. The following items are essential outputs attained through in the framework of the project: (1) Individual landslide topographies in each target areas were identified based on aerial photo interpretation. Further, the danger degree of each individual landslide topography was evaluated by the analytical hierarchy process (AHP) method. (2) Characteristics of movement behavior of targeted landslides were grasped by the comprehensive monitoring systems installed in Grohovo landslide area near Rijeka City and also in Kostanjek landslide area in Zagreb City. (3) Prediction of travel distance for selected representative landslides was carried out using shear strength parameters measured by the newly developed portable ring shear apparatus. (4) prototype hazard maps and risk maps on landslide disasters were developed for selected target areas. (5) Land-use guidelines for target areas were formulated as a final output. As an important follow up output after the official termination of the project, a lumped mass system model with damper is proposed, which enables simulation of moving velocity of landslide.

Keywords:

Croatian-Japanese joint research project, Hazard zoning, Land-use guidelines, Aerial photo interpretation, Analytical hierarchy process, Potable ring shear apparatus, Lumped mass system model with damper.

[5]Prof. Dr. Hideaki Marui,Research Institute for Natural Hazards and Disaster Discovery,Niigata University, Ikarashi-Ninocho 8050, Nishi-ku, Niigata, 950-2181 Japan, maruihi@cc.niigata-u.ac.jp
[6]Dr. Eisaku Hamasaki, Advantechnology Co., Ltd., Kakyouin 1-4-8-1202, Aoba-ku, Sendai, 980-0013 Japan, Hamasaki@advantechnology.co.jp.
[7]Lect. Dr. Gen Furuya, Engineering Department, Toyama Prefectural University, Kurokawa 5180, Imizu, 939-0398 Japan, gfuruya@pu-toyama.ac.jp.