Date of Submission	04 November 2015

IPL Project Proposal Form 2016

(MAXIMUM: 3 PAGES IN LENGTH)

1. **Project Title:** Landslide inventory and Susceptibility map in Durres and Kavaja region

2. Main Project Fields

Select the suitable topics. If no suitable one, you may add new field.

(1) Technology Development

A. Monitoring and Early Warning, B. Hazard Mapping, Vulnerability and Risk Assessment

(2) Targeted Landslides: Mechanisms and Impacts

A. Catastrophic Landslides, B. Landslides Threatening Heritage Sites

(3) Capacity Building

A. Enhancing Human and Institutional Capacities

B. Collating and Disseminating Information/ Knowledge

(4) Mitigation, Preparedness and Recovery

A. Preparedness, B. Mitigation, C. Recovery

3. **Name of Project leader** Prof. Hasan Kulici

Affiliation: (office and position) Director of Engineering Geological department in Albanian Geological Survey (AGS)

Contact: (postal address, fax, phone, email) Rruga e Kavaje Nr 153. Tirane, Albania, 0672053196, hkulici@yahoo.com

Core members of the Project

Olgert Jaupaj Chief of GIS section in Geoinformation department in AGS

Mentor Lamaj Chief of engineering geological section in AGS

Names/Affiliations: (4 individuals maximum)

4. Objectives: The final goal of this project is to create landslide inventory in GIS and to produce a Landslide Susceptibility Map in order to prevent or minimize the loss of life and damage of property and livelihoods caused by landslides. Landslide susceptibility map can be used as supporting information for Local administrators and local inhabitants for a better landuse planning.

5. Background Justification: Albania Geological Survey is the only institution in Albania which is dealing with landslides. For the moment we are only making reports for landslides for Civil Emergency when a landslide occurs in urban area.

6. Study Area: The study is will be in Durres and Kavaja region which have a high frequency of landslides occurrences. The study region includes a high density of local inhabitants and infrastructures

will be concentrated in the future (2 lines maximum; where will the project be conducted/applied?)

7. Project Duration: (1 line maximum) 2 years
8. Resources necessary for the Project and their mobilization

   Personnel, Facilities, and Budgets

   For this project all the department of engineering geological and geophysics will be in our help, also we will have a close cooperation with the faculty of Geology in Albania. We will need: 3 GPS for gathering the coordinates of Landslide crown, 3 photograph camera, 2 laptops for mapping and analysis in ArcGis, 1 HDD to collect all the information from field surveys and a drone.

   The Budget for this project will be approximately 30.000 euro
9. Project Description:
   a. Literature review: Collection of all bibliographic materials and historic information for this area. Collection literature from international scientific and technical journal articles concerning landslides classification system,
   b. Interpretation of landslides occurrences from aerial photographs, Google earth according with field verification
   c. Field surveys for looking new landslides, evaluate the landslide evolution, present state and activity, to confirm the aerial photographic interpretations
   d. Inventory map compilation: Each landslide identified through orthophotos or in the field will be mapped as closed polygon in Arc_GIS
   e. Create a Gis Database for each landslide.
   f. Select landslide causative factors on the basis of previous fieldwork survey and landslide inventory analysis for landslide susceptibility ma preparation
   g. To evaluate the role of landslide causative factors in the study area and prepare input factor
   h. Apply bivariate method for deriving landslide susceptibility map of the study areas.
   i. Based on the final map of the study areas, recommendation for landslide hazard prevention measures will be given in order to help the local community to be prepared and to respond adequately to disasters

10. Work Plan/Expected Results: (20 lines maximum; work phases and milestones)

This project aimed to create database for landslide inventory and to generate a Landslide susceptibility map for Durres and Kavaja. The construction of landslide susceptibility maps represents a significant step towards landslide mitigation in these areas. The Landslide susceptibility map will help the local government for the prediction of the risks. The local government will be in position to propose a land-use planning using this map in order to reduce the landslides risk

11. Deliverables/Time Frame: (10 lines maximum; what and when will you produce?)

	1-3	3-6	6-12	12-14	14-16	16-18	18-21	21-24
Literature review								
Data Acquisition								
Field mapping and investigation process								
Landslide database generation in GIS								
Developing landslide inventory map								
Generation of Landslide Susceptibility map								
Data verification finalization of results								
Final Report								

12. Project Beneficiaries: (5 lines maximum; who directly benefits from the work?
    a. Albanian Geological Survey
    b. Ministry of industries
    c. Albanian Civil Emergency
    d. Local Government

13. References (Optional): (6 lines maximum; i.e. relevant publications)

a. **Group authors, (2008).** *Geology of Albania***,** Albanian Geological Survey
b. **NGUYEN THANH LONG, (2008).** *Landslide susceptibility mapping of the mountainous area in a Luoi district, Thua Thien Hue province, Vietnam,* doctoral thesis, University of Vrije Brussel
c. **Rebekah Gereldene Singh, (2009).** *Landslide classification, characterization and susceptibility modeling in*
d. *Kwazulunatal,* degree of Master of Science, University of the Witwatersrand
e. **Pank JAISWAL (2011),** *Landslide risk quantification along transportation corridors based on historical information,* doctoral thesis, University of Twente
f. **C.J. Van Westen** *Geo-Information tools for Landslide Risk Assessment. An overview of recent developments*
g. **C.J. van WESTEN T.W.J. VAN ASCH R. SOETERS, (2005).** *Landslide hazard and risk zonation —why is it still so difficult?*
h. **Paola Reichenbach, Mirco Galli, Mauro Cardinale, Fauste Guzzeti,Francesca Ardizzone,** *Geomorphological mapping to assess landslide risk: Concepts, methods and applications in Umbria region of central Italy*

Note: Please fill and submit this form by 15 November 2015 to ICL network <ICL-network@iclhq.org>