

## Proposal of the ICL Landslide Monitoring and Warning Thematic Network (LaMaWa Network)

### 1. Name of Thematic Network

The ICL Landslide Monitoring and Warning Thematic Network

### 2. Name of Proposer

#### Affiliation: position

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#### Core members of the activities

Prof. Matjaž Mikoš & Prof. Hirotaka Ochiai & Prof. Željko Arbanas

#### Names/Affiliations

Prof. Matjaž Mikoš, Professor, Faculty of Civil and Geodetic Engineering University of Ljubljana, Ljubljana, Slovenia

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### 3. ICL member organizations (representatives) involved in the Network.

- University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia (WCoE)
- Forestry and Forest Product Research Institute, Tsukuba, Japan
- Croatian Landslide Group from Faculty of Civil Engineering, University of Rijeka, Croatia & Faculty of Mining, Geology and Petroleum, University of Zagreb, Croatia

**Write those organizations (representatives) if further ICL members are expected to join the planned network.**

- China Geological Survey, China (WCoE)
- University of Florence, Department of Earth Sciences, Italy (WCoE)
- La Sapienza Università di Roma, Research Centre on Prediction Prevention and Control of Georisks (CERI) & Department of Earth Sciences, Italy (WCoE)

**4. Objectives for the initial 3 years: (5 lines maximum; what you expect to accomplish?)**

The general objective of the proposed network is to compare experiences in the field of landslide monitoring and installed early warning systems for active landslides in different regions of the world. This objective is to be achieved by: i) setting up of a dedicated web page (within IPL web pages) showing advanced landslide monitoring techniques and by giving a short overview of selected installed monitoring systems for active landslides in the world; and ii) preparing a series of review papers for the journal *Landslides* covering the themes of the network and being prepared jointly by the members of the network (strong international cooperation).

**5. Background Justification: (10 lines maximum)**

In different regions of the world numerous advanced and less advanced techniques for landslide monitoring are being applied more or less successfully. The same is true for early warning systems that have been installed on active landslides. There are numerous reports and research papers or case study reports available on the web, mainly written by the authors from only one country. Our main aim for a thematic network in this field is to try to critically compare different techniques and systems applied from the international point of view (possible transfer of technologies, pros & cons). If we could attract several ICL members that are very active in this field of expertise in different regions of the world, we may expect added value by preparing joint reports on the applicability, pros and cons of different techniques and systems from one's own experiences critically discussed by other experts in the ICL community having experiences in the same field.

**6. Resources available for Network activities (Personnel, Facilities, Budgets, and Contribution to ICL/IPL)****Personel available for Network activities**

ICL member	Personel
University of Ljubljana, Faculty of Civil and Geodetic Engineering	5 senior researchers & 2 young researchers
Forestry and Forest Product Research Institute	
Croatian Landslide Group	2 senior researchers & 5 young researchers

**Facilites available for Network activities**

ICL member	Facilites
University of Ljubljana, Faculty of Civil and Geodetic Engineering	Geotechnical laboratory & Field site with a comprehensive monitoring system (Slano blato & Stogovce landslides);
Forestry and Forest Product Research Institute	
Croatian Landslide Group	Geotechnical laboratory & Field site with a comprehensive automated monitoring system (a complex landslide in the Rječina river valley)

**Budgets available for the propose Network activities and contributions to ICL/IPL**

	Thematic network activities and contributions to ICL/IPL	Budget
1 <sup>st</sup> phase	Organization of the network, web discussions and finally building of a few working groups for selected topics in the fields of landslide monitoring and warning, such as e.g. remote sensing techniques, terrestrial landslide displacements monitoring, advanced warning systems for debris flows, easily managed warning systems, etc. Cooperation with other ICL thematic and/or regional networks where and when needed.	own sources; partially covered as the WCoE activities

2 <sup>nd</sup> phase	Working out of a draft report for each topic, efforts to get more international experts in the specific field to work on the draft, preparation of the final report, publication of the final report as a review paper (tactically as an original paper in the journal <i>Landslides</i> ). Publishing short annual reports as the ICL/IPL activities in the journal <i>Landslides</i> .	own sources; partially covered as the WCoE activities
3 <sup>rd</sup> phase	Publishing joint results on the IPL/ICL web page, disseminating an overview of best monitoring practices (BMP), best warning practices (BWP), and best available technologies (BAT). Taking a decision to proceed with the 1 <sup>st</sup> phase and select new topics to work on them.	own sources; partially covered as the WCoE activities

## 7. Description of past activities related to the proposed network (30 lines maximum).

The IPL-ICL discussed the establishment of thematic and regional (consortia)/networks on landslides at the Secretarial meeting in Kyoto in January 2011, at the IPL-ICL Session of the Global Platform for Disaster Risk Reduction 2011 in Geneva in May 2011, and at the Secretarial meeting in Rome in October 2011 during the 2<sup>nd</sup> World Landslide Forum. After these discussions, finally during the 10<sup>th</sup> session of the Board of Representatives of ICL in October 2011 in FAO several thematic networks have been proposed, and they have also been structured; one of them was the ICL Landslide Monitoring and Warning Network (LaMaWa Network).

University of Ljubljana, Faculty of Civil and Geodetic Engineering (UL FGG) offered the organization role for this thematic network as a WCoE that is involved into monitoring of some active landslides in Slovenia. UL FGG was also involved also into the preparation of a regional ICL Adriatic-Balkan Network, where other aspects of regional cooperation in this region will be discussed. Potentially, University of Rijeka, Faculty of Civil Engineering from Croatia can contribute as an ICL member to the proposed ICL LaMaWa Network by their field expertise in monitoring of the complex landslide in the Rječina river valley. Furthermore, other ICL members & WCoEs (the proposed ones are given in section 3 of this proposal) can join and bring in their expertise in the field of monitoring and warning. Due to rather short time between the 2<sup>nd</sup> WLF in Rome (October 2011) and the 10<sup>th</sup> ICL Anniversary in Kyoto (January 2012), no formal discussions have been finalized so far. Nevertheless, we may take this draft as a starting point and the basis for the formal decision.

## 8. Planned future activities /Expected Results: (20 lines maximum)

The activities in the proposed network for the period of 3 years can be divided into three phase:

- ✚ 1<sup>st</sup> Phase: Organization of the network, web discussions and finally building of a few working groups for selected topics in the fields of landslide monitoring and warning, such as e.g. remote sensing techniques, terrestrial landslide displacements monitoring, advanced warning systems for debris flows, easily managed warning systems, etc. Cooperation with other ICL thematic and/or regional networks where and when needed.
- ✚ 2<sup>nd</sup> Phase: Working out of a draft report for each topic, efforts to get more international experts in the specific field to work on the draft, preparation of the final report, publication of the final report as a review paper (tactically as an original paper in the journal *Landslides*). Publishing short annual reports as the ICL/IPL activities in the journal *Landslides*.
- ✚ 3<sup>rd</sup> Phase: Publishing joint results on the IPL/ICL web page, disseminating an overview of best monitoring practices (BMP), best warning practices (BWP), and best available technologies (BAT). Taking a decision to proceed with the 1<sup>st</sup> phase and select new topics to work on them.

Note: Those who wish joint one or two networks proposed at FAO and written in Page 2 may contact with ICL secretariat. We may inform a group of people proposing the networks.