IPL Project Annual Report 2018
January 2018 to 31 December 2018

1. Project Title: Development of community-based landslide hazard mapping for landslide risk reduction at the village scale in Java, Indonesia (IPL-165)

2. Main Project Fields: Mitigation (conducted in conjunction with IPL Project No IPL-140, IPL-158 and IPL-159).

3. Name of Project leader: Prof. Dwikorita Karnawati
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   Core members of the Project: Names/Affiliations: (4 individuals maximum):
   a. Prof. Teuku Faisal Fathani, Faculty of Engineering, UGM. Center for Disaster Mitigation and Technological Innovation (GAMA-InaTEK) Universitas Gadjah Mada, Indonesia
   b. Dr. Wahyu Wilopo, Faculty of Engineering, UGM. Center for Disaster Mitigation and Technological Innovation (GAMA-InaTEK) Universitas Gadjah Mada, Indonesia
   c. Dr. Hendy Setiawan, Faculty of Engineering UGM. Center for Disaster Mitigation and Technological Innovation (GAMA-InaTEK) Universitas Gadjah Mada, Indonesia
   d. Mr. Suharman: Dept. of Sociology, Faculty of Social and Politics, UGM

4. Objectives: (5 lines maximum)
   To provide simple, practical and communicative landslide hazard map, which is developed through community participation.

5. Study Area: (2 lines maximum):
   at 30 districts at Java, Sumatera, Sulawesi, Kalimantan and Bali Islands


7. Report

   1) Progress in the project: (30 lines maximum)
   A community-based landslide hazard mapping has been implemented in several pilot sites in Karanganyar District, Banjarnegara District, Trenggalek District and at another 30 districts at Java,
Sumatera, Sulawesi, Kalimantan and Bali Island together with the community empowerment program through public education. The proposing of this map is very important to support the landuse planning as well as landslide mitigation and early warning. In order to reduce the risk of landslide at the village, a community landslide hazard map needs to be developed. The landslide hazard map provided by the National Agency for Disaster Management (BNPB) with the regional scale for most vulnerable region in Indonesia is not applicable for the mitigation program at the village level. Therefore, it is very challenging to provide a community landslide hazard map which is quite simple to be prepared, and also user friendly for the mitigation actions at the village.

Community participation for landslide hazard mapping was carried out in order to identify the potential landslide zone, therefore the risk of landslide can be reduced. The mapping was conducted by community task force for the period of two months under the guidance of student community services program from Gadjah Mada University, Indonesia. The existing documentation map, illustrating the locations of houses, road and the landuse within the region of village, was used as the base map of this mapping. This community hazard map, landslide mitigation efforts, evacuation procedures and other related information for public awareness can be published on an information board placed at several locations at landslide vulnerable area. This community-based landslide hazard mapping for landslide risk reduction has been adopted into Indonesian Standard SNI-8235-2017: Landslide Early Warning System and ISO 22327-2018: Guideline for the implementation of community-based Landslide Early Warning System.

2) Planned future activities or Statement of completion of the Project (15 lines maximum)
A community landslide hazard mapping will be conducted again in several pilot sites in West Java Province, East Java Province, Central Java Province, Sulawesi and Bali by integrating this mapping activity into a student community service program for landslide mitigation for the period of 2 months starting from early July to end of August 2018. The method of mapping that will be conducted is the same as those conducted previously in Karanganyar, Banjarnegara, Trenggalek Districts.

3) Beneficiaries of Project for Science, Education and/or Society (15 lines maximum)
   a) The local community and the local authority in the landslide prone area will obtain the benefit by having capacity and capability to conduct a simple landslide hazard mapping, which will be very important for supporting the landuse planning as well as the landslide mitigation and early warning in their living area.

   b) The local as well as the national agency for disaster management will take the benefit by having scientific support for landslide hazard mapping and disaster risk reduction at the village level.
c) The students involved in the community service will obtain an opportunity to improve their capacity to apply their knowledge about landslide hazard mapping into the practical action to solve the real landslide problem in the field.

d) The research and teaching staff involved in this project will have an opportunity to test the performance of smart grid for landslide hazard mapping.

4) Results: (15 line maximum, e.g. publications)

2. SNI-8235-2017: Landslide Early Warning System. Indonesian Standardization Agency


