

## **A preliminary study of seismic risk assessment shortly after the Banjarnegara Indonesia earthquake on 2018**

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### **ABSTRACT**

This paper presents a preliminary study of seismic risk assessment in Kertosari village, Kalibening Subdistrict, Banjarnegara District, after the earthquake incident on 18th April 2018. The study was based on Hazard US (HAZUS) with Damage Probability Matrix to estimate losses of damage state with model building type (Reinforced Concrete Moment Resisting Frames-Low Height (C1L), Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms-Low Height (RM1L) and Reinforced Masonry Bearing Walls with Precast Concrete Diaphragms (RM2L)). From the results, the probability calculation of damage in Kertosari Villages, moderate damaged category is the most. Other damage categories are slight, extensive, complete and none. Meanwhile, based on site preliminary survey and data from Banjarnegara Municipal Disaster Management Authority [1] which has updated on 20th April 2018 in Kertosari village, complete damaged category is the most. Therefore, it is necessary an expert's judgment to refine building type model and the criteria of damage state for compatible Indonesian building.

### **KEYWORDS:**

Preliminary study; Seismic risk assessment; Banjarnegara Indonesia