

KAJIAN PENATAAN RUANG KAWASAN RAWAN BENCANA LONGSOR KECAMATAN SOMAGEDE KABUPATEN BANYUMAS

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ABSTRACT

Somagede Sub-district is located in east region of Banyumas Regency, Central Java Province with altitude between 25 – 775 meters above sea level and its morphology consist of flatland to rough relief hills. Somagede Sub-district is one of several sub-districts which have susceptibility against landslide hazard. To anticipate, to prevent, and to reduce the possibility of landslide occurrence and to minimize the damage, an effort is needed to manage the spatial utilization as one of mitigation method.

This research is conducted using Ministry of Public Works Regulation No.22/PRT/M/2007 of spatial planning of landslide prone area and the application of Geographical Information System (GIS) as its guidance. Typology of potential landslide zone in the research area is differed into 3 types, that is Typology A (slope gradient > 40%), Typology B (slope gradient between 20% - 40%), and Typology C (slope gradient between 0% - 20%). Landslide susceptibility level indicators consist of slope gradient, soil condition, geological structure, rainfall intensity, slope water system / groundwater potential, seismicity, and vegetation. Landslide vulnerability level indicators consist of cropping pattern, excavation and slope cutting, pond, drainage, construction works, population density, and mitigation effort. The stage of weighting and scoring of each indicator is done in accordance to Ministry of Public Works Regulation No.22/PRT/M/2007 and modification value according to the research area condition.

The results of this research are landslide susceptibility map based on natural physical aspects, landslide vulnerability map based on human activity aspects, landslide risk map, potential landslide zone classification map of Somagede Sub-district, guidance of spatial structure plan, guidance of spatial pattern, and guidance of spatial zonation/utilization. Areas with high level of landslide risk are Kemawi Village, Kanding, Klinting, Piasa Kulon, and Somagede. Such area is directed to be used as protection region, and area with medium and low level of landslide risk can be used as cultivation region with several regulations. In general, landslide hazard aspect has been taken into account in the spatial planning of landslide prone area in Somagede Sub-district. Socialization, implementation of zonation regulation, allocation of incentive and disincentive, and the establishment of Regional Spatial Planning regulation should be done immediately to reduce the impact and the possibility of landslide occurrence.

Keywords:

vulnerability map, susceptibility map, risk map, potential landslide zone map, spatial planning