Integration Data and Applied Geographic Information System (GIS) Management for Landslide at Amphure Pai, Mae Hong Son

DuangKaew S., Promasakha K. Phetvirotchai P., Sukhunthamart N.,
Luktong S.,Pairotkun K., Putimongkoncharean J., Tonsuwandee N.

4353 Numerical Weather Prediction (NWP), Thai Meteorological Dep. (TMD),
Sukhumvit Rd., Banngna, Bangkok, 10260. Tel. 02-7445442 (Office), 081-7765784
Email: promasakha@yahoo.com or promasakha@tmd.go.th

Abstract

Natural disasters as tropical cyclone, earth quake, flash flood, flood, droughts and landslide are dangerous for life, property and economics of Thailand in every year. Landslide is one of the natural disaster that makes the most destroy. Besides, parameters that cause land slide are heavy rain and the change of landuse every year due to the forest area has been changed to agriculture filed. Therefore, landslide occurred from characteristic of geology, meteorology and landuse. The technique used weighted factors index by fix parameters that consider factors. The first is climate factor as accumulated rain. The second is physical factor as slope topography, characteristic landuse, characteristic mineral and soil. Results showed higher resolution of risk area map through villages that composed of five category risk area as follows: very strong risk area, strong risk area, moderate risk area, weak risk area and very weak risk area. The technology applied geographic information system (GIS) used to landslide management. The technique can respond to the faster events of landslide, and it can fixed area of landslide with plot Amphure Pai, Mae Hong Son through villages in output of risk area map. Therefore, it can used to preparing and reduce of life and property from landslide.