

## ABSTRACT

Disasters are events that can threaten and disrupt people's lives and livelihoods. The territory of Indonesia is most vulnerable to disasters, one of which is a landslide that often occurs during periods of high rainfall. Therefore an action is needed to minimize the impact and risk of hazards carried out before an emergency or disaster occurs, this action is known as disaster mitigation.

Landslide mitigation systems are built and implemented in landslide-prone areas, to anticipate the worst possible impact of the disaster. The system utilizes remote communication technology using LoRa as a method of Radio Frequency communication and internet connectivity between sensor objects and servers. Web applications that are connected to the database are used to alert and report on the latest developments in landslide-prone areas in real-time over long distances. The web application can make it easier for authorities to cope with disasters that occur in real-time so that the public can always be ready when a landslide occurs at any time.

Based on the results of testing web applications that are made appropriate to be used are relevant to the ISO/IEC 9126 model standards. The average delay value for each data change in the real-time database until the data recorded during testing is 1,66 seconds, is not relevant to the ITU-R M.1079-2 standard recommendations. Based on the results of the questionnaire, as many as 72.6% of respondents answered this application interesting to use and this application can run according to its function.

**Keywords:** Internet of Things, Real-Time Database, Disaster Mitigation, Land Slide