



ID: P3.5-501

Type: E-poster

Implications of Limestone Mining to Noise Level on The Site KAPI (CTBTO) with Analysis of Power Spectral Density

Limestone mining activity close to site KAPI (CTBTO) has been clearly visible through the land clearing from satellite imagery. The BMKG Region IV Makassar team has visited the site to analyze noise from heavy equipment activities that operating around the site, consisting of a bucket excavator on 25 August 2023 and a breaker excavator on 23 January 2024. Noise from the activities of these two types of excavator is recorded by broadband seismometer Nanometrics Trillium 360 (KAPI_00) at depth ± 61 m and Trillium 120 PH (KAPI_10) at depth ± 7 m. The purpose of this study is to analyze the effect of limestone mining activities on the noise level of two KAPI sensors placed at different depths. The background noise on KAPI is processed using power spectral density and compared with the results of background noise recording during quiet conditions on 25 March 2022, before the mining started. The analysis shows an increased amplitude of spectral density for all components at sensor KAPI_00 and sensor KAPI_10 after the operation of mining activities. Other interesting things found that the sensor KAPI_10 have recorded a significant increase in period less than 0,1 s compared to sensor KAPI_00.

E-mail

armansyah@bmkg.go.id

Primary author: Mr ARMANSYAH, Armansyah (Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG))

Co-authors: Mr DANIARSYAD, Gatut (Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG)); Mr SLAMET, Irwan (Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG)); Mr JAMRONI, Jamroni (Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG))

Presenter: Mr ARMANSYAH, Armansyah (Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG))

Session Classification: P3.5 Analysis of Seismic, Hydroacoustic and Infrasound Monitoring Data

Track Classification: Theme 3. Monitoring and On-Site Inspection Technologies and Techniques: T3.5 Analysis of Seismic, Hydroacoustic and Infrasound Monitoring Data