

ABSTRAK

This study analyzes railway noise levels in Saungnaga Village, Baturaja Barat District, Ogan Komering Ulu Regency, aiming to quantify noise exposure, map its spatial distribution, and assess community perception. Noise measurements were taken with a Sound Level Meter (SLM) at three sites, each with measurement points at 5 meters, 10 meters, and 15 meters from the track. Measurements covered 24-hour cycles divided into daytime (06:00 WIB –22:00 WIB) and nighttime (22:00 WIB –06:00 WIB) periods; resulting L_s , L_m , and 24-hour equivalent levels were computed and visualized using Surfer and Google Earth Pro to produce noise contour maps.

Results indicate 24-hour equivalent levels (L_{sm}) ranging approximately from 65.9 to 87.3 dBA across locations and distances, consistently exceeding the residential standard of 55 dBA. Structured interviews with 30 local residents corroborated the technical findings, with most respondents reporting disturbance from train noise. The study recommends increasing measurement density in future work and evaluating the feasibility of noise-barrier installations to mitigate community exposure.

KEYWORDS: RAILWAY NOISE; NOISE MODELING; SOUND LEVEL METER; NOISE MAPPING; COMMUNITY PERCEPTION