ABSTRACT

Fishermen's limited access to communication technology, including the floating fish chart monitoring system, is still not good, this makes it difficult to exchange information between fishermen and limits the effectiveness of the floating fish chart monitoring system. Therefore, this study aims to analyze the Long Range (LoRa) network communication system in the context of a floating fish chart monitoring system. This research method involves calculating the link budget theoretically and simulating using online mobile radio software. From the calculation of the link budget with distances between transmitter and receiver as far as 1.2 km, 1.8 km, and 3.8 km, with a frequency of 915 MHz, as well as predetermined antenna parameters and antenna height, FSL values of 93.26 dB, 96.78 dB, and 103.27 dB, RSL values of -63.36 dB, -66.88 dB, and -78.47 dB, with EIRP values of 24.9 dB and MAPL values of 172.9 dB. Although the results of the link budget calculation show a good value, the coverage planning simulation shows that there are several zones with poor signal quality. From the results of calculations link budget and simulation coverage planning that has been carried out, it can be concluded that the Long Range (LoRa) network communication system shows great potential in supporting the floating fish chart monitoring system in the territory of Indonesia.

Keywords: *floating fish platform, link budget, long range (LoRa), coverage planning .*