

ABSTRACT

The beach is a transitional area between land and sea that is influenced by the lowest low tide and the highest high tide. The beach is an area densely populated with human activities such as tourism, industry, settlements, capture fishing, ports, transportation facilities, and various other activities. One of the beaches that is frequently visited and has a variety of human activities is located at Kuala Jangka Beach in Bireuen Regency. The increasing productivity in coastal areas has led to environmental problems caused by the entry of pollutants into the water column, which can result in the decline of water quality, disrupt marine activities, and pose risks to human health. The pollution index is one of the methods used to determine the quality status of a body of water. The benchmark for determining water quality standards is analyzed based on the concentration of measured elements and in accordance with the standards specified in the quality benchmark. The study aims to analyze the water quality and pollution index based on oceanographic parameters in the coastal area of Kuala Jangka, Bireuen Regency. The research is expected to provide benefits in the form of information to the public and readers regarding the condition of water quality and the pollution index in the coastal area of Kuala Jangka, Bireuen Regency. The method used in the research is a survey method with the determination of station points through purposive sampling. There are 7 oceanographic parameters used in calculating the pollution index, namely odor parameter, brightness, temperature, salinity, pH, DO, and BOD. The analysis results of the pollution index indicate that the Kuala Jangka beach in Bireuen district at stations 1, 2, 3, and 4 is classified in the lightly polluted category based on the establishment of seawater quality status for marine biota.

Keywords: Kuala Jangka beach in Bireuen Regency, oceanographic parameters, pollution index, water quality