

## **ABSTRACT**

This study aims to assess the biophysical characteristics of the turtle nesting habitat at Paku Beach, Jangka District, Bireuen Regency, as a basis for conservation efforts. Turtles play a vital role in coastal ecosystems, but their population continues to decline due to egg harvesting, habitat destruction, and coastal development. Although Paku Beach still has potential as a nesting site, its management is not yet optimal. The research was conducted in November 2025 through a field survey using a purposive sampling method at two stations: one in a vegetated area and one in a non-vegetated area. Observed parameters included beach slope, sand temperature and humidity, substrate fraction, and coastal vegetation. Data analysis used weighting and scoring methods to assess habitat suitability. The research results show that the biophysical conditions of Paku Beach are quite supportive of turtle nesting activity, characterized by a gently sloping beach, suitable sand temperature and humidity, a fine sand substrate, and the presence of coastal vegetation such as pandan laut. An evaluation score of 80% indicates that Paku Beach is quite suitable as a turtle nesting habitat and requires sustainable management and conservation.

**Keywords:** Biophysical characteristics, Conservation, Nesting habitat, Paku Beach, Turtle.