

ABSTRAK

Pelabuhan Perikanan Tanjung Adikarto terletak di Daerah Istimewa Yogyakarta. Perairan pelabuhan tersebut telah terjadi sedimentasi yang diduga salah satu akibat dari pengaruh gelombang. Penelitian bertujuan untuk mengetahui karakteristik gelombang dan *bedload* sedimen, serta untuk mengetahui hubungan gelombang dengan *bedload* sedimen di perairan tersebut. Penelitian dilakukan pada bulan Oktober 2018 dengan mengunduh data gelombang dari *European Centre for Medium-range Weather Forecast* (ECMWF) dan sedimen dikoleksi mingguan pada 6 stasiun menggunakan *bedload sampler*, selanjutnya di petakan menggunakan *ArcGIS*. Karakteristik gelombang yaitu tinggi gelombang rata-rata (H_s) dan periode gelombang signifikan (T_s) dianalisis menggunakan formula gelombang resepresentatif. Sampel sedimen yaitu *bedload* dan fraksi sedimen dianalisis di laboratorium Teknik Sipil Universitas Jenderal Soedirman Purwokerto dengan menggunakan metode ayak kering. Fraksi sedimen diperoleh pasir kasar, pasir sedang, dan pasil halus. Tinggi gelombang signifikan (H_s) dan periode gelombang signifikan (T_s) di perairan Pelabuhan Tanjung Adikarto diperoleh 0,85 m dan 4,72 detik. Massa rata-rata *bedload* sedimen pada setiap stasiun diperoleh rata - rata 600 gr dan jenis sedimen didominasi oleh pasir sedang. Tinggi gelombang berpengaruh terhadap berat *bedload* sedimen ($P < 0,05$) atau mempunyai nilai hubungan -88%.

Kata Kunci : Gelombang, Sedimen, Pelabuhan

ABSTRACT

Tanjung Adikarto Fishery Port is located in the Special Region of Yogyakarta. The waters of the port have occurred sedimentation which is thought to be one of the effects of the waves. The study aims to determine the characteristics of waves and sediment bedload, and to determine the relationship of waves to sediment bedload in these waters. The study is conducted in October 2018. Wave data are collected from the European Center for Medium-range Weather Forecast (ECMWF) and sediments are collected weekly at 6 stations using a bedload sampler, then mapped using ArcGIS. The wave characteristics namely average wave height (H_s) and significant wave period (T_s) are analysed by wave representative formula. Sediment bedload and sediment fraction are analyzed in the Civil Engineering laboratory of Jenderal Soedirman University, Purwokerto using the dry sieve method. Sedimentary fraction were obtained coarse sand, medium sand, and fine sand. Significant wave height (H_s) and significant wave period (T_s) was found 0.85 m and 4.72 seconds. The massa average weight of sediment bedload at each station was obtained 600 gr and the sedimentary types are dominated medium sand. Wave height affects to the weight of sediment bedload ($P < 0.05$) or has value of influence -88%.

Keywords: *Wave, Sediment, Port*

