

Penelitian ini bertujuan untuk mempelajari penyebab terjadinya penutupan sedimen di Muara Sungai Bogowonto dan faktor-faktor yang menyebabkan terjadinya penutupan sedimen muara sungai tersebut, dan untuk mempelajari karakteristik sedimen yang menyebabkan terjadinya penutupan di muara sungai tersebut. Penelitian dilakukan dengan metode survey, dan teknik pengambilan sampel dilakukan dengan metode *systematic sampling*. Data yang dikumpulkan meliputi arah dan kecepatan angin, unsur-unsur gelombang (periode, tinggi, kecepatan, panjang gelombang). angkutan sedimen, serta data sedimen. Hasil penelitian terlihat bahwa arah angin saat musim kemarau cenderung bertiup ke Barat hingga Barat Laut, yang mengakibatkan arah gelombang dan arah arus pantai juga ke arah Barat sehingga angkutan sedimen yang terjadi juga ke arah Barat. Arah dan kecepatan angin berperan dalam menentukan besar kecilnya serta arah gelombang dan arus pantai. Arus sepanjang pantai dan parameter gelombang merupakan faktor yang paling berperan dalam proses deposisi.

Berdasarkan pengkajian parameter statistik ukuran butir sedimen menunjukkan bahwa rerata ukuran butir sedimen di daerah penelitian termasuk ke dalam tekstur pasir terdiri dari pasir kasar hingga pasir sangat halus. Di muara dan daerah dekat muara mempunyai nilai rerata ukuran butir yang lebih besar dan semakin jauh dari muara sungai rerata ukuran butirnya semakin besar. Rerata ukuran butir yang besar mencerminkan tenaga pengangkut yang semakin besar. Kecepatan tenaga pengangkutan saat pengendapan sedimen di muara sebesar 4,1 cm/detik. Semakin besar rerata ukuran butirnya maka kecepatan pengendapan juga akan semakin besar pula. Nilai kemencengan dari simetris hingga sangat positif. Kemencengan di muara dari positif hingga sangat positif dan semakin menjauhi muara kemencengan menjadi simetris, dan kemungkinan persentase ukuran butirnya merata. pemilahan sedimen di daerah penelitian termasuk ke dalam kelas pemilahan cukup baik (*Moderately well sorted*) yaitu berkisar antara 0,50 – 0,70 dalam skala phi. Berdasarkan hasil dari nilai pemilahan tersebut dapat dikatakan bahwa tenaga yang bekerja pada saat terjadi proses pengendapan cukup kuat.

Tekstur yang seragam mengindikasikan bahwa di daerah penelitian didominasi oleh satu proses, yaitu akibat proses marin meskipun juga diikuti dengan proses yang lain yaitu proses eolin dan proses fluvial. Tanpa proses eolin dan proses fluvial tersebut tidak akan terjadi pengendapan. Nilai kelancipan menunjukkan bahwa contoh sedimen mempunyai kelas kelancipan datar yaitu antara 0,89 hingga 1,00 skala phi, yang berarti bahwa agihannya normal atau tersebar secara merata.

Aim of the research is to understand the causes of closing bogowonto river mouth by sediment, as well as factors causes of that processes. Closing Bogowonto river mouth could be caused by factors like a speed, wave, tides, longshore current, and sediment transport. Also, the research was purpose to understanding the sediment characteristics in the river mouth and surrounding as well as the deposit environment. Survey method was use in this research and technique of sample was taken by systematic sampling method. Data collected are direction and wind speed, wave element (period, high, speed, wavelength) transport sediment, and also sediment data. The result of research showed that the wind direction of dry season moment tend to blow from west to northwest, which have been causing wave direction and instructed the longshore current also directed to west so that the transport sediment directed to west also. Direction and wind speed represent to determine the amount of wave direction and longshore current. Longshore current and wave parameter represent the main factor of depositional process.

Based on the studied of statistic parameter size measure grain sediment indicated that the average of size measure of grain sediment in research area is including into sand texture composed by the harsh sand to smooth sand. In the river mouth and area which close to river mouth have the value size measure average grain is even greater. The transport power and deposition in river mouth greater and more further from river mouth the transport power is smaller. The speed of sediment depositional in estuary amount 4, 1 cm/second. More greater the value of size measure average so the depositional speed will also greater. The value of skewness from simetric to very positive. Skewness in river mouth from positive to very positive and more further from estuary skewness become simetric and percentage probability the size of grain sediment sortation in research area include moderately well sorted class, which is between 0, 5-0, 7 on phi scale. Based on result from sortation value could be defined that power which worked when deposition process happened strong enough.

Uniformity texture indicate that in research area dominated by one process, which was caused by marine process, although also followed by eoline process and fluvial process. Without both process won't be happen the deposition. the value of kurtosis showed that the sediment example include kurtosis as flat between 0, 89 to 1, 00 on phi scale. It's mean that the spread is normally.