KHOIROL IMAM FATONI. Tidal chart and tidal propagation pattern in the Indonesian Seas. Under the supervision of I WAYAN NURJAYA and AGUS S. ATMADIPPOERA.

Understanding of the tidal phenomenon could support in management of marine resources. Since the tidal pattern is different for each region, it needs to be presented in an informative media like tidal chart, showing an information co-tide, co-range, and tidal type contours. This study aims to investigate tidal wave propagation, distribution of major tidal harmonic constants, and areas that have the same tidal type in Indonesia waters. The major tidal harmonic constants data (M2, S2, N2, K2, K1, O1, and P1) were obtained from Indonesian Naval Hydrographic Office (Dishidros TNI AL). The method used to interpolate values of major tidal harmonic constants is spline interpolation. Software implemented to create contour is terramodel. The results showed that the semidiurnal tidal wave propagate mainly from the Indian Ocean into interior Indonesian seas through Malacca Strait, Sunda Strait, Lombok Strait, Sawu Sea and Arafura Sea. Contours of tidal constants in shallow waters are more tightly than that in the deep waters, from Natuna Sea to Bangka Belitung waters there exists four types: diurnal, mixed tide prevailing diurnal, mixed tide prevailing semidiurnal, and semidiurnal. However, in general tidal type in Indonesia waters is dominated by mixed tide prevailing semidiurnal, because it is situated between the Indian and Pacific Oceans where mixed tide prevailing semidiurnal type is dominant.

Keywords: tidal chart, co-range, co-tide, tidal type, tidal propagation.