ABSTRACT

This research was conducted in coastal area of Ternate City intending to: (a) investigate causal factors of degrading physical environment in coastal area of Ternate City, (b) analyze process of degrading physical environment and interaction of environmental components, and (c) investigate impacts of degrading physical environment occurring in coastal area of Ternate City.

Focus of research is widely associated with hydrooceanographic and geomorphologic indicators emphasizing on degrading environment on physical aspects, especially factors, processes, and impacts occurring in coastal area of Ternate City. Approach used in this research was ecologic approach. This research used survey method taking nonrandom samples with *purposive sampling*. Locations of observation, measurement and sample taking conducted in east coast of Ternate City.

Results of research showed: causal factors of degrading physical environment in the coastal area of Ternate City, were wind, wave, current, and low and high tides. Findings of research such as (a) dominantly degrading physical environments in the coastal area of Ternate City were coastal erosion, sediments, and salt water intrusion into groundwater. Coastal erosion was caused by effects of destructive wave, rock and sand mining in coasts conducted by people living in the area. Sediments, in the coastal area of Ternate City, were caused by products of erosion in upper area as result of land opening and coastal reclamation, (b) there were differences of sedimentary granule sizes between sediments in Salero and Kalumata Shores. Sediments, in Kalumata Shore, had coarser materials, structured from very fine to fine pebbles. The different granule sizes indicated that wave energy and resulting process in both shore were different, and (c) huge mines of C-digging land in the upper area in Sangaji village and Top Kalumata as building material sources and building-raw materials of coastal reclamation which have been conducted in the coastal area of Ternate City indicated that there was gradation occurrence in upper area. Coastal erosion and deposition changed coastal lines being backward and frontward Shore in the coastal area of Ternate City. Coastal erosion, deposition and rubbish accumulation had impact on degradation of biotic components, such as, coral reef, seagrasses and mangrove. Coral reef and mangrove in Kalumata Shore was damaged because covered by sediments and rubbles. Coastal erosion had impact on the vanish of mangrove in Manggadua, Fitu, Sasa, and Gambesi Shores.

Keywords: coastal area, deposition, coastal erosion, salt water intrusion, and coastal reclamation