

Marine activities and Delineation Zones: In the context of Marine Geospatial Data Infrastructure (MGDI) decision

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SUMMARY

Malaysia waters within her maritime areas are endowed with a number of natural and anthropogenic resources that span from the shorelines to the boundaries of her maritime zones with other neighbouring countries. It is a marine environment that is characterised with complex and multi-dimensional marine activities, particularly in the context of marine geospatial data infrastructure (MGDI). Decision making in such complex environment requires multiple alternative solutions for a number of diversified evaluation criteria that are suited for effective, efficient, and informed decisions for these activities. The objective of this paper is to highlight the efficacy of the 'MGDI decision' concept in assessing marine activities that are general to marine environment and peculiar to Malaysia waters within her maritime delineation zones (MDZs). The activities are reviewed, categorised into two (traditional and non-traditional) and ranked by marine experts according to their importance. Further evaluations of these characterisations of marine environment based on MGDI initiative were assessed by importance weights criteria through implementation of dynamic analytic hierarchy process model wherein five of the MDZs were used as the alternatives (ALT.1_Internal Waters, ALT.2_Territorial Sea, ALT.3_Contiguous Zone, ALT.4_Exclusive Economic Zone, ALT.5_Continental Shelf and High Seas). Results revealed the relative level of significance or weight of 180 variables that optimally showed Malaysia Territorial water (MTW) to be the most viable MDZ for the marine activities.