A conceptual model for marine cadastre for Sri Lanka

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Sri Lanka is a maritime nation situated in one of the most strategically important locations in the Indian Ocean. With the present growth in socioeconomic developments in the country, many opportunities are foreseen toward the marine environment. From the conventional activities like fishing, navigation, tourism and new environment requirements like marine parks, archeological sights and also with the ongoing hydrocarbon exploration activities, a whole new era in marine activities will unfold in the coming years. There will be new challenges and issues and concerns in terms of administration, managing and jurisdictions such as rights, responsibilities and restrictions over different marine zones. Sri Lanka has established its marine regions as defined under United Nations Convention on the Law of the Sea (UNCLOS) and submitted for claims, utilization and managing. Now there is a great demand for having an information system that can facilitate the visualization of the effects of the jurisdictions that one can have in a marine environment. Cadastre system will define and describe the spatial extents and their associated rights, restrictions, responsibilities and administration. When it comes to Marine Cadastre, it is totally different from the Land Cadastre as there is no evidence of the physical boundaries, which leads to confusion and conflicts. In this paper a conceptual model is developed and discussed to successful implementation of the marine cadastre for Sri Lanka. Through this model, various development stages involved in the marine cadastre development can be clearly identified. Finally, it is concluded that it must be done through a spatial database using object oriented approach.

Keywords: maritime boundaries, marine cadastre, Geographic Information Systems, Hydrography

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