

In Pursuit of Marine Geospatial Data Infrastructure

Hydrographic data are usually characterised by their geospatial nature, with tremendous and huge amounts of information that are usually abundant but are not adequately maintained, managed and represented for effective decision making. Such decisions are required at all hierarchies of governance – local, state, national, regional and at the international levels – particularly those relating to issues that are of interest to the maritime domain. It is therefore important to pursue the means of addressing these problems.

The Marine Geospatial Data Infrastructure (MGDI), Marine Cadastre, Marine Administration or the Coastal Data Infrastructure is the new paradigm that caters for the above problems. It is a subset of the well known National Spatial Data Infrastructure (NSDI) and can be established at any of the levels of governance, though it is more of a collaborative and long term activity that must involve different stakeholders in the hydrographic communities.

The development of the MGDI should therefore be given priority by any of the organisations that had already fully developed the NSDI. It is also noticeable that more attention and funding are geared towards the development of the NSDI than the marine aspects. It has been given some recognition and there are developments in some parts of the world including Asia Pacific, Australia, Canada, Europe, and the United States, but it is yet to be given the attention it deserves in many other parts of the world. It is therefore important that necessary and adequate awareness be given to the Marine Geospatial Data Infrastructure, Marine Cadastre, Marine Administration or the Coastal Data Infrastructure concepts by the hydrographic communities, particularly through an enhanced approach by the International Hydrographic Organization in line with the S-100 issues, hydrographic institutions, hydrographic offices, naval offices, hardware vendors, hydrographic software developers such as CARIS and QPS, and other private and public establishments and stakeholders.

Since marine resources in the water bodies are diverse, the application areas of the Marine Geospatial Data Infrastructure, Marine Cadastre, Marine Administration or the Coastal Data Infrastructure also abound in the hydrographic communities ranging from data exchange, data sharing, data security, data standards and metadata (including S-100), maritime security, protection of classified data, artifacts and infrastructures, marine transportation, fisheries, geotechnical, geosciences and surveys, ocean delineation, oil blocks demarcation and decision making. It also has attendant issues such as technical, legal, political and institutional.

The importance that can be derived from MGDI should therefore be given the necessary attention by all coastal states so as to maximise their national interest for sustainability. It is therefore expected that the hydrographic training institutions should continuously strive toward striking a balance in their curricula and training modules toward this new trend in the capabilities offered by the richness of the Marine Geospatial Data Infrastructure. Likewise, the various hydrographic offices and marine agencies of various countries should take the MGDI initiatives seriously and pay them sufficient attention in their various operations.