

# **Marine Cadastre in Europe**

**a preliminary study**

Brief edition  
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# Introduction

## Marine Spatial Data Infrastructure (MSDI)

Closely related to the concept of the Marine Cadastre, is the notion of the **Marine Spatial Data Infrastructure (MSDI)**. According to the International Hydrographic Organization (IHO, 2011), *“Marine Spatial Data Infrastructure (MSDI) is the component of an SDI that encompasses marine geographic and business information in its widest sense. This would typically include seabed topography, geology, marine infrastructure, resources utilisation, administrative and legal boundaries, areas of conservation, marine habitats and oceanography” (IHO, 2011). MSDI places emphasis on the unlocking of hydrographic and all the other marine geospatial information”.*

In fact, the **Marine Cadastre is considered as a base layer of a MSDI with fundamental information relating to maritime boundaries and associated rights and responsibilities**, regularly updated and maintained (FIG, 2006). The role of the Marine Cadastre as a data layer in a marine SDI has been addressed in the international workshop on Administering the Marine Environment held in Malaysia in 2004. The workshop recommended, in an analogy to a “Land Administration System”, to adopt the term **“Marine Administration System”** for the *“administration of rights, restrictions and responsibilities in the marine environment with the spatial dimension facilitated by the Marine SDI*. The workshop further recommended that *“a Marine Cadastre is defined as a management tool which spatially describes, visualizes and realizes formally and informally defined boundaries and associated rights, restrictions and responsibilities in the marine environment as a data layer in a marine SDI, allowing them to be more effectively identified, administered and accessed (PCGIAP-WG3 2004)”*. In order to avoid management gaps in the coastal zone, the workshop promoted the idea of a **seamless SDI** that includes data from land, coast and marine environments to enable the access and sharing of data between those environments to be improved.

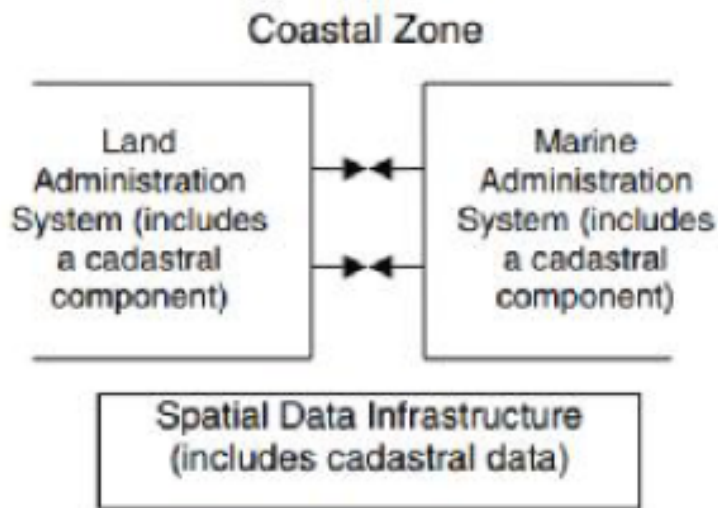


Figure 2: The spatial dimension in the marine environment (FIG, 2006)

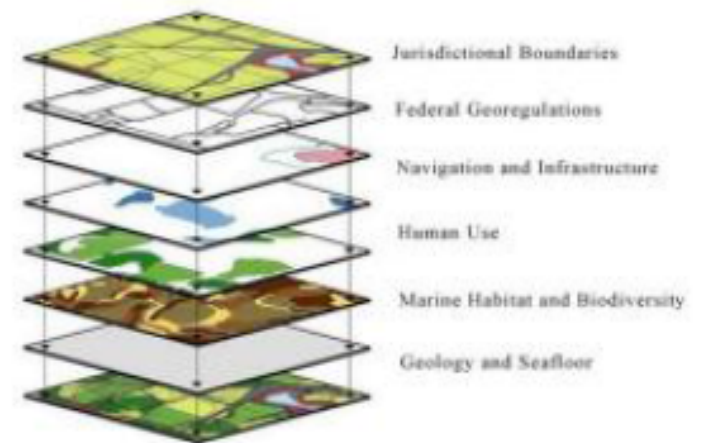


Figure 3: Marine Spatial Data infrastructure themes (Fowler et al., 2011)

As with Spatial Data Infrastructures, the field of the MSDI is very wide with a lot of related technological developments and applications. However compared to SDIs, the Marine SDI has not yet taken a stance nor the terrestrial SDI, because the subject of MSDI is still new (Tares M., 2013). Nevertheless, it has been argued further that even though the number of MSDI themes is currently relatively small in number, it's likely to increase as understanding and new activities evolve in the marine environment (Tares, M. 2013).

## 4. Main conclusions and way forward

### Main conclusions



### 3

**The Marine Cadastre is a base layer of the Marine Spatial Data Infrastructure offering fundamental information relating to maritime boundaries and associated rights and responsibilities, regularly updated and maintained.**

However the study identified that the MSDI is at an early phase in Europe. It is anticipated though that as the need for boosting the 5 sectors of the Blue Economy gains increased focus at the EU level, more information systems will be developed in the Member States. Subsequently, the need for authoritative data relating to boundaries and spatial extents of rights associated with human activities in the sea will increase in the near future.