

Regulations and Utilizations for 3D Marine Cadastre in China

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SUMMARY

Marine developments and utilizations have attracted more attentions and various sea industries have developed in many sea areas in different forms. Challenges happen when marine use changes from sole use to multiple uses, especially different uses in different depths. To meet the requirements China has enacted and enforced several regulations to manage and register 3D marine cadaster.

Traditional 2D marine management treat the marine parcel as a full sole space from sea surface to bottom sea subsoil, which couldn't distinguish the different 3D space of sea surface, sea water, seabed and subsoil with different depths/elevations. So, without the 3D space description and 3D RRRs (rights, responsibilities and restrictions) in sea ares, it couldn't facilitate the 3D marine utilization.

To promote the developments of marine resources and sea areas, many regulations have enforced to give clear definitions in certain fields. State Oceanic Administration of China (SOAC) (part of Ministry of Natural Resources of China) issued the management regulation on sea area use about offshore wind farm in 2016 and put forward 3D sea with multiple layer registration and management to deal with submarine cable and site place that facilitated the development of offshore wind power. In 2019, the State Council of P.R.China motioned to explore 3D multiple-layer marine RRRs, and claimed that multiple-layer marine RRRs can be issued for sea surface/above, sea waterbody, seabed and sea subsoil in the Implementation Plan for the Comprehensive Reform of the Pilot Demonstration Zone for Building Socialism with Chinese Characteristics in Shenzhen (2020-2025) in 2020. These regulations have figured out 3D marine cadaster to resolve the conflicts of overlap sea use and cross sea use in 2D manner. Detail cases, including overlap sea use between over-sea bridge bases and the drainage field of electric power station, multiple jurisdictional management Shenzhen-Hong Kong Expressway will be analysed to illustrated 3D

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marine cadaster with multiple layer RRRs.

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