



GLOBAL BLUE ECONOMY

Analysis, Developments, and Challenges

Edited by

Md. Nazrul Islam

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Chapter

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ABSTRACT

The Indian Ocean with its four major ridge systems collectively forms the Indian Ocean Ridge System (IORS). The hydrothermal fields along these ridges, namely the Carlsberg Ridge (CR), Central Indian Ridge (CIR), South West Indian Ridge (SWIR) and South East Indian Ridge (SEIR) are slow to ultra-slow spreading ridges. The IORS are geologically, tectonically, and petrologically different, amongst themselves and with the global mid-ocean ridges. Unlike the other slow spreading and well-studied Mid-Atlantic Ridge, the number of hydrothermal vent sites that host seafloor massive sulfide (SMS) deposits is far and few along the IORS. Yet, in the future it may be viable to mine the SMS deposits because of their economic potential and need in hi-tech industries. We present an overview of the hydrothermal sites and associated SMS that occur along the IORS as reported by several researchers. The inception of and investigations of the IORS by India are detailed. This is followed by the importance of applying the paradigm of the blue economy and its various facets by India in the exploration, exploitation, and allied activities for the SMS resources. In the long run it is perhaps feasible to profitably recover the SMS with minimal harm to the environment by having various mitigation measures in place.

