

DOSI Report

WORKSHOP ON THE DEVELOPMENT OF A REGIONAL ENVIRONMENTAL MANAGEMENT PLAN FOR THE AREA OF THE INDIAN OCEAN, WITH A FOCUS ON THE MID-OCEAN RIDGES AND CENTRAL INDIAN OCEAN BASIN

DOSI participants: Ana Colaço and Klaas Meyn

The REMP workshop from 1.-5th of May 2023 in Chennai (India) aimed to define the geographical area for the development of the REMP based on geology, biogeography and oceanography. This included to review and analyze geological, geophysics, physical oceanography, geochemical, benthic and pelagic ecosystem data, synthesizing environmental data, including patterns of biodiversity, connectivity, community structure, ecosystem function and ecological proxy variables. A major part of this process was the description and collection of current information available from Indian Ocean wide studies with a particular focus on data available from current exploration activities. Following the initial assessment of available data and identifying existing knowledge gaps of biological and oceanographical data present, management tools were introduced and faunal groups and areas identified that should be protected from exploitation in order to achieve effective protection of the marine environment.



REMP Biology Subgroup meeting.

The workshop started with presentations of contractors, showing the exploration and environmental work that has been done within each of the license areas and were a general baseline and overview for all participants in terms of available data in these areas, type and number of sampling that has been done or is ongoing and planned in the future. Following this introduction and providing relevant background information, two breakout groups were formed, a geological and a Biology /physical oceanography to discuss the data and try to uniformized concepts. Also, a data classification for different parts of the ridge was assessed. DOSI members participate on the biology group were Klaas Meyn was one of the rapporteurs.

Area-based management tools and non-spatial management tools were introduced and discussed by all workshop participants. The qualitative model of hydrothermal vent field that was developed following the nMAR REMP was discussed to see if it could be adopted for the Indian Ridge hydrothermal vents too. DOSI participant Ana Colaço, as she was deeply involved on the model from nMAR helped the participants to understand, by simplifying and cartooning the model construction, adapting conceptually to the Indian Ridge.

For the discussion of aerial based management, the concept of APEIs was introduced for the nodule area but also for the hydrothermal ridge environment. The size of the APEIs were subject to debate to cover the variety of abiotic and biotic information present in the nodule areas of the Central Indian Ocean basin. For the ridge environment it was discussed if larger areas covering the non-vent fauna and biological, geological, chemical and physical properties of ridges, fracture zones and active- and inactive hydrothermal vent fields could be a suitable way to maintain sufficient self-preservation as long as the connectivity and biogeographic provinces amongst these ridge-based APEIs should be taken in consideration.

The expected output of the workshop will be a report that will be prepared by the designated co-chairs and the ISA Secretariat, building on the workshop discussions.