

## **CABINET APPROVES CONTINUATION OF THE UMBRELLA SCHEME "OCEAN SERVICES, MODELLING, APPLICATION, RESOURCES AND TECHNOLOGY (O-SMART)"**

Relevant for: Geography | Topic: Distribution of key natural resources - Ocean Resources in world & India

The Cabinet Committee on Economic Affairs chaired by the Prime Minister Shri Narendra Modi today gave its approval for continuation of the umbrella scheme "Ocean Services, Modelling, Application, Resources and Technology (O-SMART)" of Ministry of Earth Sciences, for implementation during the period from 2021-26 at an overall cost of Rs. 2177 crore.

The scheme encompasses seven sub-schemes namely Ocean Technology, Ocean Modelling and Advisory Services (OMAS), Ocean Observation Network (OON), Ocean Non-Living Resources, Marine Living Resources and Ecology (MLRE), Coastal Research and Operation and Maintenance of Research Vessels. These sub-schemes are being implemented by autonomous/attached institutes of the Ministry, viz. National Institute of Ocean Technology (NIOT), Chennai; Indian National Center for Ocean Information Services (INCOIS), Hyderabad; National Centre for Polar and Ocean Research (NCPOR), Goa, Center for Marine Living Resources and Ecology (CMLRE), Kochi; and National Centre for Coastal Research (NCCR), Chennai as well as involving other national institutes. A fleet of oceanographic and coastal research vessels of the Ministry provide required research support for scheme.

The research and technology development pertaining to oceans in India was initiated by Department of Ocean Development (DoD), which was set up in 1981 which later merged to Ministry of Earth Sciences (MoES) and continuing since then. MoES has achieved significant position in the Oceanographic research through technology developments, forecast services, field installations, explorations, survey, technology demonstrations towards national benefits. The O-SMART scheme encompassing oceanographic research activities is being implemented with the objectives for providing forecast and services based on the continuous observation of our oceans, development of technologies and exploratory surveys for sustainable harnessing of our oceanic resources (both living and non-living) and promotion of front-ranking research in ocean sciences.

Several major milestones have been achieved through the activities of the scheme, the most significant is India's recognition as Pioneer Investor with International Seabed Authority (ISA) for conducting extensive research on deep sea mining of Poly Metallic Nodules (PMN) and hydrothermal sulphides in the allotted area of the India Ocean. The technology development for desalination using low temperature thermal desalination installation of such facility in Lakshadweep islands is also a significant achievement. Moreover, India's ocean related activities are now extended from the Arctic to Antarctic region covering large ocean space which have been monitored by through in-situ and satellite-based observation. India has taken leadership role in implementing Indian Ocean component of Global Ocean Observing System in Intergovernmental.

Oceanographic Commission through wide range of observations networks including both moored and drifters' types have been deployed and maintained in the Indian Ocean. These observation network yields ocean forecast services for potential fishing ground and natural coastal hazards warning for storm surge associated with cyclone and Tsunami to stake holders at nations levels as well as neighbouring countries. A state-of-the-art early warning system for

oceanic disasters viz. tsunami, storm surges, has been established at INCOIS, Hyderabad to provide services for India and countries of the Indian Ocean, which have been recognized by UNESCO. Extensive survey along the Indian exclusive economic zone (EEZ) and continental shelf of India are conducted for national benefits towards identifying ocean resources, Ocean related advisory services, navigation, etc. Assessment of living resources in the EEZ and deep ocean of India including mapping of the living resources has been undertaken for marine ecosystem with goal for Conservation and protection of Marine Biodiversity. The Ministry has been also monitoring the health of coastal waters of India including shoreline changes and marine ecosystems.

OSMART being a multidisciplinary continuing scheme, the ongoing extensive research and technology development activities would augment capacity building of the nation in the oceanographic field at the international level. The present decade has been declared as the Decade of Ocean Science for Sustainable Development by the United Nations (UN) and continuation of the scheme would strengthen our stand in the global oceanographic research and technology development. This continuation of the scheme would contribute significantly towards national policy on blue economy for effective and efficient use of the vast ocean resources in a Sustainable way. Efforts towards achieving United Nations sustainable Development Goal-14 to conserve and sustainably use the oceans, seas and marine resources are being covered through the coastal research and marine biodiversity activities. Significant contribution to the national GDP is being made and to be continued through the ocean advisory services and technologies developed benefiting communities and several sectors working in the marine environment, particularly in the coastal states of India.

In the next five years (2021-26) this scheme would provide further comprehensive coverage through strengthening the ongoing activities towards delivering cutting edge technology applicable for marine domain, forecast and warning services to various coastal stake holders, understanding biodiversity towards conservation strategy for marine living organisms and understanding coastal processes.

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