

ICAR-CMFRI Launches DeepDATA App to Map India's Deep-Sea Biodiversity

The ICAR-CMFRI has launched DeepDATA, a mobile application that enables users to explore scientifically verified information on deep-sea fish species and contribute field observations to build a national digital repository, officials said on Thursday. The app is currently available on the Google Play Store. A statement by ICAR--Central Marine Fisheries Research Institute (CMFRI) said that students, researchers, fishermen, and anyone interested in India's deep-sea resources can browse photographs and access information on deep-sea fish species, including their taxonomy, distinguishing characteristics, distribution, and conservation status.

"It serves as a digital learning platform for those interested in exploring India's rich and largely unexplored deep-sea biodiversity. The app was developed under the Deep Ocean Mission project with funding from the Ministry of Earth Sciences," the statement said. According to CMFRI, designed to encourage citizen participation, the app enables users to upload photographs and observations of deep-sea fishes encountered during fishing operations, research cruises or coastal visits.

"Every species record uploaded to the platform is verified by CMFRI experts before being added to the database, ensuring scientific accuracy and authenticity. Following scientific validation, these records will generate valuable information on the availability and distribution of species in Indian waters," officials said. Highlighting its role in strengthening biodiversity mapping, CMFRI Director Dr Grinson George said fishermen could contribute to enriching the data, as they regularly encounter species from offshore and deep-sea fishing grounds.

"Their field observations can provide researchers with valuable information on the spatial distribution of species, the appearance of rare or lesser-known fishes and possible changes in their occurrence over time, leading to biodiversity conservation and sustainable management of India's deep-sea resources," Dr George added. According to Dr Eldho Varghese, In-charge of the IT Unit at CMFRI and lead developer of the app, DeepDATA brings together scientific knowledge and observations from the field on a single digital platform, making information on India's deep-sea biodiversity more accessible while strengthening efforts to document the country's largely unexplored marine resources.

"DeepDATA bridges the gap between classroom learning and real-world deep-sea biodiversity," said Principal Scientist Dr Rekha J Nair who leads the project under which the app was developed. The digital platform is expected to enhance research, improve biodiversity assessment, support conservation planning and promote greater public awareness of India's rich but largely unexplored deep-sea ecosystems, she added.