

Marine research institute launches DeepDATA app to map India's deep-sea fish species

The ICAR-Central Marine Fisheries Research Institute has launched DeepDATA, a mobile application that lets users explore scientifically verified information on deep-sea fish species and upload field observations to help build a national digital repository. The app is currently available on the Google Play Store.

CMFRI said the app is aimed at students, researchers, fishermen and others interested in India's deep-sea resources. Users can browse photographs and read information on deep-sea fish species, including their taxonomy, identifying features, distribution and conservation status.

In a statement, the institute said, "It serves as a digital learning platform for those interested in exploring India's rich and largely unexplored deep-sea biodiversity." It added that the app was developed under the Deep Ocean Mission project with funding from the Ministry of Earth Sciences.

CMFRI said the app has been designed to encourage citizen participation. Users can upload photographs and observations of deep-sea fishes seen 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.

CMFRI Director Dr Grinson George said fishermen could play an important role in enriching the data as they regularly come across 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," he said.

Dr Eldho Varghese, In-charge of the IT Unit at CMFRI and the lead developer of the app, said DeepDATA brings together scientific knowledge and field observations on a single digital platform. Principal Scientist Dr Rekha J Nair, who leads the project under which the app was developed, said, "DeepDATA bridges the gap between classroom learning and real-world deep-sea biodiversity."

She added that the platform is expected to strengthen research, improve biodiversity assessment, support conservation planning and promote wider public awareness of India's largely unexplored deep-sea ecosystems. With DeepDATA, CMFRI aims to make information on India's deep-sea biodiversity easier to access while using scientifically verified public contributions to improve the documentation of marine species and their distribution in Indian waters.