

CMFRI develops mobile app to measure fish length and width without touching them



ICAR-Central Marine Fisheries Research Institute (CMFRI) has developed a smartphone application MatsyaMetri that can measure the length and width of fish without physically handling them. The app has been developed under a project for the automated measurement of aquatic resources and the generation of standardised length-frequency data used in fisheries stock assessment.

The app enables users to capture images of fish and estimate their dimensions using an intelligent, image-based measuring tool. The measurements are automatically recorded and compiled into length-frequency datasets, which are used for fisheries population analysis, stock assessment and resource monitoring.

According to Grinson George, Director, ICAR-CMFRI, the application simplifies biological data collection by automatically recording measurements and generating length-frequency datasets. Designed for fisheries scientists, researchers, and field survey teams, MatsyaMetri facilitates rapid and systematic collection of biological data to support fisheries assessment and management. The application allows multiple individuals of the same fish species or aquatic resource to be measured under a single sampling session. Once measurements are completed, the system automatically generates length-frequency distributions using appropriate class intervals. The recorded measurements and the corresponding photographs can be saved along with the sampling session and subsequently exported as a CSV file for further scientific analysis.

The application is aimed at simplifying biological data collection during field surveys and supporting more systematic generation of fisheries data for scientific assessment and resource monitoring, said Eldho Varghese, senior scientist and ICAR-National Fellow, who developed the application. MatsyaMetri is designed for ARCore-supported Android devices. After registering and logging in, users can create a sampling session, point the smartphone camera at a flat surface, and place the fish within the camera view. The application detects the surface and provides an on-screen measuring guide for estimating the length and width of the fish.