**Mega Awareness Campaign on Ocean Information and Advisory Services**

**under Azadi Ka Amrit Mahotsav(AKAM)**

**Jointly Organized by**

**Indian National Centre for Ocean Information Services (INCOIS) &**

**M.S. Swaminathan Research Foundation (MSSRF)**

Venue: MSSRF, Chennai, Tamil Nadu

Date: 11th August 2023

This Mega Awareness campaign on Ocean Information and Advisory Services is organised under Azadi Ka Amrit Mahotsav programme on the direction of Government of India to reach out to the fisher families of Tamil Nadu and Puducherry to further enhance the awareness and dissemination of the ocean information and advisory services to every fisherman of our country.

This campaign includes a technical session in Tamil, panel discussions with fishermen users to understand their need, issues and future requirements on this important area, Lectures from our collaborators viz. Tamil Nadu and Puducherry State fishery departments, Indian Coast Guard, CIFNET, CIFT, FSI, CIBA that helps the fishers with safety and livelihood security. In this programme, we will recognise 8 Master fisher trainers who possess practical knowledge and social commitment to take the fisher friend services to fellow fishers. Also, this programme focuses on the capacity development of the younger generation fishers.

**Background:** Majority of fisher families in India belong to small and artisanal fishing category. The Tsunami of December 26, 2004 came as a rude shock to them which caused a great fear and uncertainty in the minds of the fishers to set out into the sea. It is under such conditions Indian National Centre for Ocean Information Services, Ministry of Earth Science, Government of India and Fish for All Research and Training Centre of M S Swaminathan Research Foundation has partnered and initiated a programme of knowledge empowerment of fisher communities with reference to Ocean State Forecast (OSF) and information on the possible locations where they can find large fish shoals. This has enabled both MSSRF and INCOIS join and develop an integrated package of shore-to-shore based knowledge services to fishers and empower them for making informed fishing.

**INCOIS – Indian National Centre for Ocean Information Services** has mandatory to provide very useful information such as Potential Fishing Zones (PFZ) Advisories, Early Warning System for Tsunami and Storm Surges, Ocean State Forecasts (OSFs), High Wave Alerts/ Warnings, Search and Rescue Aided Tool (SARAT), Online Oil Spill Advisory Services, Small Vessel Advisory Services (SVAS), Marine Heat Wave Advisories, Coral Bleaching Alerts System (CBAS), Algal Bloom Information Services (ABIS), etc. for improving the livelihood of the fishers particularly the small scale fishers.

**MSSRF - Fish for All Research and Training Centre** is a post tsunami rehabilitation initiative by Prof. M.S. Swaminathan with the support of Tata Trust. This centre is located in Poompuhar fishing village, Mayiladuthurai District of Tamil Nadu. The main focus of the centre is to provide solutions for the issues and challenges faced by the small and marginal fisher families in the following areas. Strengthening and diversifying of livelihoods and identifying alternative avocation for coastal communities and add value to the process chain- capture/culture, commercialization, and consumption by involving all the stakeholders and associated multiple institutions. This program specially focuses on women, artisans, non-traditional fishers, fish vendors, and fishing laborers among other producer groups. The Fish for All Research and Training Centre was dedicated to the coastal communities of the nation on 26th December 2009, which also marked the fifth anniversary of the tsunami hitting the Indian coast.

Since 2009, MSSRF has partnered with INCOIS to build the capacity of the fishers to utilise these services effectively for their economic development and safe fishing at sea. Today more than 1.5 lakhs fishers from 632 coastal villages are aware of these services and are receiving locale specific scientific forecast services such as PFZ, Ocean State Forecast and early warning information generated at INCOIS through recent advancement in the area of digital ICT tools. One of the key tools is the android based PAN India Fisher Friend Mobile Application which is now used by more than 2 lakhs fishers from West Bengal to Gujarat. This software was developed with the support and inputs of Qualcomm Wireless Reach and INCOIS.

FFMA is providing the confidence to the small scale fishers to venture into the sea with great confidence as they have the information to anticipate ocean conditions and the location details of the potential fishing zone. The services of INCOIS and MSSRF complement each other in fulfilling the knowledge requirements of the fisher communities. The information disseminated through multiple technologies enables them to make critical decisions that help improve their livelihood and ensure safe fishing at sea.

It can be seen from our interaction with our fishers that the ocean information, particularly wave height and wind speed, assist them in taking practical decisions and planning several aspects of their fishing activity;

* to avoid venturing into the sea;
* to decide their fishing location and direction;
* to delay or start early for fishing;
* to speed up their return to their shores,
* to take precautionary measures during heavy wind and cyclone times by anchoring the boat to a safe place or if they are in the sea to move towards a nearby shore or anchor in a safe spot in the sea or on the shore and so on.

Apart from disseminating information to fisherfolk, the Fish for All Centre gathered regular feedback from the fishers through focus group discussions, case studies, market study, and village and district level user interaction meetings which reflect their voices on the utility and effectiveness of the intervention in their lives and also strengthen these services. This helped us to update the FFMA software and fishers are now using FFMA *ver 54.*

Annexure 1 – About INCOIS

**About INCOIS**

The Indian National Centre for Ocean Information Services is an Autonomous Body under the Ministry of Earth Sciences. Established in 1999, it is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies, and the scientific community through sustained ocean observations and constant improvements through systematic and focussed research.

**Our Vision:** To emerge as a Knowledge and Information Technology Enterprise for the Oceanic realm.

**Our Services**

1. **Ecosystem Services:**

Using remotely sensed sea surface temperature, INCOIS provides **Potential Fishing Zones (PFZ) Advisories** on information on the location of fish aggregation in the ocean. These multi-lingual PFZ advisories (8 regional languages) reach the fisherfolk via various modes: telephone, fax, e-mail, website, social media, Digital Display Boards, third-party FTPS, radio, news media, mobile services/ mobile applications, and partner NGOs.

**Coral Bleaching Alerts System (CBAS)** assesses the thermal stress accumulated in the coral environs and provides early signs of the intensity and extent of coral bleaching.

**Algal Bloom Information Services (ABIS)** detects and monitors the blooms in the Indian Ocean and provides near real-time information on the spatiotemporal existence and spread of blooms over the North Indian Ocean.

1. **Multi-hazard Early Warning Services**

The **Indian Tsunami Early Warning Centre (ITEWC)**, based out of INCOIS is capable of detecting tsunamigenic earthquakes within 10 minutes of the occurrence of an earthquake on the sea bed and issuing timely tsunami advisories to disaster management officials as well as to the vulnerable communities. This state-of-the-art warning centre, operational since 2007, has all the necessary computational & communication infrastructure for the reception of real-time data from seismic and sea-level networks, tsunami modelling, and generation and dissemination of tsunami bulletins for the entire Indian Ocean region. The centre operates round the clock to provide services to the coastal population, disaster management agencies and 25 Indian Ocean rim countries.

The ITEWC functions as one of the Tsunami Service Providers (TSP) for the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS). The ITEWC regularly participates in tsunami mock exercises (drill) organised by the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

**Online Oil Spill Advisory Service** predicts the trajectory of oil spills during any event of oil spilled in the ocean. This information in advance helps the relevant stakeholders to take up the clean-up and control measures., issue timely advisories to small vessels operating in the Indian coastal waters to reduce the number of accidents.

INCOIS also provides Surge Early Warnings, Ocean State Forecasts (information on winds, waves, ocean currents, and water temperature), High Wave Alerts/warnings, Small Vessel Advisory and forecast services, Marine Heat Wave Advisories.

**International Training Centre for Operational Oceanography (ITCOOcean)**

INCOIS houses ITCOocean, a Category-II Training Centre recognised by IOC-UNESCO, providing advanced training in operational oceanography. It is aimed at promoting the development and optimization of scientific base, technology and information system for operational oceanography at national, regional and global scales.