



INCOIS launches Products

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Why in News

The Indian National Centre for Ocean Information Services (INCOIS) has launched a trio of products to better cater to its diverse users. The Products are

- Small Vessel Advisory and Forecast Services System,
- Swell Surge Forecast System and
- Algal Bloom Information Service

Small Vessel Advisory and Forecast Services System

- It is an innovative impact-based advisory and forecast service system for small vessels operating in Indian coastal waters.
- It warns users about potential zones where **vessel overturning** can take place.
- The warning system is based on the '**Boat Safety Index**' (**BSI**) derived from wave model forecast outputs such as significant wave height, wave steepness, directional spread and the rapid development of wind at sea which is boat-specific.

Swell Surge Forecast System

Swell surge forecast system is an innovative system designed for the prediction of Kallakkadal/Swell Surge that occurs along the Indian coast, particularly the west coast.

Kallakadal

- Kallakadal/Swell surge are **flash-flood events** that take place without any noticeable advance change in local winds or any other apparent signature in the coastal environment.

- Kallakkadal is a colloquial term used by Kerala fishermen to refer to the freaky flooding episodes and in 2012 **UNESCO** formally accepted this term for scientific use. They are caused by **meteorological conditions** in the **Southern Ocean**, south of 30°S.
- During Kallakkadal events, the sea surges into the land and inundates vast areas.

Algal Bloom Information Service

- ABIS provides timely information on harmful algal blooms, which are detrimental to coastal fisheries, water quality and also tend to induce respiratory problems within the coastal population from time to time.
- The **target users**- fishermen, marine fishery resource managers, researchers, ecologists and environmentalists.
- INCOIS-ABIS will provide **near-real time information** on **spatio-temporal occurrence** and **spread of phytoplankton blooms** over the **North Indian Ocean**.
- Four regions have been identified as bloom hotspots-
 - North Eastern Arabian Sea
 - coastal waters off Kerala
 - Gulf of Mannar
 - coastal waters of Gopalpur.

Algal bloom

- An algal bloom or marine bloom or water bloom is a rapid increase in the population of algae in an aquatic system. They may occur in freshwater as well as marine environments.
- Harmful Algal Blooms, or HABs, occur when colonies of algae grow out of control and produce toxic or harmful effects on people, fish, shellfish, marine mammals and birds.
- Harmful Algal Blooms can:
 - Produce extremely dangerous toxins that can sicken or kill people and animals.
 - Create dead zones in the water.
 - Raise treatment costs for drinking water.
 - Hurt industries that depend on clean water.

Indian National Centre for Ocean Information Services

- INCOIS is an **autonomous organization** under the **Ministry of Earth Sciences (MoES)**.
- It is located in **Hyderabad &** was established in **1999**. It is a unit of the **Earth System Science Organization (ESSO)**, New Delhi.
 - The ESSO operates as an executive arm of the Ministry of Earth Sciences (MoES) for its policies and programmes.

- 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 improvement through systematic and focused research.

Source: PIB