

Venue:

The training course will be held at ITCOcean, Indian National Centre for Ocean Information Services (INCOIS), Hyderabad.

Course Fee and Financial support:

No course fee is charged for the training course. The participants are expected to make their own arrangements for all expenses, including International to and fro travel. However, INCOIS can provide local transportation, food and lodging at their Hostel for few deserving candidates. Preference in admission will be given for candidates who are supported by their own organizations. International participants may approach UNDP, UNESCO, UN-ESCAP, IOC, SCOR and other agencies for financial assistance.

Application Form:

The application form can be downloaded at the following link:

www.incois.gov.in/Incois/ITCOcean-PFZShortCourseApplicationForm.pdf

The completed and signed application form should be sent to Director, INCOIS on or before January 15, 2014.

Contact Address:

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Short Course On Remote Sensing of Potential Fishing Zones and Ocean State Forecast

Organized
by
International Training Centre for
Operational Oceanography (ITCOcean),
ESSO-INCOIS, Hyderabad.

March 24-29, 2014

Background:

Indian National Centre for Ocean Information Services (INCOIS) under Earth System Science Organization (ESSO) is a dedicated institution for operational oceanography and the only institution in the Indian ocean region that has been providing operational ocean information and advisory services over the past 10 years. It has expertise particularly, in ocean observations, ocean modelling and ocean information and advisory services in the Indian Ocean region.

ESSO-INCOIS and UNESCO's Intergovernmental Oceanographic Commission (IOC-UNESCO) signed a Memorandum of Agreement on 4 July 2013 during the 27th session of the IOC Assembly in Paris, to cooperate in conducting training courses at the International Training Centre for Operational Oceanography (ITCOcean) set up by ESSO-INCOIS in Hyderabad, India. The Centre aims at promoting the development and optimization of scientific base, technology and information system for operational oceanography at national, regional and global levels.

About the Course:

Fish account for approximately 7% of the world's total food supply, and is one of the major source of food in developing countries. Around half a billion people gain their livelihood from harvesting the oceans. Locating and catching fish, is however, becoming a challenging task as fish stocks dwindle and scattered, thus increasing the search time, cost and effort. Concerted efforts are required for identifying potential fishing zones to help fishermen to locate fish stocks and to increase the catch per unit effort.

Over the past decade, India has developed a methodology to locate potential fishing zones using satellite-derived information on Sea Surface Temperature (SST) and chlorophyll. Important oceanographic features such as






temperature fronts, meanders, eddies, rings and upwelling areas identifiable from satellite imagery have proved to be prospective sites for fish congregation and migration. Subsequently, these features are mapped in real-time and are used to generate the Potential Fishing Zone (PFZ) advisories for the Indian fishing community. INCOIS disseminates PFZ advisories, in various local languages, daily, using modern Information and Communication Technologies (ICT), that include telephone / fax, Web GIS, E- mail, SMS and radio broadcasts. These advisories, valid for 2-4 days, have helped in reducing search time up to 70% and resulting in significant increase in catch per unit effort.

Since 2010, INCOIS has been providing Regional Ocean State Forecast for Arabian Sea, Bay of Bengal, North Indian Ocean, South Indian Ocean, Red Sea, Persian Gulf and South China Sea at a spatial resolution of 0.25 X 0.25 degrees and a temporal resolution of 3 hours for the next 7 days. This was achieved through the operationalisation of Indian Ocean Forecasting System (INDOFOS). The forecasts on wave, swell and wind are also made for the nine coastal states of India. In addition, customized forecast are made for maritime boards, shipping, Navy, Coastal Guard and oil industries.

The proposed training would provide the scientific basis of the methodology using remote sensing and Geographic Information System (GIS) techniques. The details of satellite data processing for the retrieval of SST, Chlorophyll concentration and Sea Surface Wind (SSW) and their applications will be provided. Generation of PFZ maps and the advisories, their means of dissemination and validation of the advisories will be discussed in detail. Hands on exercises would involve processing of both past and real time satellite data sets (NOAA-AVHRR, MODIS-Aqua, IRS-P4,/ Oceansat), using standard software packages, like SeaDAS. Hands on experience on retrieval and use of Ocean State Forecast (OSF) data for operational use will be provided. Various case studies on the applications of OSF data, including high wave alert during severe cyclone cases will be demonstrated.

Course Contents:




The focus of the training course is utilization of satellite data for the identification of Potential Fishing Zones and Ocean State forecasts. The course will cover the following broad topics:

-  Satellite data acquisition and processing
-  Remote Sensing applications for fisheries (PFZ)
-  Utilization of GIS for generation of PFZ advisories
-  Ocean State Forecast (OSF) and product generation
-  Lab-sessions on Satellite Data processing, interpretation of imageries for generation of PFZ advisories, retrieval of OSF products, etc.

Faculty:

The faculty for the course consists of scientists/experts in different fields drawn from the host institute (INCOIS) and from other organizations like Indian Space Research Organization (ISRO), National Institute of Oceanography (NIO) and other agencies. These experts have long and varied experience in the field of oceanography, modeling, instrumentation and applications.

Who can apply?

-  University students pursuing their career in operational oceanography. Priority will be given to students from Indian Ocean RIM countries.
-  Staff of operational oceanographic centres, who need familiarization with operational products.
-  Staff of Government departments and decision makers involved with oceanographic services and marine activities.