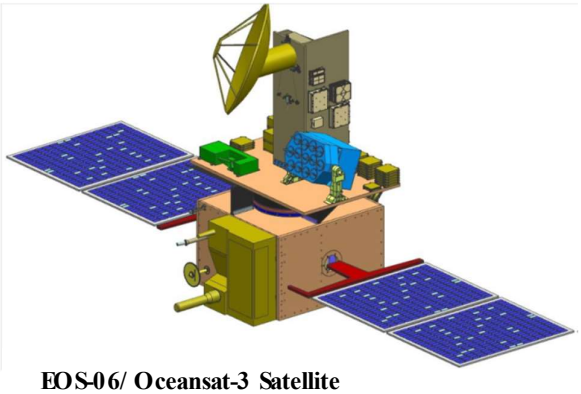
5 Day Training on

Satellite Oceanography

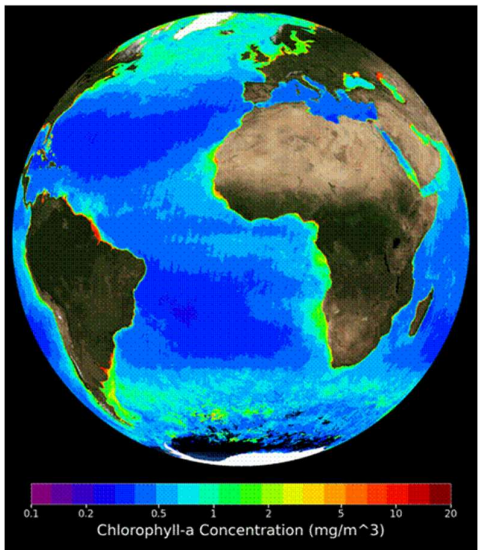
(29th April – 03rd May, 2024)

The knowledge on the climate change is ever increasing with reference to observations made by satellite sensors and model simulations. These observations are essential to understand the changing climate and sustainable living on this earth system by reducing adverse impact to the mankind. As oceans cover more than 70% of the earth's surface area, their observations provides critical understanding of the functioning of the climate system. However, ocean observations are far more difficult and costly due to their remote and inaccessible nature. To overcome this data void, satellite platforms provides an excellent opportunity to collect observations on various vital parameters of oceans to study their variability on various spatio-temporal scales. This important branch of science, known as satellite oceanography plays a pivotal role in understanding how oceans are playing an important role as climate regulators. In the era of global warming due to anthropogenic climate change, the ocean circulation and ecosystems are also undergoing unprecedented changes requiring frequent monitoring to understand the changing characteristics of the oceans.



EOS-06/ Oceansat-3 Satellite

Hence, in support of the climate studies, particularly ocean studies, Indian Space Research Organisation (ISRO) is engaged in monitoring ocean physical and biological parameters on long term basis, such as ocean colour, ocean surface winds, sea surface temperature (SST) etc., with dedicated thematic satellites known as OCEANSAT series. So far, ISRO has launched three satellites under this thematic series, wherein the EOS-06/Oceansat-3 is the latest satellite launched in November 2022, providing critical ocean observations from its third generation Ocean Colour Monitor (OCM-3) and Ku-Band Scatterometer (OSCAT-3). Along with these, ISRO's INSAT series satellites, INSAT-3D/3DR and newly launched INSAT-3DS are providing SST data. These long-term ocean observations are going to be part of National Information System for Climate and Environmental Studies (NICES) program, initiated to build a quality controlled satellite data base on geophysical products from satellite data to qualify for climate monitoring in collaboration with other ISRO centres and national institutes working in similar fields. In the process, advanced geospatial technologies have been used to collect data and build information on the planet Earth in different scales of time and spatial resolution. The results are being analysed by expert groups and thematic scientists to unravel the signs of a changing climate.

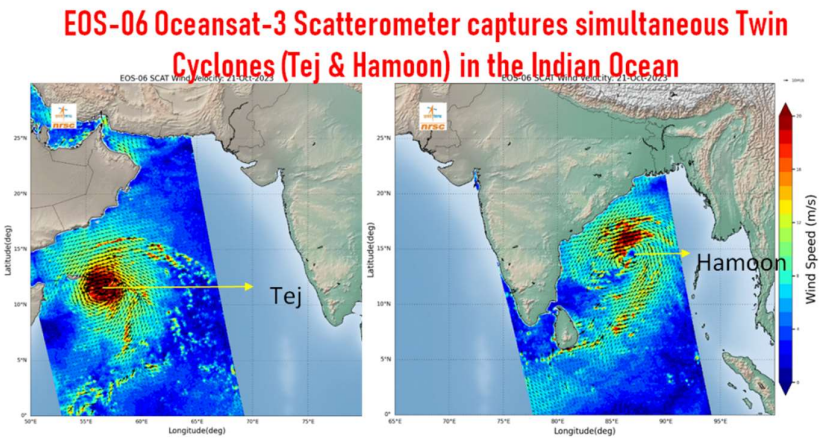


EOS-06/Oceansat-3 Chl-a (mg/m^3) mosaic (April-Dec 2023)

Since the knowledge acquired from these Ocean databases using geospatial technologies need to be spread across the stakeholders, NRSC is planning a training program for effective utilisation of EOS-06/OCEANSAT-3 products. In this regard, NRSC invites individuals from state and central organisations, institutes and universities and those having the background in the Ocean science studies and geospatial technology with remote sensing.

Training Focus:

This training course focuses on imparting basic concepts on Remote Sensing of Ocean parameters (SST, Winds, Colour, Sea Level etc.,) using optical and microwave (Nadir and Wide swath Altimeter, Scatterometer and SAR) satellites to enhance participant's knowledge. After the training, participants are expected to perform in the following tasks, such as, (i) on different tools and technologies available for processing satellite oceanography data sets, (ii) on different methods for processing the ocean data sets and (iii) ultimately enable utilisation of ocean satellite data / information products for climate and environmental studies.



Who Can Apply?

Applications are invited from interested candidates from State Government / Central Government Departments, Faculty/Research Scholars from Academic Institutions, NGO and Private Companies who intend to have an understanding and acquire knowledge on satellite oceanography studies. Participant should have minimum qualification of Masters Degree in Science or Bachelor's degree in Engineering. Exposure to ocean remote sensing techniques will be an added advantage. Further details may be explored with training@nrsc.gov.in.