

SHORT COURSE

ON

“GEOSPATIAL APPLICATION IN DISASTER RISK
REDUCTION FOR ENVIRONMENTAL DISASTERS
(FOREST FIRE, HEAT WAVE AND ATMOSPHERIC
POLLUTION)

Organized By

Conducted By



Centre for Space Science and Technology Education in
Asia and the Pacific (CSSTEAP)
(Affiliated to the United Nations)
IIRS Campus, 4, Kalidas Road, Dehradun, India
www.cssteap.org



Indian Institute of Remote Sensing (IIRS)
Indian Space Research Organisation (ISRO)
Department of Space, Government of India
4, Kalidas Road, Dehradun, India
www.iirs.gov.in



Duration: July 17-28, 2023



INTRODUCTION

Natural disasters are becoming more frequent and intense across the globe. According to the latest report by UN-ESCAP, Asia-Pacific region is the most disaster-prone region in the world, and the region faces major disaster problems in the form of environmental hazards, geological hazards and hydro-meteorological hazards, and causing massive damage to environment, infrastructure, economy and society. To address the challenge posed by disasters, the international community adopted the Sendai Framework for Disaster Risk Reduction (DRR) 2015-2030 at the Third UN World Conference on DRR in March 2015 in Sendai, Japan. The geospatial technology with space based inputs can become an important tool in building resilience and addressing the priorities outlined by Sendai framework for DRR.

ABOUT CSSTEAP AND IIRS

CSSTEAP was established in India in November 1995 with its headquarters in Dehradun. The center has emerged as a Centre of Excellence in capacity building in the field of space science and technology application. The 1st campus of the Centre was established at Dehradun, India and is hosted by Indian Institute of Remote Sensing (IIRS), a constituent unit of Indian Space Research Organisation (ISRO). CSSTEAP has been imparting training and educational programs related to RS & GIS, Satellite Communication, Satellite Meteorology, Space Science, Global Navigation Satellite Systems, and Small Satellite Mission, helping participants in developing research skills through its Master Degree, Post Graduate and Certificate programs. IIRS (established in 1966), a constituent unit of Indian Space Research Organization (ISRO), is a key player for training and capacity building in geospatial technology and its applications through training, education and research in Southeast Asia. The training, education and capacity building programs of the Institute are designed to meet the requirements of professionals at working levels, researchers, academia, and decision makers.

COURSE OBJECTIVE

To generate awareness among researchers / professionals on geospatial technology and its applications in the field of disaster risk reduction for environmental disaster particularly forest fires, heat waves and atmospheric pollutants.

COURSE FEE AND ACCOMMODATION

A course fee of \$ 300 (equivalent INR for Indian participant) is applicable which includes course materials and field trips. Accommodation will be arranged in IIRS/CSSTEAP hostel and the participants will have to pay Rs. 100 per day towards as accommodation charges. To encourage the participants from the Asia-Pacific region, selected participants will be waived-off the course fee and the field trips expenses. The course fee may be sent through online transfer/NEFT/RTGS/SWIFT in favor of CSSTEAP, payable at Dehradun with the following bank details:

Banking Institution :	Punjab National Bank
Account Name :	Centre for Space Science and Technology Education in Asia and the Pacific
Account Number :	0111032100000236
SWIFT / IFSC :	PUNBINBBDPR / PUNB0445600
Address Bank :	Survey of India Branch, New Cantt. Road, Dehradun, India

COURSE CONTENTS

First Week

- Overview of Natural Disasters
- Overview of Remote Sensing and GIS Technology
- Geo-web Portals and Data Repositories for Providing Disaster Related Information
- Fire Severity Mapping and Detection of Active Fire
- Fire Weather and Forest Fire Risk Prediction Modelling
- Concepts of Heat Waves and Field Excursion

Second Week

- Various Indices of Heat Waves
- Land Surface Temperature Based Heat Wave Mapping using Surface Temperature Products
- Mapping Heat Waves using Long-Term Climatological Mean
- Aerosol and Suspended Particulate Matter Detection using Space Based Sensors
- Mapping and Modelling of Atmospheric Aerosol Transport
- Detection of Gaseous Pollutant using Space Based Sensors

FELLOWSHIP AND INSURANCE

The candidates have to bear all expenses at their own during the course. A few fellowships covering to and fro international air travel, domestic travel in India and living expenses (INR 15,500 for two weeks) in India are available from Government of India. However, first preference will be given to the fully self-sponsored candidates and then to the candidates whose sponsoring organization will be bearing international to and fro travel. Medical, life and disability insurance should be undertaken before leaving their country for India by the participants themselves or on their behalf by their sponsoring institute/organization for covering entire health and disability risks. No medical expenses will be borne by the Centre. Candidates in sound physical and mental health only need to apply.

ELIGIBILITY AND HOW TO APPLY

Master's degree in science or Bachelor's degree in engineering or equivalent qualification relevant in the field of study with at least 5 years of experience in teaching/research or professional experience in the field. Eligible candidates can apply online through the CSSTEAP website <https://admissions.cssteap.org/login>.

- **Announcement of course: May 4, 2023**
- **Last date for application: May 31, 2023 (17:30 Hrs)**

CONTACT DETAIL

For any course related query, Kindly contact to

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(Course Director)

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