

**SHORT COURSE
ON**

**“Application of Space Technology for
Disaster Risk Management with
Emphasis on Floods and Landslides
for Asia-Pacific region”**

Organized By

Conducted By



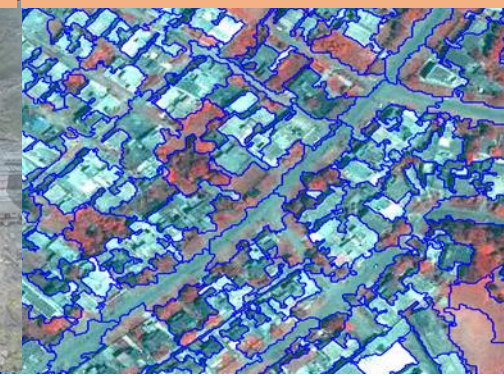
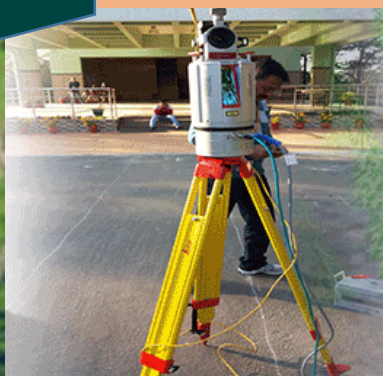
September 19-30, 2022



**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**



INTRODUCTION

Natural disasters are becoming more frequent and intense across the globe. Asia-Pacific nations experience more natural disasters than any other region. The region faces major disaster problems in the form of environmental hazards, geological hazards and hydro-meteorological hazards causing massive damage to environment, infrastructure, economy and society. Floods and associated landslides account for the largest number of natural disasters and affect more people than any other type of natural disaster in this region.

The space based inputs can become an important tool in building resilience and addressing the priorities outlined by Sendai framework for disaster risk reduction (DRR). Space technology can be useful particularly in the risk assessment, monitoring, response, mitigation and preparedness phases of disaster management, including early warning.

ABOUT CSSTEAP

The Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) with its headquarters in Dehradun and over the past 26 years, 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 programmes 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 programmes of the Institute are designed to meet the requirements of professionals at working levels, fresh graduates, researchers, academia, and decision makers.

OBJECTIVE OF THE COURSE

The overall objective of this two weeks training programme is to generate awareness among users / researchers / professionals / decision-makers / academicians on Space technology and its applications for disaster management and in the line of implementing Sendai Framework for DRR.

The participants will be familiarized with the disaster management concepts, conceptual frameworks and institutional mechanisms, application of space and geospatial technologies for pre- and post-disaster monitoring and mitigation such as early warning, hazard, vulnerability and risk assessment, damage assessment, data repositories and web portals for addressing flood and landslide hazards. The course will include theory and hands on sessions to facilitate in-depth learning.

COURSE CONTENTS

First Week

- Overview of global framework for disaster risk reduction
- Overview of Remote Sensing & GIS technology
- Role of aerospace based technology in landslide & flood hazard monitoring and mitigation
- Satellite based communication and navigation for disaster management
- Geo-web portals and data repositories for providing disaster related information

Second Week

- Basic concepts and introduction to flood & landslide hazards
- Application of space technology for mapping, monitoring, damage assessment & early warning of flood and landslide hazards
- Application of advanced tools and technologies for flood hazard (altimetry, hydrological modelling etc.) and landslide hazard (physical based modelling & SAR interferometry, landslide modelling etc.)

EXPECTED BENEFITS

After attending this course, the participants are expected to gain theoretical and practical knowledge on the disaster risk reduction (DRR). The participants should be able to use this knowledge in their country for monitoring and mitigation measures of the impacts due to earthquakes, floods and damages to cultural heritage sites using latest geospatial technologies.

ELIGIBILITY

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 of natural resources or environment, e.g. agriculture, soils, forestry, ecology, geosciences, water resources, human settlement, land use planning, oceanography, environmental analysis, etc. Basic knowledge in mathematics and/or statistics is essential. The course will be conducted in English, the candidate should have proficiency in English language. *For candidates working in the field of disaster management/or working with disaster management agency/organization, the minimum experience may be relaxed.*

COURSE DURATION & IMPLEMENTATION

The training course is being organized by Centre for Space Science and Technology Education in Asia and Pacific (CSSTEAP) and will be conducted by the faculty of Indian Institute of Remote Sensing, ISRO, Dehradun, India during September 19-30, 2022. The course curriculum will be implemented through a mixture of theory lectures and practical exercises, by using state-of-art hardware, software and instrumentation facilities. The faculty for the said course consists of the specialized and experienced faculty members of IIRS (ISRO) and experienced scientists/engineers working at other ISRO centers and Departments. Each participant will be provided a PC loaded with image processing and GIS software to have hands-on experience.

LANGUAGE

The medium of the instructions/teaching is English. Proficiency in written and spoken English is essential. The candidates who are not proficient in English are advised not to apply. Applicants, who have done their higher studies in a medium (language) other than English, are required to submit TOEFL score or a diploma / certificate of English Language issued by an accredited language institution or by the local UNDP for satisfactory establishment of the applicant's competence in spoken and written English language. Preference will be given to those who secure high score in TOEFL examination. Nominating agencies are requested to kindly ensure this matter.

COURSE FEE

A course fee of INR 15,000 for participants from India and US\$300 for participants from other countries is charged which includes course materials and field trips. Director CSSTEAP may waive off the course fee in case of few of the meritorious applicants.

ACCOMODATION

Accommodation for the participants will be arranged in hostel at IIRS, Dehradun. During the stay at Dehradun an amount of INR 50 per day will be charged towards room rent. The cost of consumables such as cooking gas need to be borne by the occupants themselves. If needed, the participants can also join IIRS Mess for food, which is being operated by the students of IIRS.

FELLOWSHIP TO PARTICIPANTS

Preference will be given to the candidates who are financially supported by their organizations. A few fellowships covering to-and-fro intentional air travel, domestic air travel in India and living expenses (INR 8,000 for 2 weeks) in India are available from Government of India. However, preference will be given to the fully self-sponsored candidates or sponsoring organization candidates bearing international to & fro travel.

HEALTH AND INSURANCE

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 organizations covering entire health and disability risk. No medical expenses will be borne by CSSTAEP. However, participants who receive the Fellowship of the Government of India will be paid medical expenses for minor ailments on actual basis (as out patients only) as and when such expenses are incurred. CSSTEAP will have limited liabilities as far as medical expenses are concerned in such cases. Candidates in sound physical and mental health only need to apply. Please read the important instructions carefully, which are given at the end of the application form.

APPLICATION PROCEDURE

Duly filled-in application form attached at the end of this document need to be sent through email for faster processing. Email Id: cssteap-admissions@iirs.gov.in

The application form along with educational certificates needs to be forwarded through CSSPEAP Governing Board member in your country (please see details on the website) or through Indian Embassy/ High Commission in your country or your Embassy/ High Commission in your country or your Embassy/ High Commission in India after nomination by your employer.

CONTACT DETAIL

For any course related query, Kindly contact to

Mr. C.M.Bhatt
(Course Director)

(Email: cmhbhatt@iirs.gov.in; Ph: +91-135-2524345)

Dr. Shovan Chattoraj
(Course Coordinator)

(Email: shovan@iirs.gov.in; Ph: +91-135-2524157)

Indian Institute of Remote Sensing
4, Kalidas Road, Dehradun-248001,
Uttarakhand, India

ABOUT DEHRADUN

Dehradun city, often called as Doon Valley, is at the base of chain of one of tallest mountains in the world in Western Himalayas in northern India. It is one of the educational hubs in India. Weather is moderate during March to May. The hill station Mussoorie, the Queen of hills, is 30 km from here and experiences snowfall during winter. Fairly heavy monsoon rains (average annual rainfall 2000 mm) prevail during June to September. Winter is severe during the months of December to February (minimum temperature occasionally touches 1 to 2 degree Celsius).

The valley has good greenery and is surrounded by dense tropical to temperate forests and pastures and provides pristine environment for academic pursuits. IIRS Campus is about 6 km from Dehradun railway station and about 30 kms from Jolly Grant Airport Dehradun. The place is well connected by train from New Delhi, Kolkatta (Calcutta), Mumbai (Bombay), Lucknow and by road from New Delhi. By air it is well connected with Delhi. Haridwar and Rishikesh, the two famous pilgrim centres are about 60 and 40 km, respectively from city. The Western Himalayas are well known for wonderful landscape, mountaineering, tracking, trails and river rafting.

Several important national organizations/institutions are located here. Some of important ones are: Indian Council of Forestry Research and Education, Indira Gandhi National Forest Academy, Forest Survey of India, Wildlife Institute of India, Survey of India, Oil and Natural Gas Corporation Limited, Central Soil and Water Conservation Research and Training Institute, Botanical Survey of India, Zoological Survey of India, etc. There are a large number of tourist places in and around the city.

Important Dates

Announcement of course:

July 19, 2022

Last date for application (via e-mail):

August 05, 2022



CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN ASIA AND THE PACIFIC
(Affiliated to the United Nations)

**APPLICATION FORM FOR SHORT COURSE ON
"APPLICATION OF SPACE TECHNOLOGY FOR DISASTER RISK MANAGEMENT WITH EMPHASIS
ON FLOODS AND LANDSLIDES FOR ASIA PACIFIC REGION"
(September 19-30, 2022)**

Conducted at
Indian Institute of Remote Sensing (ISRO), Dehradun, India
Last date for receipt of application: August 05, 2022

**AFFIX
PASSPORT SIZE
PHOTOGRAPH
HERE**

DRM
(For office use only)
Application No.....
Date Received.....

Important:

All the correspondence from CSSTEAP (issue of admission letter, e-tickets for travel, enquiries, etc) with the applicants will be on internet and sometimes on phone (Home/ Office), therefore kindly ensure that email-id, phone, fax, etc, are correctly and clearly mentioned.

(Please type or use CAPITAL LETTERS)

1. (Name: (As mentioned in the passport)

Dr./Mr./Ms./.....
First Middle Last

2. Father's Name:

3. Name of mother/husband/wife:

4. Date of Birth (DD/MM/YYYY) :

5. Place of Birth:

6. Gender (Male/Female):.....

7. Nationality:.....

8. Contact Information: Present official Address (Valid until date.....)

.....
.....
.....

Contact number (Please give complete Phone no. with country and city codes)

Office (Tel)Office (Fax).....

Mobile..... E-mail

Important

- a) It is essential that full passport details are mentioned in the Application Form or provided to the Centre at the earliest.
- b) Application Forms without passport details may not be considered.
- c) Providing alternate email-id, phone would ensure timely communication with applicants.
- d) Please note for faster communication with the applicants CSSTEAP Secretariat will be using your email-id for all purposes (e.g. Admission letter, air tickets and logistic arrangements).

9. Your permanent home address (in your country)

.....

.....

Contact number (Please give complete phone no. with country, city codes) which will be useful to contact your family members in case of emergency.

Home (Tel):

Home (Fax): :

Email (alternate preferably Gmail or Yahoo):

:

(please write very clearly)

10. Nearest International airport (Specify the place/city): :

11. Academic Qualifications (mandatory)*

Degrees(Bachelor /Master) /Diploma	Duration of Course(mention from which year to year)	University/ Institution	Year of passing	Grade/ percentage	Major Subjects/ specialization

*(Enclose copies of Degree/Diploma/Certificates/marks/grades obtained etc. and their certified transcription in English)

Major Subjects in Last Examination: Area of Specialization: -----

Medium of instruction/language: TOEFL Score (Proficiency in English): ----

Reading : Fair/Good/Very Good

Writing : Fair/Good/Very Good

(please tick the option)

Spoken : Fair/Good/Very Good

Enclose certified copies of marks/grades of degree, diploma, TOEFL (validity period), etc certificates and their certified translations in English).

12. DETAILS OF EXPERIENCE OF LAST FIVE YEARS

a) Present Position/ Designation: B) Present Responsibilities*

.....

Organization and complete Address:

.....

Type of Organization (Tick): a) Government Department b) Private Agency:

Date of Joining this Organization (dd/mm/yyyy):

* If necessary, attach additional sheets giving details of your technical activity during last one year.

b) Research or working Experience during past 05 years:

Name of Organization (s)	Position(s)/ Post (s) held	Nature of work done	Duration

c) Are you working in the field of Disaster Management? Yes _____ No _____

13. (a) Activities & Projects in which your present organization is engaged (mandatory) and nature of work done or will be done

(b) Main scientific/Technical facilities available in your organization *(including approximate number and type of computers, type of software available etc.)

14. Have you done any other course from CSSTEAP (If yes, please give details including theme and year):

15. How this Course will help you in your work/organization? Please describe below.

16. Details of Passport: Please provide valid passport details below and if not holding a valid passport, please forward copy of the passport whenever available.

Passport Number	Place of Issue (City and Country)	Date of issue	Passport valid up to	Issuing Authority	Whether previously visited India if so place and date of last visit

17. Physical Fitness:

- Have you ever been infected by Covid-19 virus? If Yes, When?
- Are you vaccinated against Covid-19 virus?
- Are you suffering from any recurring/chronic/serious communicable disease, which may affect your study program in India?.....
- If yes, please specify nature of illness
- Candidates are advised to attach medical fitness certificate from a government hospital or government recognized hospital on hospital letterhead

18. How do you propose to meet the international travel & stay expenses in India? Tick whichever is applicable (Preference will be given to those who will make their own travel arrangement himself/herself)

- a) SELF-SPONSORED b) CSSTEAP SUPPORT c) Other Source (Please Mention)

20. Smoking and drinking of alcohol in the office premise is not permitted. Participants are expected to maintain proper decorum while in campus & excursions.

21. The selected candidate need to abide by rules and regulation of the institute and maintain discipline harmony and will not indulge in unlawful activities in campus hostel or during educational and field visits.

22. DECLARATION BY THE CANDIDATE

I have read the Announcement brochure and will abide by the rules and regulations of the Centre. I have made / am making/have not made travel arrangements for attending the Course, and for local expenses for the period of stay in India.

Date:

Place:

Signature of the candidate
(Mandatory)

23. SPONSORING NOMINATING AGENCY CERTIFICATE

Dr/Mr./Ms.....is nominated to attend the Short Course on "DRM" to be conducted at Indian Institute of Remote Sensing, Dehradun, India during September 19-30, 2022 through offline (in person) mode. It is envisaged to utilise his/her experience in specific tasks of our organization. He/She possesses adequate knowledge of English Language required for the course.

- (a) He/She will be / will not be provided international travel support.
(b) He/She will be/will not be provided financial assistance for the period of stay in
(c) He/She possesses adequate knowledge of English Language required by the course

☐ } Mandatory:
☐ } Please tick
☐ } appropriate

Date.....	Signature:
Place.....	Name in Capital Letters:
	Designation:
	Phone /Fax No:
	E-mail:
(Official seal of the sponsoring / nominating authority including CSSTEAP GB member)	
Note: Application without official seal of sponsoring or nominating authority and their details will not be considered	

24. FORWARDING NOTE BY THE RESPECTIVE INDIAN EMBASSY/HIGH COMMISSION IN YOUR COUNTRY OR YOUR EMBASSY/HIGH COMMISSION IN INDIA.

This is to forward the application of Mr./Ms.....Of(Specify the Country Name here) for the short course on DRM of CSSTEAP, to be held at Indian Institute of Remote Sensing, ISRO Dehradun, India, September 19-30, 2022.

Date: Signature:
Place: Name:
Designation:
Phone No.:
Fax No.:
Email:

(Official Seal of the Embassy/High Commission of India either in your country or of your country in India)

N.B. Please send an advance copy of the application form duly sealed and signed by the nominating/sponsoring agency to the Course Coordinator, DRM, Indian Institute of Remote Sensing by fax (+91-135-2740785) or scanned copy via email (cssteap-admissions@iirs.gov.in or cssteapun@gmail.com) for quick processing.

IMPORTANT

- The Application which is not complete in all respects is likely to be rejected.
- Candidates must attach copies of certificates of:
 - ✓ Medical fitness to attend the course including Chest X-ray (PA), Blood Test (including Random Blood Sugar, HIV, HBs, Ag), Urine complete (in case any medical information requiring attention is hidden and if found during the course, the Centre will be compelled to send the candidate back home at the cost of nominating agency or candidate.
 - ✓ Highest degree obtained (Degree certificate and marks sheet/grade card)
 - ✓ Proof of Proficiency in English needs to be provided or certificate provided by the nominating agency.
 - ✓ All Degree Certificates, if not in English, may please be translated in English and attested by the Head of the organization or transcript in English can also be submitted.
- Smoking and consuming alcoholic drinks in class room and office campus is prohibited.
- Expectant mothers are advised to take a judicious decision before applying and joining the course.
- Submission of Covid-19 negative report by country's authorized medical agency is must at the beginning of the course
- Candidate is required to strictly follow all necessary Covid-19 guidelines recommended by Government of India