Committee on Earth Observation Satellites

IIRS-ISRO E-learning and Outreach Program

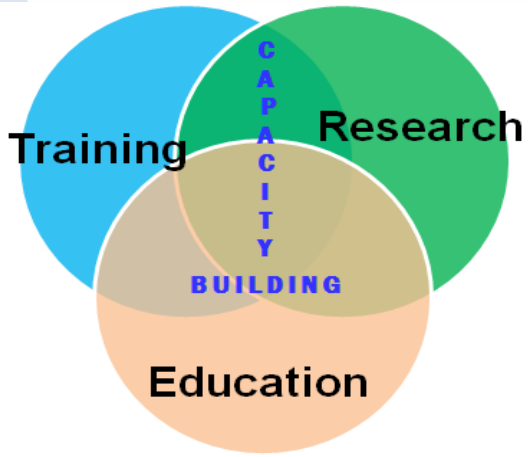
Session 2: Spotlight on Innovation
Indian Space Research Organization
Dr. Prakash Chauhan, Director, IIRS (ISRO)

CEOS WGCapD-9 Annual Meeting
Sunnyvale, California
10-12 March 2020

Indian Institute of Remote Sensing (IIRS)
Training & Education Programmes

❑ Training Programs

- ➢ **PG Diploma** (10 months, 9 Specialisations)
- ➢ **Certificate Course for University Faculty** (8 weeks, NNRMS–ISRO Sponsored)
- ➢ **Certificate Course** (8 weeks) (ITEC/MEA)
- ➢ **Decision Makers Course** (1 week)
- ➢ **Special /Tailor made Courses** (for User Depts.)



❑ Education Programs

- ➢ **M .Tech. in RS & GIS** (8 Specialisations) (Affiliated to Andhra University)
- ➢ **M.Sc. in Geo-information Science & Earth Observation** (Specialisation – Geoinformatics) (JEP with ITC, University of Twente, The Netherlands)

❑ Outreach Program

- ➢ **Live & Interactive courses**
- ➢ **E-Learning courses**

❑ Guidance to UG/ PG/ Ph.D. students

IIRS Outreach Programme

- Initiated in 2007 with 12 universities to supplement the university education in field of RS, GIS & GNSS technologies and its applications.
- Unique programme in the country for capacity building through online training in the field of Geospatial technologies;
- Free of cost;

Currently two modes of contents delivery using online learning platforms :

- Live and Interactive Classes (known as EDUSAT Programme)
- Online E-learning Programme- MOOC

(130 e-learning hours contents are available)

https://elearning.iirs.gov.in

IIRS Outreach Programme
Achievements

Website- https://elearning.iirs.gov.in

Objective

Strengthening Academia and User Segment in Space Technology & Its Applications using Online Learning Platforms.

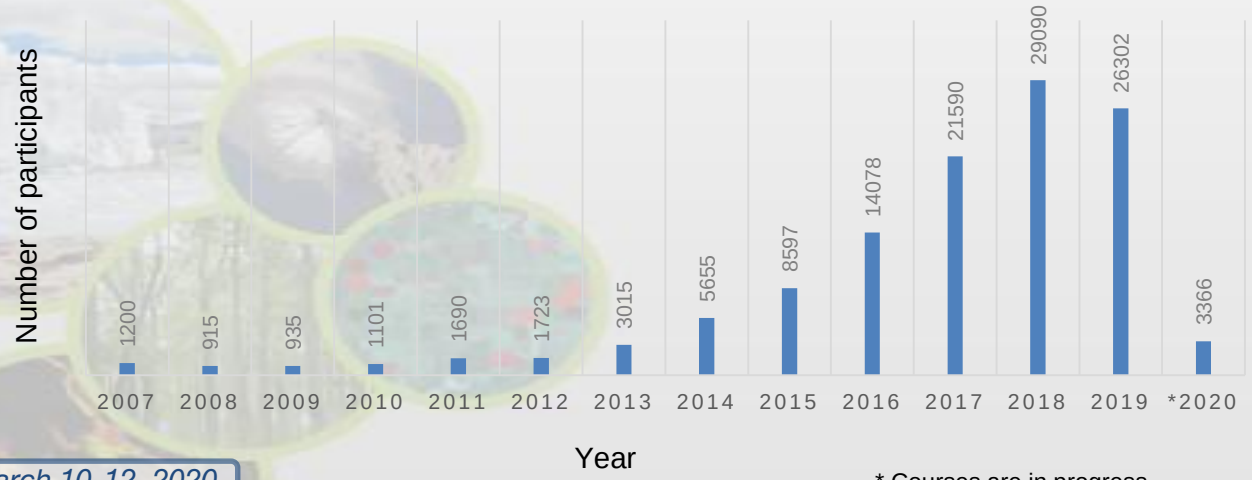
- Total Benefited participants- 126686 (Live & Interactive- 119257; E-learning (MOOC)- 7429).
- Total number of Networked Institutions- 1047

- 2019- 21 course (15 courses, 3 webinar series, 3 full day workshops;
- 2020- 15 courses and 9 full workshops (Proposed)

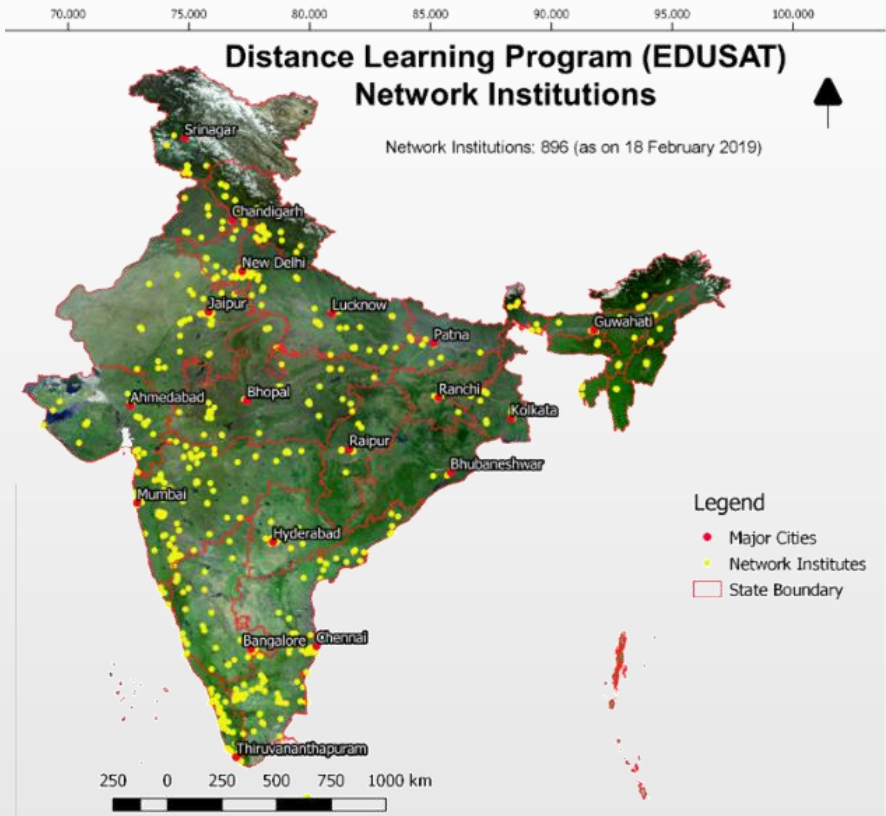
Distribution of IIRS Outreach network Instituations

Type of Institute	No. of network Institutions
University/Institute/College	902
Central Govt. Ministry/Department	28
State Govt. Ministry/Department	58
Industry/ Corporate	24
other	35
Total	**1047**

Year Wise Distribution of the Participants

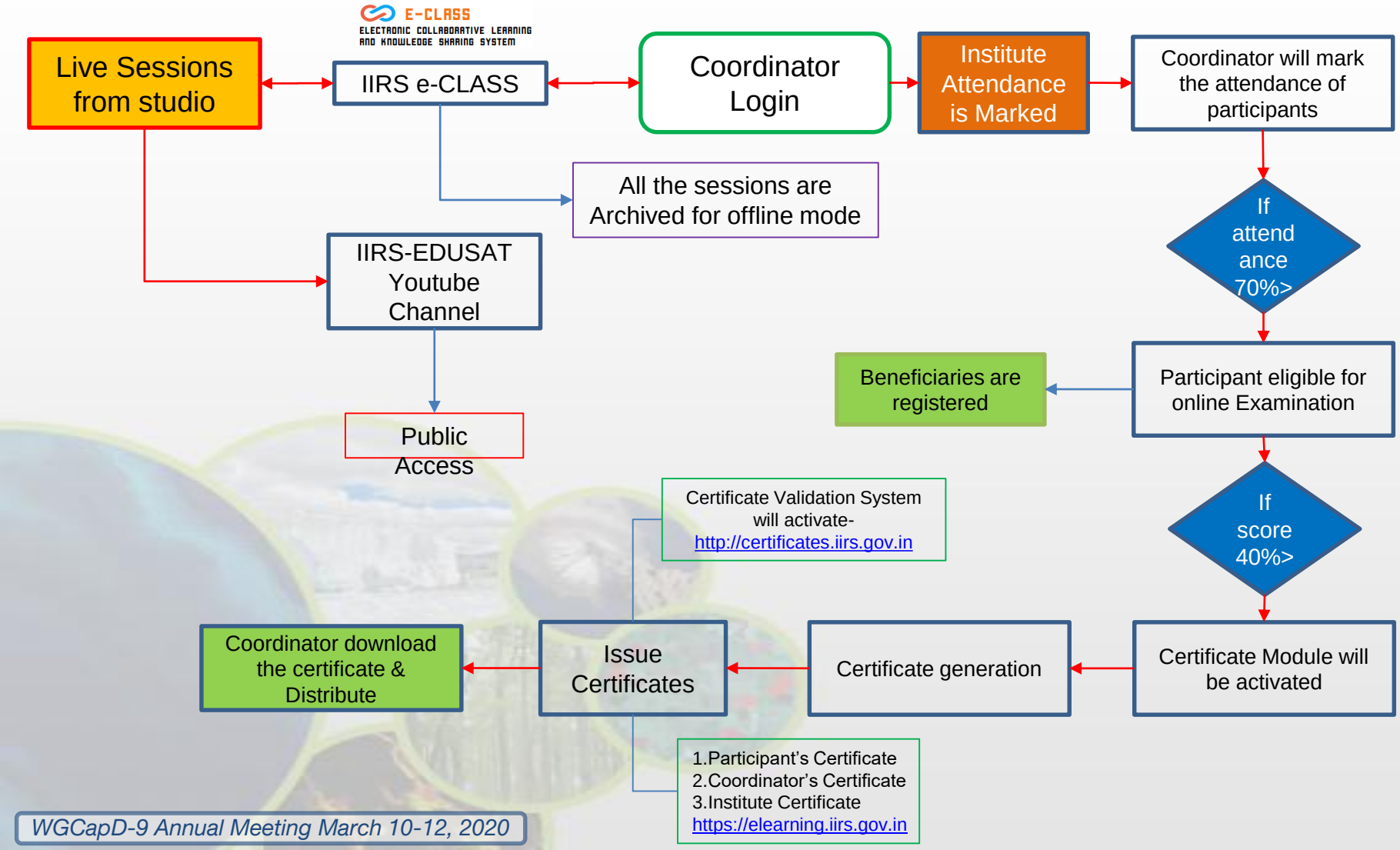


Distribution of Networked Institutions



* Courses are in progress

Innovative Learning using Live & Interactives Remote Classrooms

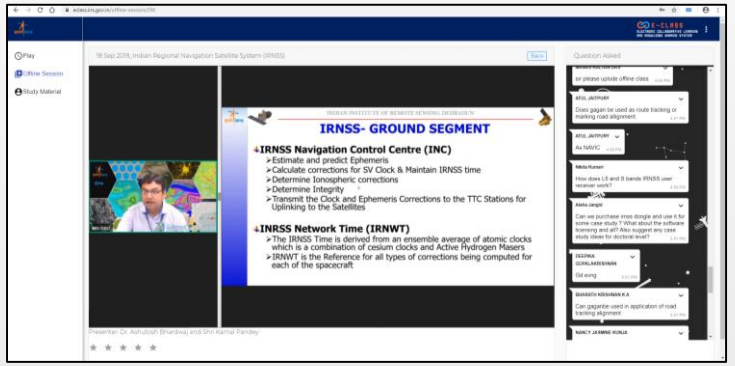


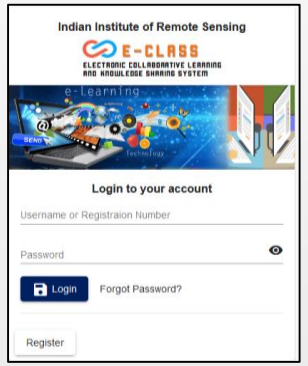
ISRO's Indigenous Online Active Learning Platform- E-CLASS

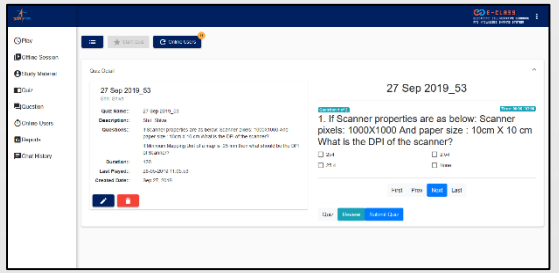
(https://eclass.iirs.gov.in)

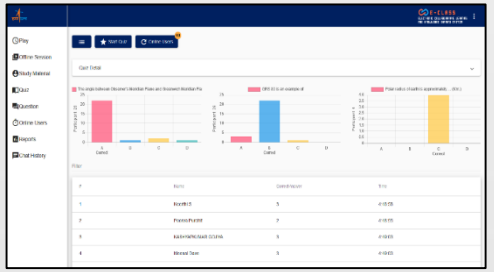
- Designed & developed Electronic Collaborative Learning and Knowledge Sharing System (**E-CLASS**).
- Learning tools developed on web and mobile platform:
  - Active Learning Mobile App for attention grabbing of online learners;
  - Live streaming of sessions, class and student activities;
  - Attendance recording;
  - Teacher's dashboard, session archives;
  - Online examination;
  - Sharing of learning resources etc.

E-CLASS
ELECTRONIC COLLABORATIVE LEARNING AND KNOWLEDGE SHARING SYSTEM



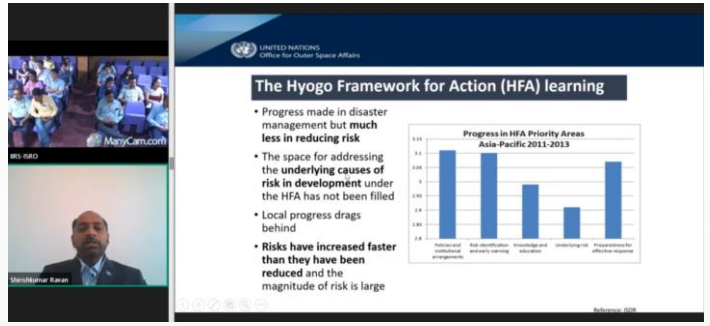


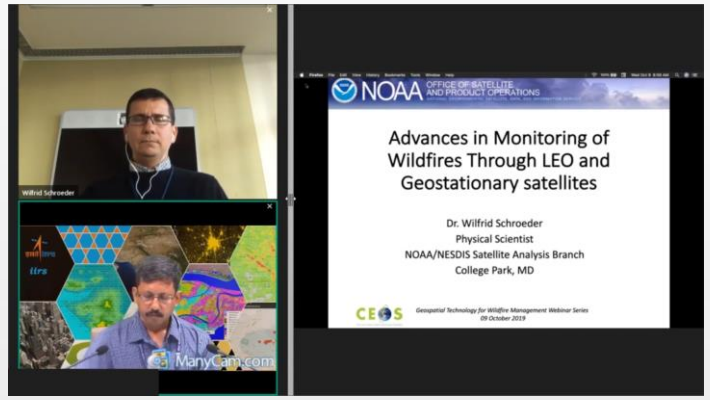


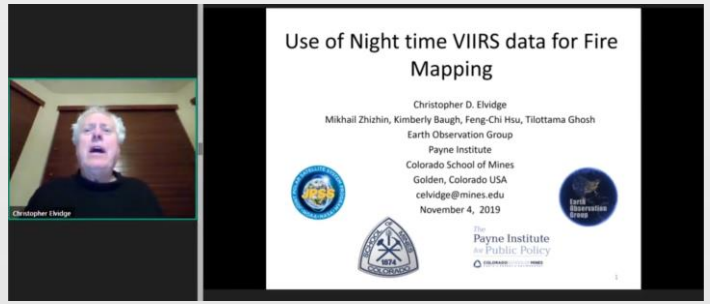


International Webinar Series in 2019 through E-CLASS

Topic	Duration	No. of Country	No. of Participants	No. of sessions
Webinar Series on Hyperspectral Remote Sensing and its Applications	Nov. 07, 2019 to Dec. 06, 2019	24	180	04
CEOS-WGCapD & ISRO Webinar Series on Geospatial technology for Wild Fire Management	Oct. 01, 2019 to Oct. 29, 2020	03	55	05
Application of Remote Sensing in Hydro meteorological and Geological Disasters	Sept 17, 2019 to Sept. 20, 2019	13	180	04







Challenges – and the path to overcoming them
&
Key takeaways and lessons learned

- Conduction hands-on exercises;
- Attention grabbing of online learners;
- Good network connectivity in remote areas;
- Sustainability of online learners. Online education should be part of regular curriculum of the academia.

- Simple delivering of online session/webinar may not be very effective. The faculty-student interaction is very much required;
- Attention grabbing of online learners is very much required;
- Extensive academia interface is required to "reach the unreached";
- Network of subject experts with academia and scientific community. The support WgCapD will be required to identify volunteer experts to deliver the online sessions.;
- Setting up Virtual lab with cyber GIS infrastructure and field laboratories;
- Dissemination of contents through mobile app and games will be very effective to attract the learners.

Thank You