

**Centre for Space Science and Technology Education in
Asia and the Pacific (CSSTEAP)**
(Affiliated to the United Nations)



Current Activities & Future Plans

Dr. A. Senthil Kumar
Director, CSSTEAP

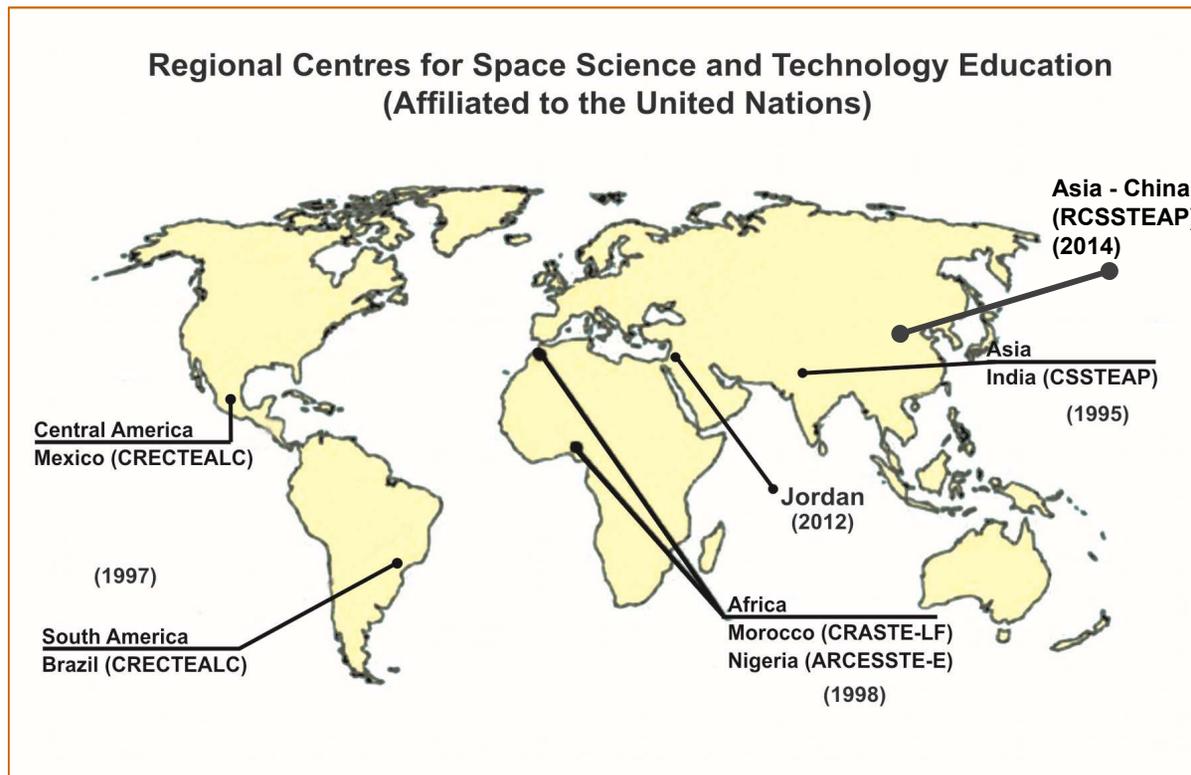
Meeting of Directors of Regional Centres (UN affiliated)

Vienna, Austria, June 13-14, 2017

Vision

- **Develop Human resources in the Asia and the Pacific regions** in applying space science and technology for sustainable development of the region, achieved *through Education and skills development* thereby enabling all learners to reach their individual potential.
- **Empower** with sufficient field knowledge: no country in the region will have to look abroad for *expertise* in Space Science & Technology application, but *will find them ready at home*

Regional Centres for Space Science and Technology Education in the World

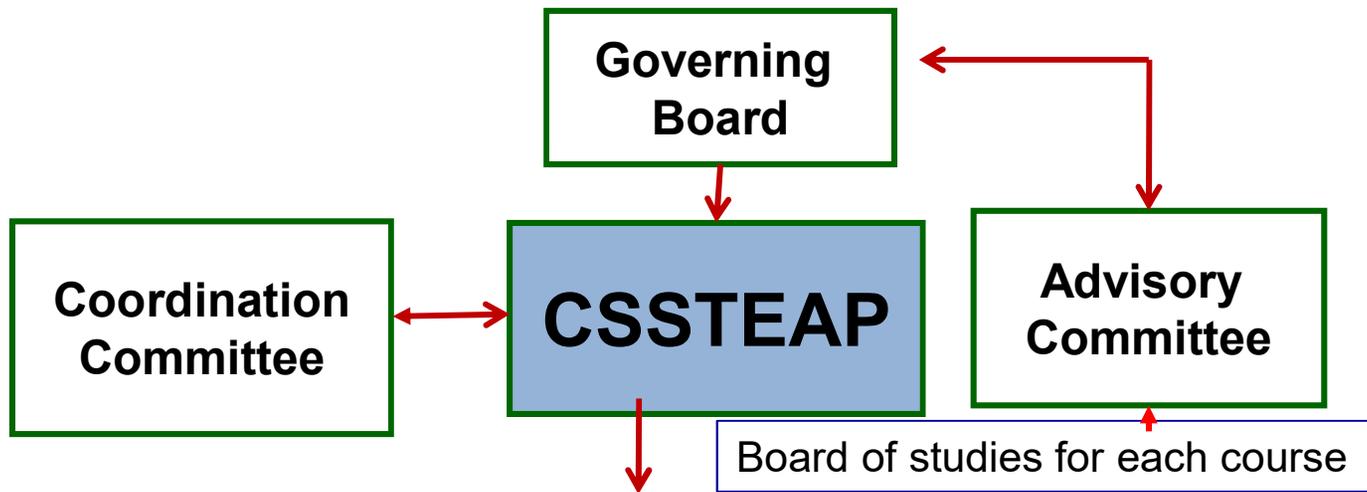


- **CSSTEAP is the 1st Regional Centre of UN-OOSA established in 1995**
- **CSSTEAP has 16 GB members & two observers for guiding all activities of the Centre.**

CSSTEAP completed 21 years.

Total 1818 participants from 35 Countries are benefitted

CSSTEAP: Structure and Campuses



CSSTEAP Hqrs., Dehradun

Regular Courses

- Remote Sensing & GIS
- Satellite Communication
- Satellite Meteorology & Global Climate
- Space & Atmospheric Sciences
- Global Navigation Satellite Systems
- Small Satellite Missions (Short Course)



Indian Institute of Remote Sensing, Dehradun



Physical Research Laboratory, Ahmedabad



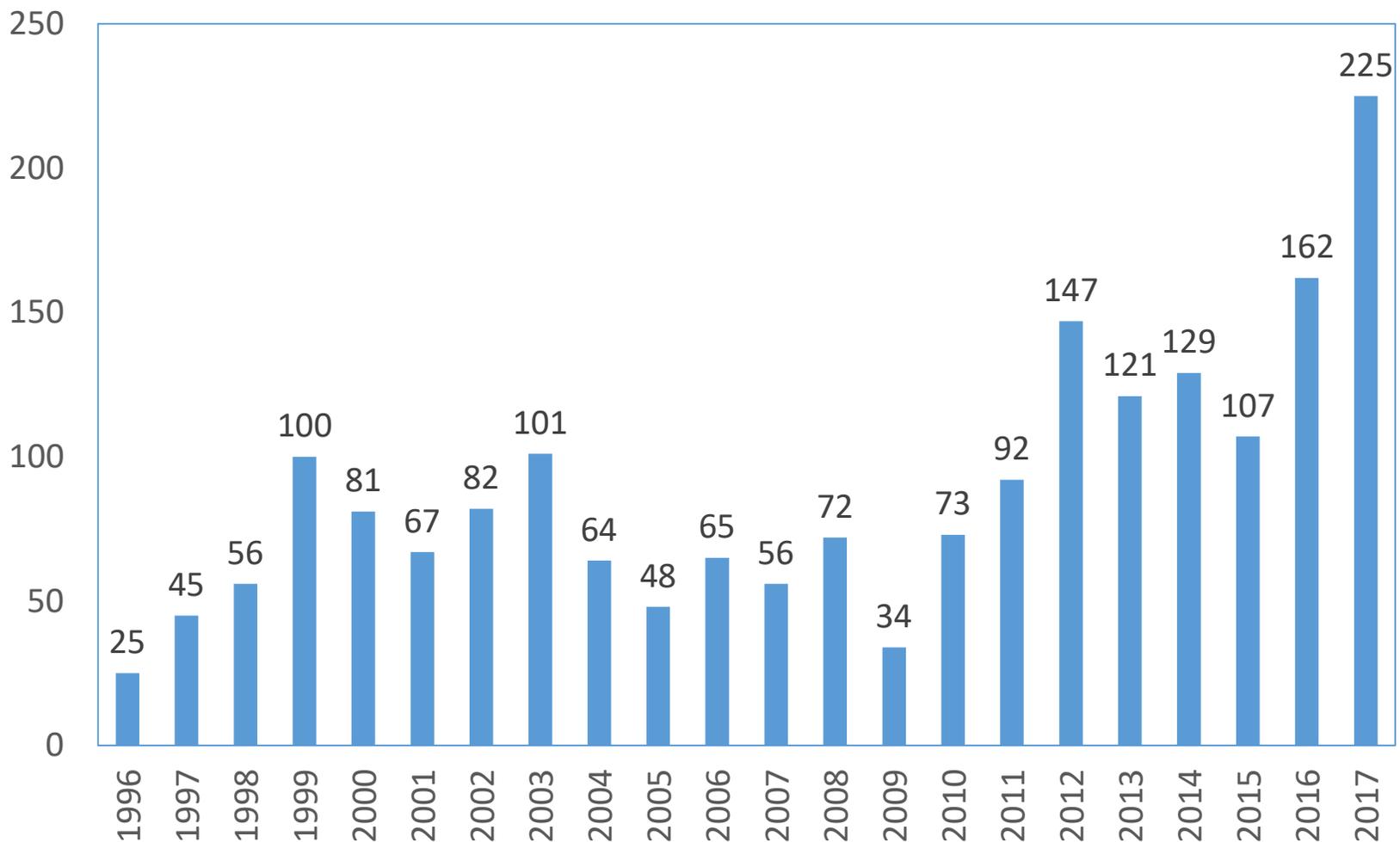
ISRO Satellite Centre, Bengaluru



Space Applications Centre, Ahmedabad

Progress in Participation

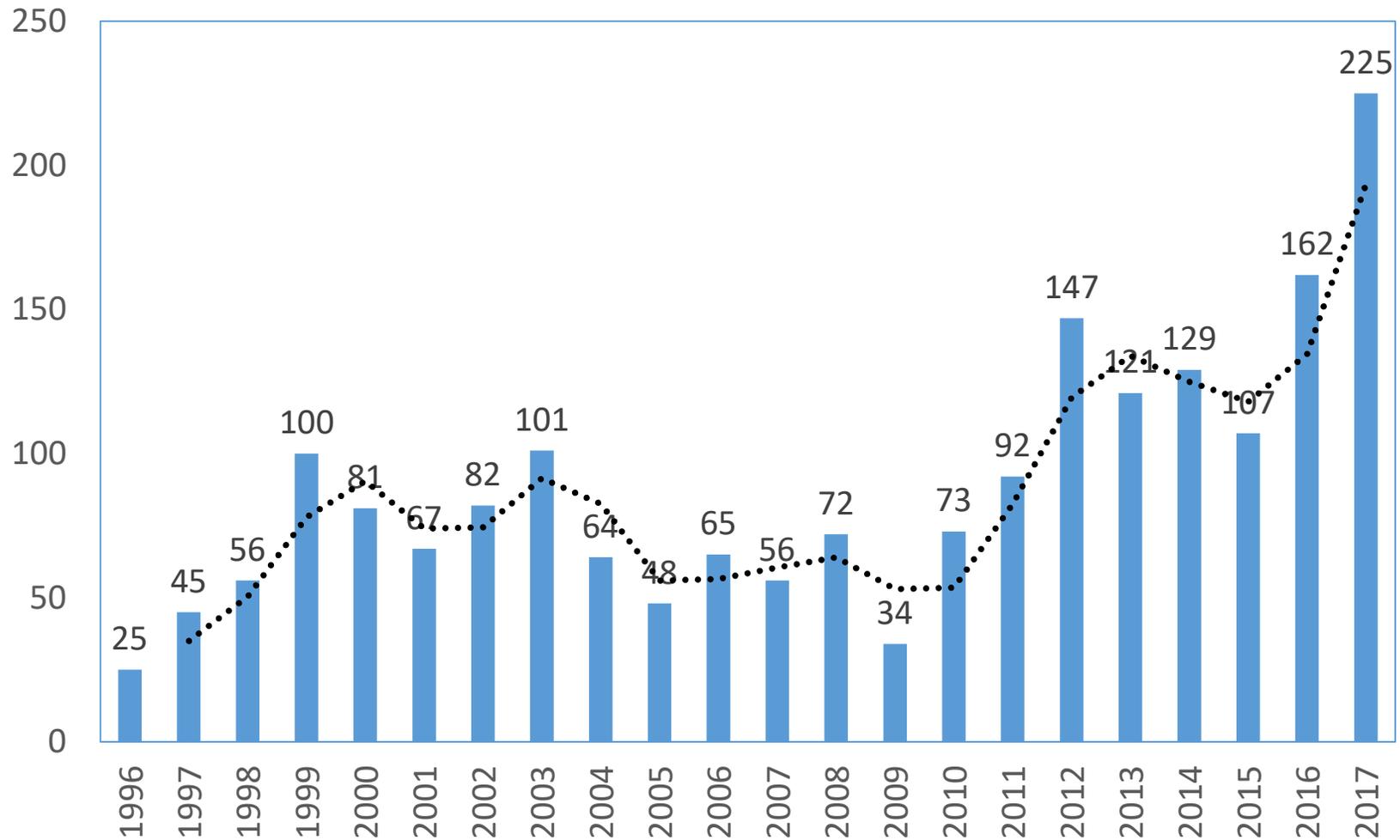
Participants' strength in CSSTEAP programs



2017* - current and anticipated

Progress in Participation

Participants' strength in CSSTEAP programs

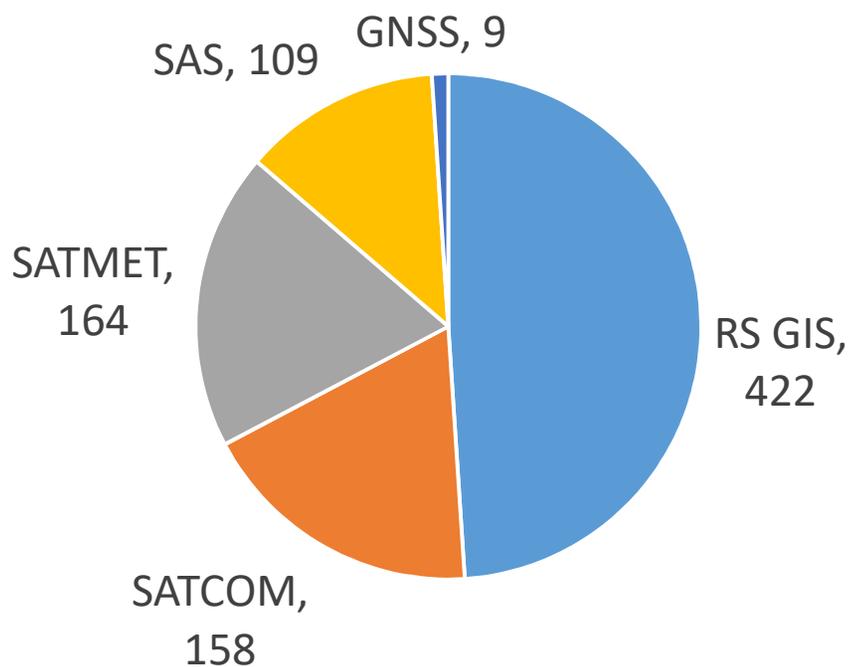


2017* - current and anticipated

Spectrum of Participation

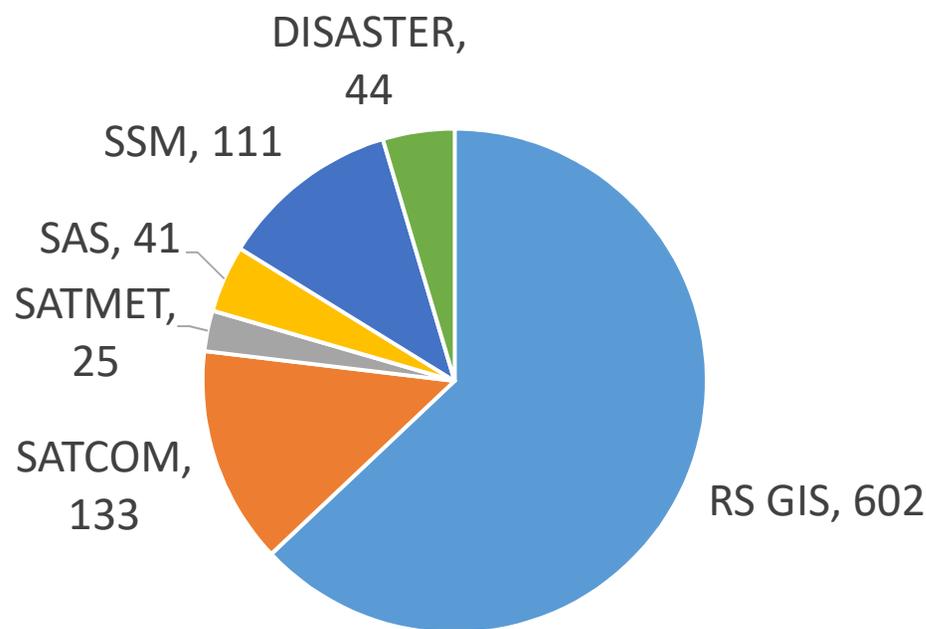
CB Levels: Skills Development + Education + Research

**PG Courses till May 30, 2017
(Education)**



Total participants: 862

**Short Courses till May 30, 2017
(Skills development)**



Total participants: 956

Educational Program Structure



PG: Remote Sensing & GIS
(RS & GIS) **Every Year**

PG: Satellite Communication
(SATCOM) & Global Navigation
Satellite Systems (GNSS)
Alternate Odd Year (OY)

PG: Satellite Meteorology &
Global Climate (SATMET)
Alternate Even Year (EY)

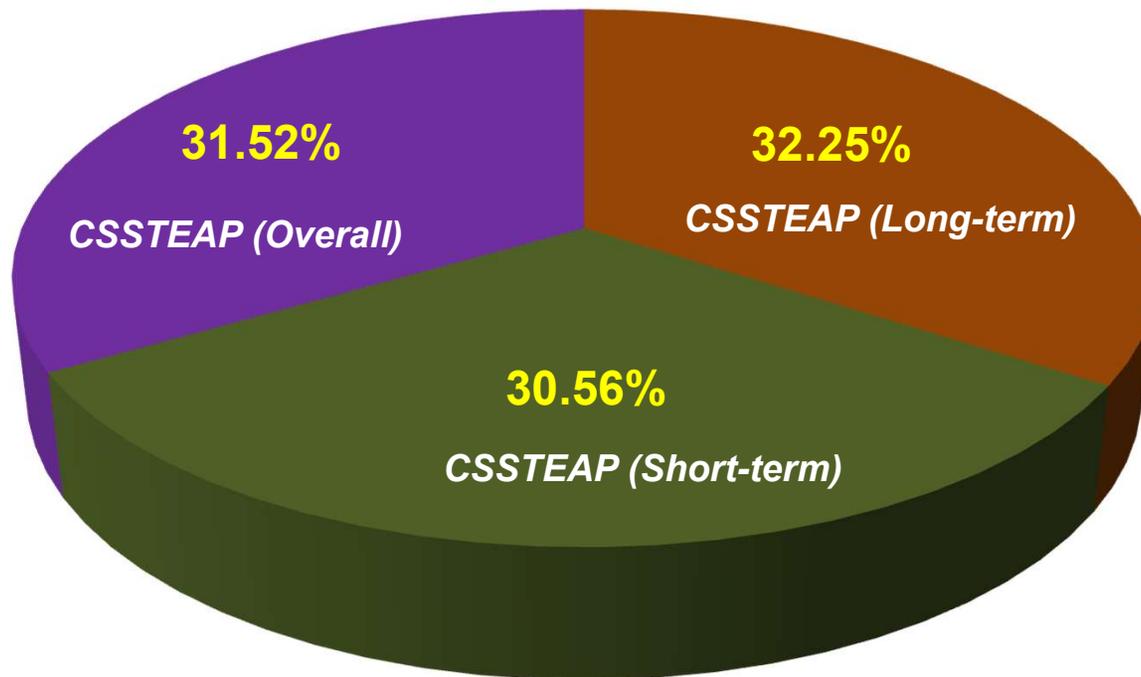
PG: Space and Atmospheric
Sciences (SAS)
Alternate Even Year (EY)

Short Courses on RS&GIS,
Small Satellite Missions and
also user demand based
(every year)

- Completion of nine month PG course curriculum
- **Award of PG Diploma by CSSTEAP**
- **CSSTEAP offers 1 Yr. Fellowship in India to meritorious students for M.Tech. Research**
- One year follow-up project in home country for academic requirement of M.Tech. research
- Submission and evaluation of M. Tech. thesis by internal & external experts.
- **Award of M. Tech. degree by Andhra University, India. About 143 received M.Tech. degree till date.**



Women Participation in CSSTEAP Programs



Short Courses (2016-17)

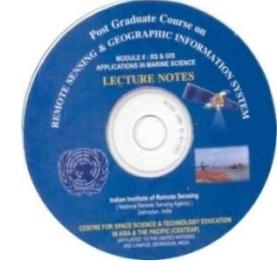
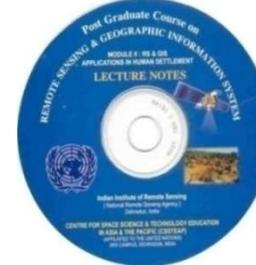
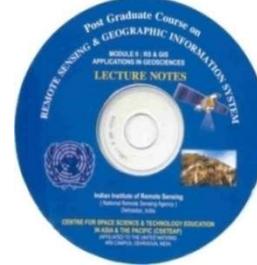
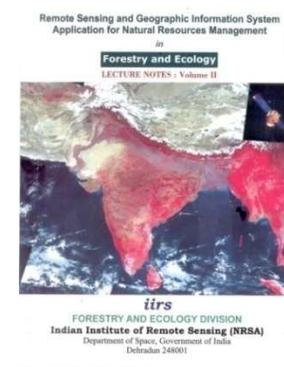
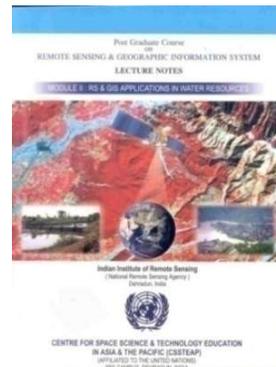
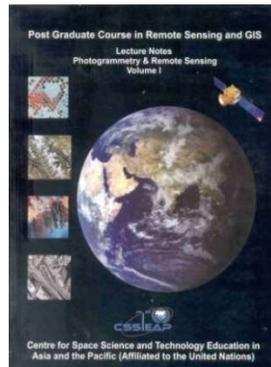
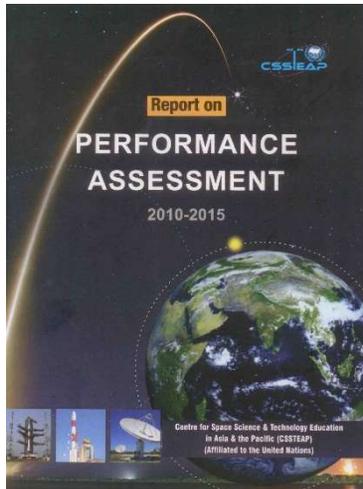


- **NWP: Weather Forecasting using Numerical Prediction Models** during April 18- May 17, 2016 (**23** participants from 7 countries)
- **AFEA: Advances in Geospatial Tools in Forestry & Ecology Applications** during May 23 - June 21, 2016 (**20** participants from 9 countries)
- **SW: Short Course on “Space Weather”** at PRL, Ahmedabad during May 9 - June 8, 2016 (**13** participants from 6 countries)
- **DDLA: Disaster Damage and Loss Assessment** in Natural Heritage and Cultural Sites using Geospatial Techniques, September 11 – October 2, 2016 (*24 participants from 11 countries*).
- **SSM: Short course on Small Satellite Missions** jointly conducted by ISAC, Bengaluru & IIRS, Dehradun during November 21 – December 02, 2016. 12 participants from 07 Countries sponsored by ASEAN also attended the course. (**37** from 14 countries)
- **DRDA: Disaster (post Earthquake) Rapid Damage Assessment** was jointly conducted with UNOOSA, UN-HABITAT, and UN-SPIDER designed and developed the course curriculum and conducted the training course from 28 March to 2 April 2017 at Yangon, Myanmar. A total of **44 participants** from 16 disaster management agencies and stakeholder departments participated in the training programme.

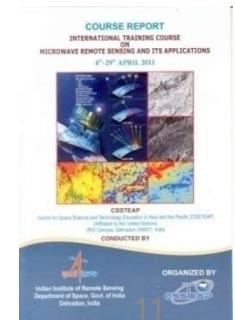
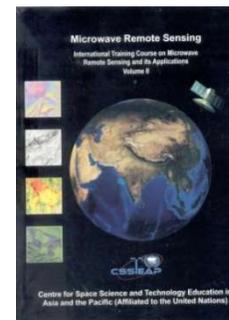
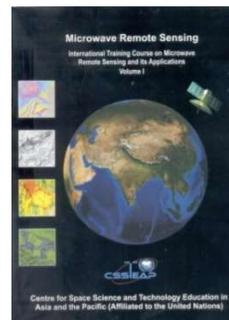
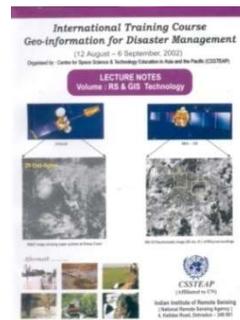
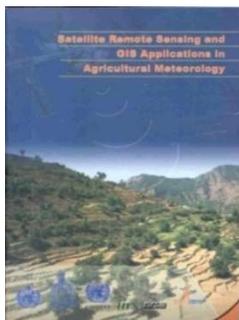
Centre's Publications



PG courses



Short courses



CSSTEAP Alumni Meets



Alumni meet at Kathmandu, Nepal on October 6, 2010



Meeting with the CSSTEAP alumni in Colombo, Sri Lanka on October 21, 2011



CSSTEAP Alumni Meet in Thimpu, Bhutan on November 15, 2011

CSSTEAP Alumni Meets

Colombo, Sri Lanka
October 20, 2016

Recommendations:

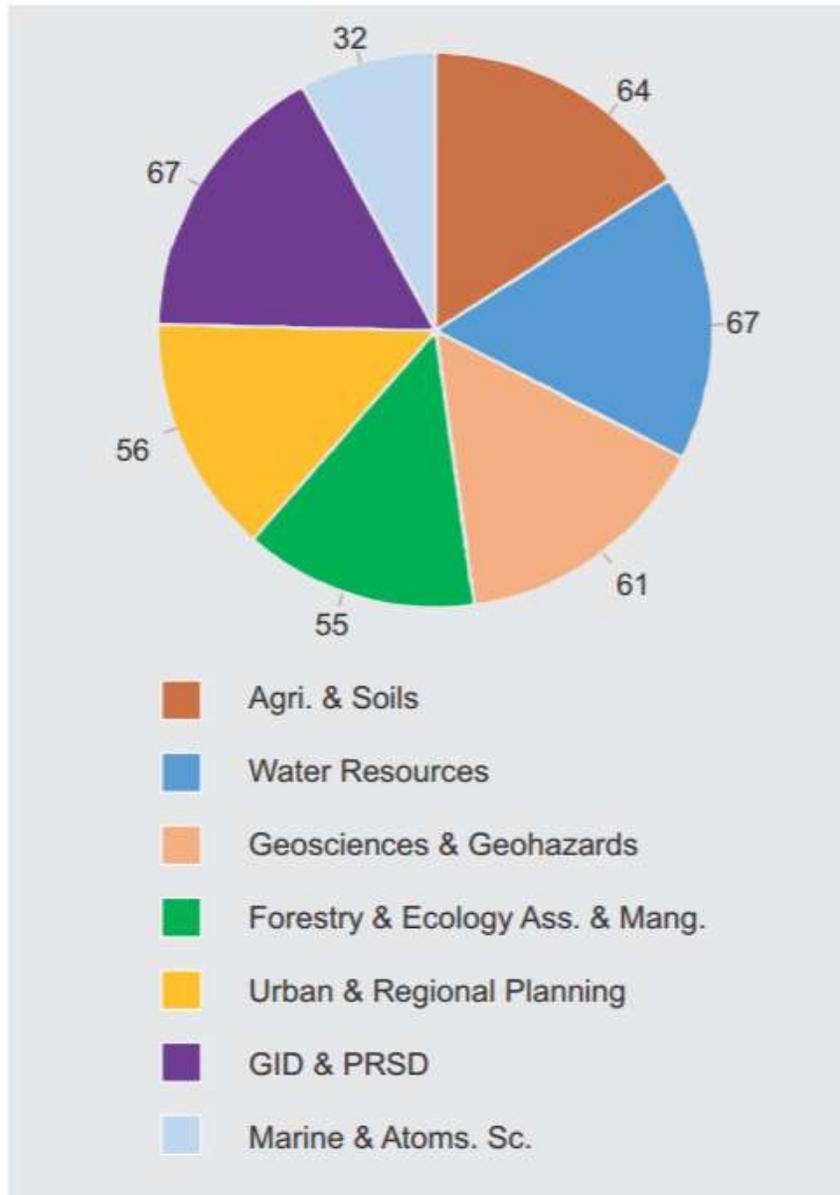
- Short Course on UAS
- Short course on Lidar
- Refresher course



Alumni meet at Nay Pyi Taw, Myanmar on March 22, 2012



Performance Assessment (2010-2015):



*Expertise generated -
No. of participants
trained in various
disciplines of RS & GIS*

Technical Visits/Cooperation



Australia – India Cooperation:



- **Mr. Sean Kelly**, Consul-General to Southern India, **Ms. Sophie Anne Craig**, Consul from the office of Australian Consulate General, Chennai visited CSSTEAP Centre on *February 23, 2016*.
- **Objective:** to discuss and identify the potential areas of mutual cooperation for capacity building and research initiatives between ISRO, Government of India and Universities, Government of Australia in the areas of space science and technology..
- Points agreed for the future collaboration included Resources Sharing, Conducting Joint research programme, Publicity of e-learning and DLP programmes through websites, study-tours, and Exchange of Students, Faculty/Scientists.

China – India Cooperation:

- A delegation from CNSA and Beihang University China, visited Indian Institute of Remote Sensing (IIRS) during *January 4-5, 2016* as a follow-up of the memorandum of understanding (MoU) on “2015-2020 Space Cooperation” signed between Indian Space Research Organisation (ISRO), Government of India and Chinese National Space Administration (CNSA) on May 15, 2015.
- The visit was part of the Theme 4: Cooperation on Education and Training of the said MoU and to discuss on the potential cooperation between IIRS, CSSTEAP and Beihang University.



Programmes in 2017

- 22nd Post Graduate course in RS & GIS at IIRS, Dehradun from July 1, 2017 - March 31, 2018.
- 11th Post Graduate Course in Satellite Communications at SAC, Ahmedabad from August 1, 2017 to April 30, 2018.
- 2nd Post Graduate Course in Global Navigation Satellite Systems at SAC, Ahmedabad from August 1, 2017 to April 30, 2018.

- Short course on "theme specific courses on RS&GIS & SATMET"
 - UAS and its applications with special emphasis to DRR (June 12-23)
 - LIDAR RS and its applications (completed, May 15-26, 22 participants from 8 countries)
 - Weather Forecasting using Numerical Prediction Models (July 3-14)

- 6th Short course on Small Satellite Missions at IIRS, Dehradun and ISAC, Bengaluru during November- December, 2017

Future Plans and Recommendations:

- To continue existing programs for P.G Diploma & short courses in disciplines on space science technology & applications;
- To make efforts to further increase no. of women candidates from participating countries.
- To continue to support M.Tech research scholarship and need based for PhD. Research on a specific request from AP countries;
- Outreach programmes should be taken up by CSSTEAP and GB member countries. Necessary support and infrastructure to be worked out with need by the respective country.
- CSSTEAP will develop international linkages with institutions like GEO, GEOSS, WMO, UNEP, etc; and
- Keenly interested to get directions on new programs from this meeting in planning of our Centre's activities.

Thank you for your attention



www.cssteap.org