GNSS Training and Capacity Building Activities by CSSTEAP
An Update

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1   **CSSTEAP and its Capacity Building Activities**

- Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) established in November, 1995

- Hosted by Government of India

- Department of Space as nodal agency

1 **CSSTEAP and its Capacity Building Activities**
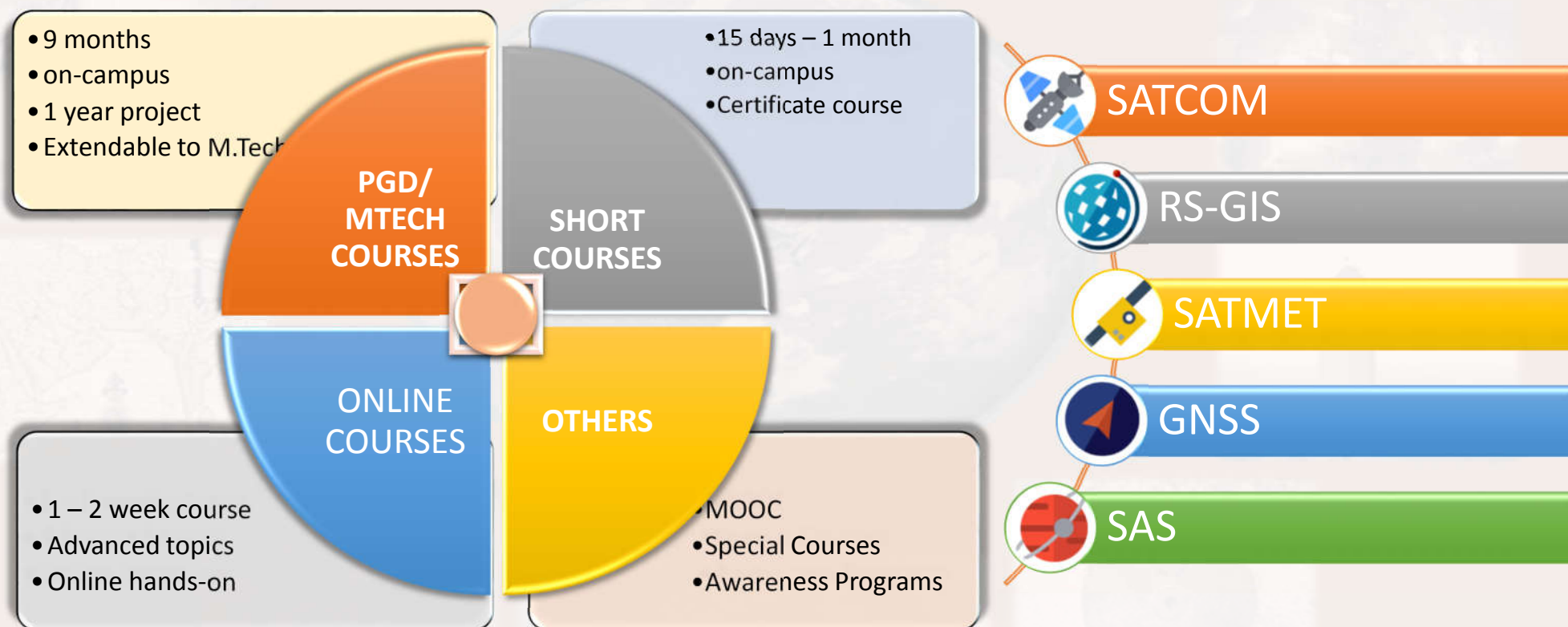
Objectives and Commitments:

- CSSTEAP is committed to dissemination of technical information and capacity building

- "ज्ञानदानात वृध्यते" (Gyanangdanat Bridhyate)

Member Countries:

- CSSTEAP governing body is constituted by active participation of its member countries
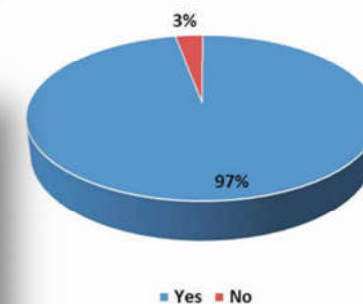
1 CSSTEAP and its Capacity Building Activities

- 9 months
- on-campus
- 1 year project
- Extendable to M.Tech

PGD/ MTECH COURSES

- 15 days – 1 month
- on-campus
- Certificate course

SHORT COURSES

ONLINE COURSES

OTHERS

- 1 – 2 week course
- Advanced topics
- Online hands-on

- MOOC
- Special Courses
- Awareness Programs

SATCOM

RS-GIS

SATMET

GNSS

SAS

1 **CSSTEAP and its Capacity Building Activities**

CSSTEAP Courses at a Glance

- Started in 1996

- Conducted every/alternate years

- Conducted 69 PGD courses with many more short courses

- Around1300 Participants benefitted

- More than 200 participants completed M. Tech

Has the course at CSSTEAP benefited in your carrier

3%

97%

- Yes - No

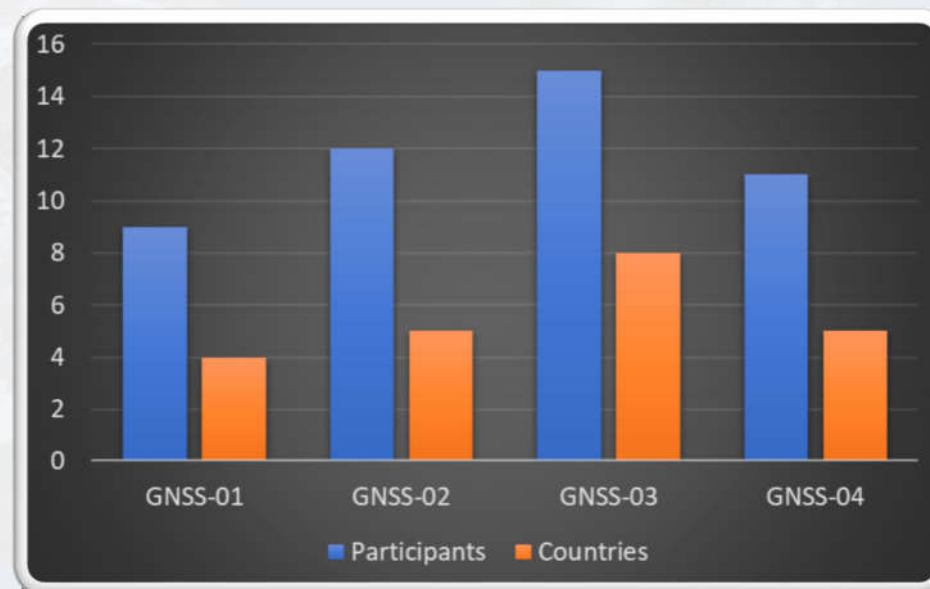**1** **CSSTEAP and its Capacity Building Activities**

- Conducted at the centres of ISRO at different parts of India

- Supported by academia, industries and other organizations

2 GNSS Training by CSSTEAP - Update

GNSS Course at a Glance

- Started full term course from 2015: 9-month duration

- Conducted by Space Applications Centre, ISRO, Ahmedabad

- 47 participants from 14 countries benefitted
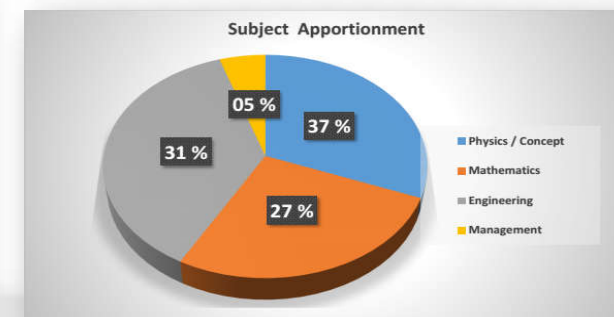
- 5 participants completed M. Tech

2 GNSS Training by CSSTEAP - Update
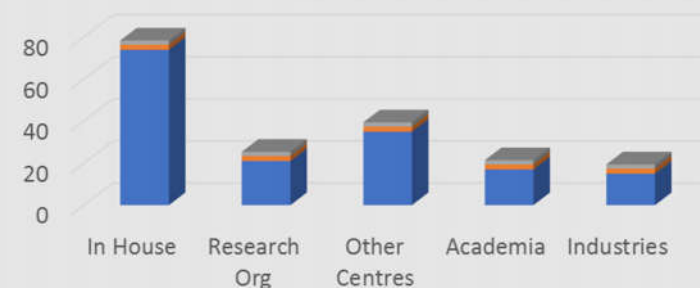
GNSS-04 Course at a Glance

September 2022 – June 2023

What's New?

- Balanced apportionment of subjects
- State of the Art technologies included
- Pro-participant designing of course curriculum
- Faculty from different professional backgrounds
- Renowned speakers from across the nation
- Useful tools & resources in classes and labs
- Enhanced allowances

Subject Apportionment

- 37 % Physics / Concept
- 27 % Mathematics
- 31 % Engineering
- 05 % Management

Faculty Chart

2 **GNSS Training by CSSTEAP - Update**

CSSTEAP Educational Facilities

Highlights

GNSS Class Room

Seminar Room

Programming & Simulation Lab
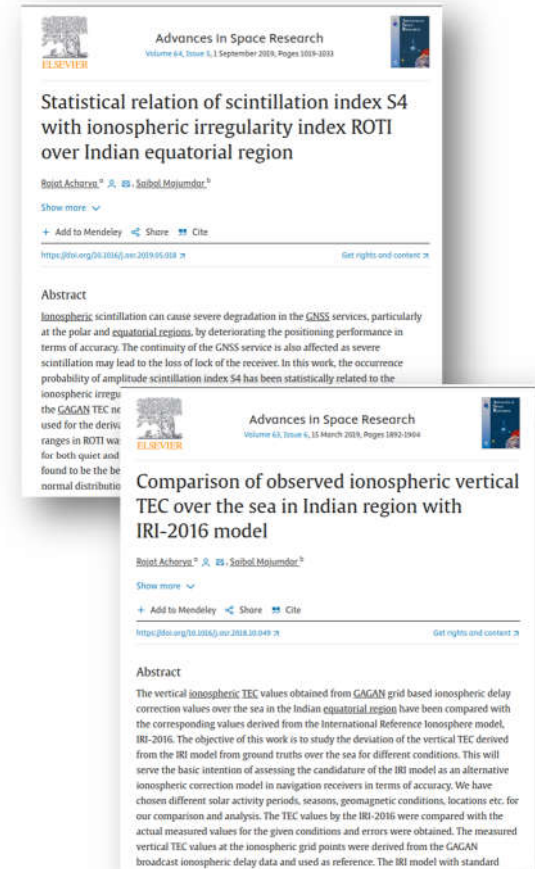
Auditorium

Hostel

VC Room

- CSSTEAP Network

- Reading cum lending library

- Seminar and VC Room

- Programming and Simulation Lab

- Recording facilities

- Auditorium for CSSTEAP

2   GNSS Training by CSSTEAP - Update

CSSTEAP Research Facilities

- CSSTEAP Participants can do project work in any of GNSS labs in SAC/ISRO with any experienced scientists as guide
- CSSTEAP participants can access dedicated knowledge repository via CSSTEAPNET
- A large section of SAC/ISRO data is made available for CSSTEAP participants
- CSSTEAP participants have the access to all available library books and subscriptions of SAC/ISRO to leading journals
- CSSTEAP participants have published research done during Course

Statistical relation of scintillation index S4 with ionospheric irregularity index ROTI over Indian equatorial region

Comparison of observed ionospheric vertical TEC over the sea in Indian region with IRI-2016 model

2 **GNSS Training by CSSTEAP - Update**

CSSTEAP Educational Tours

- Participants are exposed to the related work in other Indian organizations and institutes and laboratories across India

2 **GNSS Training by CSSTEAP - Update**

The Fun Side

Highlights

- Participation in Indian festivals

- Visits to different placed of interest across India

- Cultural programs

- Student's day celebration

- Games and sports

2 GNSS Training by CSSTEAP - Update

Observations

- Many applications from African countries

- African centres at Morocco and Nigeria, have their own specialities

- CSSTEAP, being conducted by ISRO, has expertise as service provider and payload and application developer

- Find scope of some kind of exchange of participants can be worked out

3 Forthcoming GNSS Courses by CSSTEAP

Online course on GNSS announced

- It is necessary to keep online training and capacity building activities open

- Announcement of online short course on "GNSS: Advanced Technologies and Applications"

- The course will be conducted from 28th November till 08th December, 2023

- Details of the course and application portal at https://cssteapun.org

PGD course GNSS-05 scheduled in August, 2024

- Next CSSTEAP PG course on GNSS is scheduled in August, 2024 and will be formally announced by Jan '24

Thank You