

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



24th Meeting of the Governing Board

Date: December 02, 2019

Venue: ISRO Hqrs, Bengaluru

Minutes of 24th Meeting of the Governing Board

- 24.1 The 24th meeting of the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) Governing Board (GB) was held at ISRO Hqrs, Bengaluru on December 02, 2019.
- 24.2 Action Items emerged during the 24th meeting of CSSTEAP-GB are placed in Annexure-1A and the list of the participants, including the members of the GB, Observers and Special Invitees are given in Annexure-1F.

Agenda Item -1: Welcome

- 24.3 Dr. K. Sivan, Secretary, Dept. of Space (DOS), Govt. of India, and Chairman, GB, welcomed all the GB members and special invitees for 24th meeting of the Governing Board.
- 24.4 While expressing that the Centre has completed 24 years, he appreciated the commendable growth of its capacity building activities in Asia Pacific region. He expressed his satisfaction that the Centre has benefitted more than 2300 participants, which include professionals, government officials, and academicians, largely from the Asia Pacific region.

Agenda Item – 2: Opening Remarks by Chairman, CSSTEAP-GB

- 24.5 Dr. K. Sivan, Chairman, CSSTEAP Governing Board mentioned that CSSTEAP has further diversified its reach by conducting a Global Webinar series on Space Applications in Disasters – first of its kind amongst all Regional Centres affiliated to UNOOSA. Based on GB's suggestion, the Centre has supported the UN-SPIDER's training programme in March 2019 on 'Post Rapid Disaster Assessment' in Myanmar.
- 24.6 He also emphasized that Centre has made good progress and its activities are steadily growing in terms of quality and diversity of courses incorporating advanced technological developments in the curriculum. He complimented the whole hearted support and continued guidance of the GB members and the continued support of Dept. of Space as host country commitment.
- 24.7 He apprised the participants of 24th meeting of the CSSTEAP GB on some of the significant achievements of ISRO during the last one year.

- 24.8 The opening remarks of Chairman, GB was circulated during the meeting. The highlights of the significant achievements of Indian Space Research Organisation and missions are placed in **Annexure-1B**.

Agenda Item– 3: Brief Remarks by UN Representative

- 24.9 Dr. Shirish Ravan, Senior Programme Officer and observer from the United Nations Office for Outer Space Affairs welcomed and acknowledged the participation of all GB members in the 24th Meeting of the Governing Board of CSSTEAP.
- 24.10 He congratulated CSSTEAP for its completion of 24 years journey of capacity building in space sector. He further appreciated the efforts made for conducting a webinar series on Application of Remote Sensing in Hydro-meteorological and Geological disasters in September 2019 that benefitted 148 participants from 12 countries.
- 24.11 He apprised that CSSTEAP also supported off campus training program in Myanmar upon request of UNOOSA/UN-SPIDER. He requested similar contribution to other activities as the UN-SPIDER programme is planning to visit Afghanistan, Lao PDR, Mongolia, Nepal and Sri Lanka, and conduct regional events in South Asia, ASEAN and the Pacific region.

(Action 24/1: CSSTEAP to support a few off-campus courses in countries where UN-SPIDER is likely to organize the event as per the CSSTEAP mandate – UNOOSA and Director, CSSTEAP)

- 24.12 The brief remarks of UNOOSA representative are placed as in **Annexure-1C**

Agenda Item – 4: Brief remarks by GB members

- 24.13 Mr. S. Panawennage, Sri Lanka appreciated the efforts made by CSSTEAP in recent years. He mentioned that CSSTEAP is becoming a role model and pioneering institution for capacity building in space science and technology. He appreciated the support provided by Govt. of India and ISRO as a host. He mentioned that CSSTEAP has trained 2300 participants since its inception. He further congratulated ISRO for its successful mission in recent years including Chandrayaan-2. He congratulated all the dignitaries for their constant support to CSSTEAP. He further added that UNNATI is playing a major role in capacity building towards Small Satellite Mission in the region. He emphasized that the alumni of CSSTEAP are doing great job and holding important positions related to space technology in their respective countries. He also emphasized the role of space technology for achieving agenda 2030 on SDGs. CSSTEAP has to play much stronger role in achieving these goals through capacity building.
- 24.14 Mr. Hari Odari, Nepal thanked Chairman for briefing about the activities and happenings of ISRO. He thanked ISRO for hosting the CSSTEAP and providing necessary support with which the Centre has made world class image. He mentioned that Nepal has been surely benefitted by the state of art programs of CSSTEAP and interest has been increasing as well. He highlighted that the number of trainees are just a number, however the figure multiplies and benefit multifold when training of trainers has been done. He mentioned that space technology is key to success and used in every field now a days. Further he congratulated and appreciated the efforts made by the Centre.

- 24.15 H. E. Dato Hidayat Abdul Hamid, High Commissioner, Malaysia High Commission thanked Dr. Sivan and congratulated ISRO for its achievements. He also recognized the contributions made by CSSTEAP Director, Program Coordinator and the team for arranging the several courses in the region. He thanked Govt. of India for its generosity and commitment for supporting CSSTEAP. He reiterated the commitment of Govt. of Malaysia for participation to CSSTEAP programs and hope the Centre continues to grow and further enhance capacity building, education and training in space science specially for developing countries. CSSTEAP has helped to achieve the overall objective of Space 2030 agenda namely improving access to 'Space for all' and will benefit all the countries socio economically, on space science and technology applications. He further informed that in 2017 Govt. of Malaysia has approved their national space policy for 2030 to draft to enhance development of national space eco system. He mentioned that Malaysia look forward to strengthen and expand their cooperation with the Indian government and ISRO especially on the use of space technology and applications for peaceful purposes. He again thanked Chairman, ISRO for hosting CSSTEAP.
- 24.16 Mr. Joon Lee from Republic of Korea thanked and congratulated CSSTEAP for great efforts towards space science capacity building. He mentioned that Korea has started their space program in 1989 and taking support of ISRO for many activities. He requested for a two weeks training program for KARI participants and inviting experts from experienced countries. He requested support and participation of UNOOSA for the KARI's training program and look forward for the support from CSSTEAP.
- 24.17 Prof. Abdykalykov Akymbek Abdykalykovich from Kyrgyzstan thanked Chairman, CSSTEAP GB and others for hosting the Centre. He further informed that participants from Kyrgyzstan who have been trained in remote sensing and GIS are faculty and teaching in Kyrgyz university.
- 24.18 Mr. Charan Kamal Singh Bhalla, Nauru congratulated ISRO for successful missions. He showed his interest for a short training program especially for the pacific region in the field of Space Science Technology and its applications for climate change impact.

(Action 24/2: Exploring conduct of training programme of specific interest to pacific region -Director, CSSTEAP)

- 24.19 Mr. Arvin R. de Leon, Deputy Chief of Mission, representative of Ambassador of Republic of Philippines congratulated CSSTEAP for the success. He mentioned that total 37 participants are benefitted by CSSTEAP since 1996 and presently two participants are undergoing SATCOM and GNSS Course and he is also hopeful that there will be more in future. He mentioned that Philippines being the most vulnerable countries when it comes to climate change and Philippines would like to use this technology that could be able to mitigate the effects of climate change. Philippines government is focusing in the area of space science and technology and looking for India's constant support.
- 24.20 Dr. Amir Hossein Mirabadi, Head Tech. & Coop. from Iran embassy, representative of ISA, Iran cited that space technology is being used everywhere now. He mentioned that in early 2019 a severe flood event occurred in southern Iran and they have used space data to manage that. He emphasized on the usage of space science technology. He further congratulated ISRO for its achievement and the help extended and added that Iran is also working in the field of space science and small satellite missions.

Agenda – 5: Adoption of Agenda for the 24th GB meeting

- 24.21 The agenda for the 24th meeting of the GB, which was circulated to the members, was adopted as given in **Annexure–1D**.

Agenda - 6: Confirmation of Minutes of previous meeting

- 24.22 Dr. A. Senthil Kumar, Director, CSSTEAP informed that the draft minutes of the 23rd GB meeting were circulated to all the members for comments. The comments received from GB members were incorporated and final minutes were sent to the GB members and requested GB to adopt the modification and approve the same.
- 24.23 As there were no further comments, the GB approved the minutes of the 23rd GB meeting.

Agenda - 7: Action Taken Report

- 24.24 Dr. A. Senthil Kumar, Director CSSTEAP briefed GB on the status of the action items emerged out of the 23rd GB meeting as detailed below:

24.24.1 **CSSTEAP to support in organizing off campus courses in Bangladesh, Myanmar and South Korea upon request from UNOOSA**

Director, CSSTEAP informed that this year a request was received from UNSPIDER. On the basis of this, CSSTEAP conducted one week customized training program on 'Post Rapid Disaster Assessment of Natural Disasters' during March 11-15, 2019 at Myanmar. He further added that these kind of activities will be continued on request basis and support from UNOOSA.

24.24.2 **CSSTEAP to provide list of links for free and open source data and softwares**

Director, CSSTEAP informed that in response to the action item the links have been provided for free and open source data and softwares at CSSTEAP website.

24.24.3 **Distance Learning Programme (Webinar) to be organized during April-June 2019**

Director, CSSTEAP informed that a webinar series was organized during Sept 17-20, 2019. 148 participants from 12 countries attended the webinar and it was one of its kind of arrangement among the regional countries.

24.24.4 **To upload revised syllabus of all PG courses to UNOOSA website**

Director, CSSTEAP informed that revised syllabus of all PG courses has been communicated to UNOOSA for approval. Mr. S. Panawennage requested that this revised syllabus to be circulated to GB members. Dr. Umamaheshwaran also requested that revised syllabus to be circulated to all GB members.

(Action 24/3: Revised syllabus to be circulated to GB members-Director, CSSTEAP)

24.24.5 To organize short course on NAVSAT in alternate year

Director, CSSTEAP mentioned that since CSSTEAP is already organizing a long course on GNSS this year, hence the course on NAVSAT will be conducted in 2020.

Mr. Niles Desai, Associate Director, SAC informed that preparation for NAVSAT short course is going on. The course brochure will be uploaded on CSSTEAP website shortly.

24.24.6 To organize a short course on Disaster Risk Reduction every year

Director, CSSTEAP informed the members that a short course on 'Disaster Risk Reduction' was organized during May 20-31, 2019 and would be continued as a regular programme every year.

24.24.7 To organize a short course on Numerical Weather Modelling and Space Weather in alternate years

Director, CSSTEAP informed that NWP course was organized during July 01-12, 2019 and Space Weather course during Nov 14-27, 2019.

24.24.8 To link the CSSTEAP website to ISRO website

Director, CSSTEAP informed that the link has been already provided in ISRO website. Mr. S. Panawennage mentioned that CSSTEAP could have been more visible by linking the website to other space agencies of the region. Mr. Umamaheswaran replied that the linking process can be done after considering the cyber security policies.

(Action 24/4 : Exploring the cyber security policies for linking of CSSTEAP Website with other Space agency websites- Director, CSSTEAP)

24.24.9 MoUs for research & training may be expedited

Director, CSSTEAP informed that CSSTEAP had communicated with GISTDA regarding MoU.

24.24.10 Details on data downloading and procedures and policy to be informed to GB members

Director, CSSTEAP informed that approval process for free and open data policy is in process.

Agenda - 8: Activities of CSSTEAP and Future Plans

- 24.25 Dr. A Senthil Kumar, Director, CSSTEAP briefed all the GB members about the establishment of the Centre, host institutions of all the programmes, activities of the centres.

- 24.26 He presented the report highlighting programmes, activities, host country support, etc. and reiterated that Centre continues to involve in capacity building in space science & technology and applications in five assigned areas and also special theme-based short courses.
- 24.27 He further emphasized on the new initiatives of CSSTEAP on UNISPACE+50 under Thematic priority 7 on Capacity building for the 21st Century, especially in enhancing the existing partnerships and forging new ones. These initiatives include i) a conceptual framework evolved for a coordinated capacity building to maximize the space technology to support implementing global sustainable development agendas and ii) a study on Space For Women (S4W) involvement in Asia and Pacific region.. He further mentioned the importance of promoting science and technology education for women. CSSTEAP is committed to achieve these goals by selecting more women in their training programmes.
- 24.28 He informed the GB that topics related to Sustainable Development Goals (SDGs) are also included in the revised syllabus of different PG courses appropriately.
- 24.29 He informed GB that the Centre has been conducting Post Graduate in five disciplines and short courses in various themes. Till date, the Centre has conducted 58 PG courses 23 in Remote Sensing & Geographic Information System (RS & GIS), 11 in Satellite Communications (SATCOM), 11 in Satellite Meteorology & Global Climate (SATMET), 11 in Space & Atmospheric Science (SAS) and 02 in Global Navigation Satellite Systems. The Centre has also conducted many short courses (regular & demand based) and workshops in past 24 years. These programmes have benefitted 2314 participants from 36 countries from Asia-Pacific region and 19 countries from outside Asia-Pacific region. PG Courses have benefitted 966 participants while Short Courses have benefitted 1200 participants and Webinar has benefitted 148 participants.
- 24.30 He apprised the GB on the academic programme offered by CSSTEAP during the year. The Center has conducted 3 Post Graduate courses and 3 short courses/workshops. This includes 23rd PG course in RS & GIS at IIRS, Dehradun during July 01, 2018- March 31, 2019 (24 participants from 11 countries), 11th Satellite Meteorology and Global Climate at SAC, Ahmedabad during August 01, 2018 – April 30, 2019 (13 participants from 08 countries) and 11th Space and Atmospheric Science at PRL, Ahmedabad during August 01, 2018 – April 30, 2019 (13 participants from 05 countries). Short courses on Application of Geospatial Technologies for Disaster Risk Reduction (DRR) with special emphasis on floods and forest fires during May 20 to 31, 2019 at IIRS, Dehradun (23 participants from 05 countries), Weather Forecasting using Numerical Weather Prediction Models during July 01 to 12, 2019 at SAC, Ahmedabad (26 participants from 09 countries) and Short course on Space Weather during November 14 to 27, 2019 at PRL, Ahmedabad (27 participants from 12 countries).
- 23.31 He informed GB about new initiative recommended by GB members in last GB about conducting a webinar series on Application of Remote Sensing in Hydro Meteorological and Geological Disasters which was organized during September 17 to 20, 2019. Total 148 participants from 12 Countries have attended the meeting.

- 24.32 He mentioned that currently 3 PG Courses i.e 24th RS GIS course, 12th SATCOM course and 3rd GNSS course is going on. 8th SSM course are also going on at IIRS Dehradun.
- 24.33 He also apprised that the CSSTEAP course participants were given exposure to Advanced Research in Symposia and Workshops. The SATCOM and GNSS course participants attended the Seminar on System Engineering at Ahmedabad.
- 24.34 Dr. A. Senthil Kumar presented activities planned in 2020 and mentioned that PG courses planned are: 25th RS&GIS, 12th SATMET & 12th SAS PG Courses and 9th Short course on Small Satellite Missions and two theme specific short courses namely Disaster Risk Reduction and NAVSAT.
- 24.35 He further informed that CSSTEAP could extend support to UNOOSA-initiatives (like Technical Advisory Missions, Courses, Conferences and Business meetings)
- 24.36 Chairman GB and all members of GB congratulated Dr. A. Senthil Kumar, Director, CSSTEAP on CSSTEAP achievements and excellent efforts towards achieving objectives of Centre.

Agenda - 9: Ratification of GB decision to Revised Budget 2019

- 24.37 Mrs. Shankari Murali, Chief Controller of Accounts (CCA), DOS presented in detail the revised budget estimates (RE) of CSSTEAP for 2019. The GB in its 23rd meeting in 2018 has approved the budget estimate INR 36.300 million.
- 24.38 Keeping in view the expenditure as on October 31, 2019 and the tentative expenditures on future activities, the BE : 2019 of **INR 36.300** million is revised to RE: 2019 **INR 34.669** million after taking care of actual no. of participants in various PG/Short courses. She requested GB to accept the proposal and approve RE 2019.
- 24.39 The GB formally ratified the Revised Budget Estimate for 2019.

Agenda - 10: CSSTEAP Budget Proposal for 2020

- 24.40 Mrs. Shankari Murali, CCA, DOS presented the proposed Budget Estimate for 2020 of INR 36.359 million. She requested GB to approve the BE:2020 of INR 36.359 million.
- 24.41 The GB approved the tentative budget (BE) for 2020, as given in **Annexure-1E** and suggested that review be conducted based on the expenditure and the final estimates can be revised.

Agenda - 11: Adoption of Audit Report for 2018

- 24.42 CCA, DOS presented the Audit Report for the year 2018 to the GB and informed that CSSTEAP has maintained the books of account and records very well and the auditors have no adverse observations/remarks as far as the CSSTEAP expenditure or functioning is concerned. She mentioned that as per the advice of last GB, financial performance audit was also done and is presented in the Auditor report. She requested the GB to accept the

report.

The Audit report was endorsed by GB members.

- 24.43 Mr. Bhalla suggested to circulate Audit report well in advance to all GB Members. He further specified that one month advance is most appropriate. CCA has informed that next year it will be circulated much in advance.

Action 24/5: Circulation of audit report about a month in advance to GB Members-Director, CSSTEAP

Agenda- 12: Appointment/Extension of Auditors for 2018

- 24.44 Mrs. Shankari Murali briefed about the previous appointments of auditors. Last year, during 23rd CSSTEAP GB meeting M/s Ashish Kumar Gupta & Associates was appointed to conduct audit of CSSTEAP Accounts for the year 2018 with the remuneration of Rs. 42,350/-+ Taxes. Mrs. Shankari Murali requested GB members to extend the auditors for year 2019 with same amount of remuneration. The same was accepted by M/s Ashish Kumar Gupta & Associates.
- 24.45 The GB formally agreed to extend the contract to M/s Ashish Kumar Gupta & Associates for the year 2019.
- 24.46 Mr. Bhalla has suggested that the Auditors should be changed more frequently. CCA has informed that action would be taken shortly to appoint new auditor for the year 2020.

(Action 24/6: Appointment of new auditor for 2020- Director, CSSTEAP, CCA)

Agenda- 13: Appointment of Director, CSSTEAP

- 24.47 Currently, Dr. A. Senthil Kumar is Director of CSSTEAP. His term will be ending on March 31, 2020 vide Ir no. DS_5-22/1/2018-Sec_5-DOS dated 17.7.2018.
- 24.48 The candidature of Dr. Prakash Chauhan, Director, IIRS was proposed and his biodata was circulated to GB members in the background document and the proposal was placed before the GB for approval. Dr. Prakash Chauhan absented himself from the venue.
- 24.49 The proposal was discussed at length in the meeting. Mr. S. Panawennage, Sri Lanka commended the professional experience, international exposure and research contributions of Dr. Prakash Chauhan in the field of space science and technology application and seconded the proposal. Mr. Hari Odari, Nepal and Mr. Charan Kamal Singh Bhalla, Nauru further supported the proposal alongwith other GB members. GB members approved the proposal of Dr. Prakash Chauhan as Director, CSSTEAP from April 01, 2020 for a period of three years as per Article VI/2.

Agenda - 14: Any Other Matter with Permission of Chair

- 24.51 Mr.S. Panawennage suggested that more number of members should be invited for CSSTEAP GB members. Director, CSSTEAP replied that it is an ongoing process and many AP countries have been contacted to become GB members.

- 24.52 He also briefed about UN-ESCAP's new initiative on Inter Ministerial Conference in AP region and emphasized that CSSTEAP's role in capacity building in the region would be informed to increase more participation from other countries.
- 24.53 Mr. Sanath further added that space policies are very important and a new training program on 'Space Policy & Law' under CSSTEAP may be considered. Director, CSSTEAP informed that a few lectures on International Space Law are already in the syllabus. Dr. P.G. Diwakar mentioned that legal part should be separated out from the technical aspects. Dr Shirish added that 18 months course on Space Law is already running in one of the partner countries.
- 24.54 Mr. Hari Odari asked about the process of becoming a GB member as he would like to invite other countries as well. Director, CSSTEAP explained the procedure on becoming the GB member.
- 24.56 Dr. Shirish Ravan also further added that an awareness programme for all ambassadors or Embassy officials in India may be organized regularly once in a year so that more GB members will be roped in and message will go to other countries about benefits of CSSTEAP programmes to their national development

(Action 24/7: An awareness programme for relevant ambassadors or Embassy officials in India may be organized regularly- Director, CSSTEAP)

- 24.57 Dr. Shirish suggested to organize a meet to commemorate successful completion of 25 years of services by CSSTEAP in the region. GB agreed and recommended to organize such meet at appropriate place either at New Delhi or at Dehradun. All the GB members, AC members, officials from different embassy at New Delhi, some of the alumni who achieved higher positions in their respective countries may be invited.

(Action 24/8: To organize a meet to commemorate 25 years of service by CSSTEAP-Director, CSSTEAP)

- 24.58 Chairman, CSSTEAP-GB thanked all the GB members for their active participation and involvement in improving the overall activities of CSSTEAP. He mentioned that CSSTEAP would continue to provide services in Asia-Pacific region and requested for all the countries to actively participate and send their scholars / professionals/ students.

- 24.59 Chairman, GB formally closed the meeting.

Prepared by:

Dr. A Senthil Kumar
Director, CSSTEAP/ Secretary, CSSTEAP-GB

Reviewed by:

Approved by: Dr. K. Sivan, Chairman, CSSTEAP-GB/ Secretary, DOS

**24th Meeting of the Governing Board****Sub: Action items of the 24th Meeting of CSSTEAP Governing Board**

Action No.	Related Para No.	Action	Action on
24/1	24.11	CSSTEAP to support off-campus courses in countries where UN-SPIDER is likely to organize the event as per the CSSTEAP mandate	UNOOSA & Director, CSSTEAP
24/2	24.18	Exploring organization of training programme of specific interest to pacific region	Director, CSSTEAP
24/3	24.24.4	Revised syllabus to be circulated to GB members	Director, CSSTEAP
24/4	24.24.8	Exploring the cyber security policies for linking of CSSTEAP Website with other Space agency websites	Director, CSSTEAP
24/5	24.43	Circulation of audit report at least 1 month in advance to GB Members	Director, CSSTEAP
24/6	24.46	Appointment of new auditor for 2020	Director, CSSTEAP & CCA
24/7	24.56	Awareness programme for all relevant ambassadors or Embassy officials in India may be organized regularly	Director, CSSTEAP
24/8	24.57	To organize a meet to commemorate 25 years of service by CSSTEAP	Director, CSSTEAP



**Highlights of the significant achievements of ISRO during the last one year presented by
Chairman, CSSTEAP-GB**

- In the last one year, ISRO has carried out 13 missions comprising of 6 launch vehicle missions and 7 satellite missions. Besides this, India's PSLV has launched 41 satellites of 4 countries (Lithuania, Spain, Switzerland and USA).
- PSLV continued its remarkable performance and reliability for launching multi-satellite/multi-orbit missions, which demands innovative approaches in satellite accommodation and safe separation of large numbers of satellites. The fourth Stage (PS4) of PSLV is made available as orbital platform, providing avenues for conducting on-orbit scientific experiments.
- GSLV Mk-II, with indigenous cryogenic upper stage, witnessed its 6th consecutive successful flight. India's heavy lift launch vehicle GSLV Mk-III with indigenous cryogenic engine has joined the elite group of operational launch vehicles, capable of lifting up to 4 T payload to GTO.
- Satellite Communication infrastructure in the country has been further augmented with two advanced satellites to enhance VSAT network, DTH services, Digital News Gathering etc. Our Earth Observation capability has been further strengthened with all-weather imaging and very high resolution imaging. Recently launched satellite "Cartosat-3" is a complex and agile satellite intended to benefit urban & rural planning, infrastructure development and large scale mapping applications.
- India's totally indigenous mission "Chandrayaan-2" (comprising of an Orbiter, Lander & Rover) was successfully launched on July 22, 2019. Subsequent to completion of 5 earth bound orbit raising maneuvers and Lunar Orbit Insertion (LOI) maneuver, Chandrayaan-2 was successfully inserted into a Lunar orbit on August 20, 2019. All the payloads, on-board orbiter are providing valuable data for science experiments. To mention a few, OHRC is beaming very high resolution images of the moon. Imaging infrared spectrometer is providing information on variations in the spectral radiance due to the mineral compositions in the lunar surface. The L & S band SAR payload helps in unambiguously identifying and estimating the lunar polar water-ice in permanently shadowed regions.
- Space applications are tailored to provide required inputs for enabling Socio-economic security, Sustainable Development aligned with SDGs, Disaster risk reduction and Governance. Timely and accurate forecast of cyclone track, intensity & landfall during recent cyclones viz. Fani, Maha and Bulbul have significantly helped in minimizing losses to lives and infrastructure.
- UNNATI (UNISpace Nanosatellite Assembly & Training by ISRO) programme is providing an excellent opportunity for the participant countries to strengthen their capabilities in Assembling, Integrating and Testing Nano satellites. 1st Batch of UNNATI programme have benefitted 29 Participants from 17 Countries. The 2nd batch is currently ongoing at Bangalore with the participation of 30 officials from 16 countries.
- I acknowledge the continued support of UNOOSA and UN-ESCAP in providing financial support for international travel to a few of the participants.
- It is always a pleasure to recognize the outstanding contributions made by the Directors and faculty of the host institutions. I appreciate the support extended by Director, SAC;

Director, URSC; Director, PRL and Director, IIRS in terms of administration, academics and research. Dr. Senthil Kumar, Director, CSSTEAP deserves a special thanks for his sincere efforts in enriching the quality of courses. The programme coordinator, course directors, course coordinators, expert faculty and ISRO/DOS officials also deserve a special appreciation for their full support.

Once again, I extend warm welcome to all of you and hope to have fruitful deliberations during the meeting.

Thank you all.

Dr. K. Sivan
Chairman, CSSTEAP Governing Board &
Secretary, Department of Space, Government of India

Welcome/opening remarks by UNOOSA representative

On behalf of the United Nations Office for Outer Space Affairs, I welcome all members of the Governing Board (GB) of the Centre for Space Science Technology Education in Asia and the Pacific (CSSTEAP). It is great to be re-united again at a time when space is increasingly seen as the game-changing arena to address global challenges, help alleviate human suffering and protect the environment and the planet.

Education is one of the main issues on the agenda of the international community. STEM related skills are key for successful participation in the global job market, and access to better education opportunities can change the career prospects of individuals, and ultimately the trajectory of countries, dramatically. STEM fields in general and the space sector in particular can spur economic growth, innovation and development.

With the adoption of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals, the UN embraced the principle of “leaving no one behind” and a holistic approach to achieving sustainable development all over the world. UNOOSA, fully in line with this mandate, is envisioning a 2030 world where everyone, including vulnerable groups, is empowered and inspired to become involved with space science.

We are creating opportunities that promote inclusiveness and equality in all their forms, with a special focus on education, directly contributing to SDG 4, “Quality Education”. The role played by CSSTEAP and other centres in this regard contributes enormously to capacity-building in the space sector.

I would like to express my appreciation for the CSSTEAP’s Post Graduate Diploma Programmes in space science and technologies. I also congratulate CSSTEAP for conducting a webinar series on Application of Remote Sensing in Hydro-meteorological and Geological disasters in September 2019 that benefitted 148 participants from 12 countries. In addition, as agreed in the Governing Board meeting in 2018, it also supported the off-campus training programme in Myanmar in 2019 upon request of UNOOSA/UN-SPIDER and pledged to support another training programme at the SAARC Disaster Management Centre next week. Participation in such off-campus training benefits a large number of participants in neighbouring countries.

In 2020, we look forward to CSSTEAP’s contribution to our activities as the UN-SPIDER programme is planning to visit Afghanistan, Lao PDR, Mongolia, Nepal and Sri Lanka, and conduct regional events in South Asia, ASEAN and the Pacific region.

It is an absolute delight to see that CSSTEAP is entering the 25th year of its dedicated service to promoting space science and technology education in Asia and the Pacific. Our joint work has benefitted thousands of participants from over 50 countries, both within and outside the region, to build expertise in these topics.

To conclude, I would like to express my gratitude to Dr K Sivan, Chairman of ISRO and Chair of this Governing Board, for supporting the activities of CSSTEAP. I also thank Dr Senthil Kumar, Director of the Center, his team, Directors of the host institutions, and all the course coordinators and faculties for their efforts to deliver the mandate of CSSTEAP.

I hope this GB meeting will advance decision making on CSSTEAP’s important proposals and provide valuable guidance to the Centre to handle challenges in the Asia Pacific Region so that our partnership can continue to grow and make a positive impact.

Dr. Shirish Ravan
UN Office for Outer Space Affairs



**Centre for Space Science and Technology Education in
Asia and the Pacific
(Affiliated to the United Nations)
24th Governing Board Meeting of CSSTEAP
ATTENDANCE SHEET**

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