

Reflections

Triannual Inhouse Newsletter



The ISRO Young Scientists from NESAC batch at SDSC, SHAR during the valedictory program Chaired by Shri S Somanath, Secretary, Department of Space / Chairman, ISRO

From the Director's desk



Over the last 22 years, NESAC has been providing services to a host of users covering the state government line departments, central government departments, academic institutes, NGOs, and Industries. The user base has been increasing continuously over the years. While the interaction with the users has been an integral part of our activities, it was felt necessary to have a comprehensive dialogue with the existing and potential users, particularly from the NE region of our country. With this objective, the 1st edition of NESAC User Interaction Meet (NeUIM-2022) was conducted during 23 - 24 May, 2022 via Hybrid the mode. We had a tremendous response with a total of 399 participants from various organizations, academia, industry, etc. The inaugural program

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A brief report on NESAC User Interaction Meet

The 1st edition of North Eastern Space Applications Centre (NESAC) User Interaction Meet (NeUIM-2022), was held during 23-24 May, 2022 via Hybrid (online/in-person) mode. The event was spread over the course of two days and consisted of three technical sessions, two user interaction sessions and two special sessions. A brainstorming session on “Space Technology for Governance, Academic & Research Interface and Plan for Collaboration” was also part of the special session which was conducted as per the directive of 16th Governing Council of

importance of betterment of governance using space and drone technology. Another point he made was regarding the expansion of outreach activities so as to spread greater awareness among the users about space technology solutions. Shri Calvin Harris Kharshiing, IA & AS, North Eastern Council (NEC) graced the occasion as Guest of Honour and he spoke at length about the history of NEC and NESAC and how this has served as an enabler to help state centres stand on their own feet with implementation of projects. He also spoke about the



Chairman, ISRO and NESAC GC inaugurating the Meet

NESAC held on 12th January, 2022.

The inaugural event on 23rd May, 2022 commenced with a lighting of the lamp followed by a welcome note by Dr. S.P. Aggarwal, the Director, NESAC. The inaugural event was chaired by Shri S. Somanath, Chairman ISRO, and Secretary, Department of Space (DOS) as Chief Guest via virtual mode. During his speech, he stressed on the importance of the North Eastern Region (NER) of India in terms of biodiversity, natural resources as well as the data generated atop them and mentioned about the

usefulness of the North Eastern Spatial Data Repository (NeSDR) and project monitoring portals and the fact that they were being used extensively by the state and line departments. He concluded by stating that user interaction meets are an important means of uplifting the NER to be at par with the rest of India as regards to developmental activities. The inaugural event was also elevated by the distinguished presence of the Scientific Secretary of ISRO, Shri Shantanu Bhatwadekar, Dr. Prakash Chauhan, Director, NRSC and Dr Anil Bhardwaj, Director, PRL. Shri Bhatwadekar praised NESAC for having successfully implemented more than 300 projects in the last 21 years which are currently being used



The delegates who attended the Meet in person

A brief report on NESAC User Interaction Meet

extensively by the user agencies and mentioned how NESAC has been able to carve a niche for itself in the geospatial domain by its use of geo-web services, analytics, mobile apps, UAV services and disaster management activities. He added that it is important to understand users not just in terms of the data used but also applications required. Dr. Chauhan mentioned the uniqueness of the problems of the region which makes user interaction particularly important. He stressed on the need to address the threats and challenges posed by climate variability as well as gaps in requirements and to identify potential

terrain and their variations. He mentioned about collaborative efforts and the need to boost the forecasting abilities of the centre.

The technical sessions were in “Space Technology Applications and Capabilities of ISRO/DOS” which was Chaired by Dr. Prakash Chouhan, Director, NRSC. The Technical Session 2A on “Developmental Services of NESAC” was chaired by Dr. P P Nageswara Rao, Former Director, NESAC, while the Technical Session 2B on “Repository and Disaster Management Services” was chaired by Dr. S Sudhakar, Former Director,



Director, NESAC welcoming Shri Moses Chalaj, Secretary, NEC and different moments of the Meet

to provide services to the users. He assured that NRSC shall continue to support NESAC whole heartedly in future as well. Dr Bhardwaj in his address spoke about the uniqueness of the NER region in terms of the topography, meteorology and

NESAC. The Technical Session 3 on “ISRO/DOS Geoportals and Services” was chaired by Dr. PG Diwakar, Former Director, NESAC and which had 5 technical presentations from SAC, NRSC and NESAC Scientists. There were two interactive session to understand the User’s needs and feedback.

A brief report on NESAC User Interaction Meet

There was a Special Session on “Reminiscence and Way Forward” which was a unique session that brought together all the Former Directors of NESAC for a discussion and sharing of thoughts gleaned from their rich experience with the centre as well as possible plans and areas that merit attention for NESAC in the near future. The session was chaired by Dr JS Parihar, Former Director, NESAC. The last session was the Brainstorming Session on “Space Technology for Governance, Academic & Research

NESAC has very rich spatial planning tools that should be used by the heads of the departments at state-level as well as at district-level. He recalled the recently launched Project Monitoring portal for project progress monitoring by the Hon’ble President of India. He advised the NESAC team to develop appropriate mechanisms for reaching the users in the interior areas of the NER through web-enabled information systems and satellite communication technologies.



A moment during one of the technical session

Interface and Plan for Collaboration”, which was chaired by Dr. P. S. Roy, Former Director, NESAC. The session included inputs from Academia, Research Institutes, and Industries on how the space technology can be better utilized for development and governance as well as the potential areas of research collaboration. Dr P S Roy appreciated the idea of keeping the brainstorming session and invited the galaxy of participants to share their views.

Shri Moses Chalai, IAS, Secretary, NEC also graced the event. At the outset he appreciated the several layers of spatial information generated by NESAC and advised the state-level functionaries to make best use of the information in developmental planning and project monitoring and performance evaluation. He desired that all participants, especially the youth of the region, should take home the message that the

The program was attended by a total of 399 participants from different parts of the country via hybrid mode. The event was attended by 62 participants in-person. Most of the participants were from various state Govt. departments of NE states and remaining were from various central Govt.



A cultural program was also organised

departments like NEGRIMS, ICAR, ICMR, CWC, NEIST, NERIWALM, Brahmaputra Board, including NEHU, Tezpur University, NITs of NE region, Guwahati University, Dibrugarh University,

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was attended by the Secretary, Department of Space / Chairman, ISRO and NESAC GC as the Chief Guest, who reassured all possible space-based support to the users from the NE region. The two days program with active participation of the Directors from NRSC, PRL, former Directors of NESAC, and many senior officials and the brainstorming sessions therein, gave us a new insight into the space technology intervention required by the major users in this region. This will also help us prioritize our efforts to meet the user requirements and engage with the new users. This will henceforth be an annual affair at NESAC and I am hopeful that we will see more user participation in the years to come.

We also conducted the 17th meeting of the NESAC Governing Council (GC) on the 5th May, 2022, Chaired by Shri S Somanath, Secretary, Department of Space & Chairman, ISRO. The meeting was attended by the Secretaries of Science & Technology from all 8 states of NER, senior officials from ISRO and academia and other officials. Chairman, NESAC GC gave specific directions to remain user centric and to ensure that the requirement of space-based support by the user in NE region is met by NESAC.

We signed an Memorandum of Understanding (MoU) with the Department of Science, Technology & Environment (DSTE), Government of Tripura on 25th July, 2022 at Agartala, Tripura for collaboration in extensive utilization of space technology in the state of Tripura. The MoU will facilitate joint execution of projects requiring Space Science and Technology intervention by different user departments in the state of Tripura. The MoU will also help in capacity building in geoinformatics and other areas of space applications in the state This once again proves the commitment of the state governments towards utilization of space technology for governance and development and that they look towards NESAC support to achieve such goals.

The second edition of the YUva VIgyani KAryakram

Assam Donbosco University, USTM, Assam Agriculture University, Technology Industry etc. In addition, more than 325 views were observed in YouTube live video streaming.

(YUVIKA) or the Young Scientist Program of ISRO was also conducted at NESAC during 16th – 30th May, 2022 along with four other major centres of ISRO. 30 selected students from the eight states of NER of India participated in the program at NESAC. We made elaborative arrangements for a lifetime experience of the students while they attend the program. The students were also taken to Sriharikota, Andhra Pradesh to visit the Satish Dhawan Space Centre, visit major space facilities, witness launching of RH200 sounding rocket, and interact with Chairman, ISRO. We have put extra effort towards capacity building and outreach activities with 19 training programs planned in one year in addition to customized programs. We also participated in “Vigyan Sarvatre Pujyate” program of Prasar Bharati and covered eight schools in Assam and Meghalaya with the Space on Wheels. Capacity building and outreach has become a major area of activity of the centre after the inauguration of the NESAC Outreach facility by Hon'ble Union Minister of Home and Cooperation, Shri Amit Shah Ji.

I am happy to share that Master Control Facility (MCF) established a major facility at NESAC, known as MATRIS (MCF Augmented Telemetry & Ranging Infrastructure Shillong) which was inaugurated by Shri S. Somanath, Secretary, Department of Space & Chairman, ISRO on 18th June, 2022. This will add great value to the centre and facilitate inter-centre collaborations. I thank Director, MCF for selecting NESAC to install the facility. It will be operational on 24×7 basis for telemetry and ranging operation for all communication satellites.

The technical activities of the centre have also been running with full momentum with the projects identified under the Plan of Action (PoA) taking centre stage. We have completed 15 PoA projects and have made strategy to complete the remaining projects on time.

ISRO Young Scientist Program - YUVIKA at NESAC

The second edition of the YUva Vigyani KARYAKRAM (YUVIKA) or the Young Scientist Program of ISRO was conducted at NESAC during 16th–30th May, 2022 along with four other major centres of ISRO namely, Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram; U R Rao Satellite Centre (URSC), Bengaluru; Space Applications Centre (SAC), Ahmedabad; and National Remote Sensing Centre (NRSC), Hyderabad. Four students of class IX-X standards from each State and Union Territory (UT) were selected for the programme based on the well- defined criteria. Students, who belong to rural schools, were given special weightage in the selection criteria. Thus, a total of 153 students were selected from the entire country. NESAC hosted the program for the 30 selected students from the eight states of North Eastern Region of India. The students were mostly from class IX and a few were from class X.



Director, SPO, ISRO HQ delivering taking a class

The programme included invited talks, experience sharing by the eminent scientists, facility and lab visits, practical and feedback sessions. The program covered many interesting activities like CANSAT experiment, Robot making, Telescope assembling, Unmanned Aerial Vehicle (UAV) assembling and flying, Water rocket activity, exploring the Google Earth, Moon and other planets, Sky Gazing, etc. in addition to lectures on different interesting topics covering Astronomy, Astrophysics, Cosmology, Chandrayaan, Mangalyaan, Gaganyaan,



Visit to launch pad at SDSC - SHAR

different Space Applications, etc. Students were also taken to Regional Science Centre and Planetarium at Guwahati as well as for local sightseeing.

Classes were taken by Dr S P Aggarwal, Director, NESAC; Shri K C Bhattacharyya, Former Director, NESAC; Dr Tirtha Pratim Das, Director, Space



Students during the telescope activity



Visit to the NaVIC ground stations

Science Programme Office, ISRO; Prof Biman Medhi, Dept. of Physics, Guwahati University, in addition to lectures by senior Scientists from NESAC. The students were taken to Sriharikota,

Andhra Pradesh to visit the Satish Dhawan Space Centre (SDSC), where they could visit different facilities including first and second launch pad, mission control centre, launch vehicle assembly facility, different test facilities, etc. The students also witnessed the launching of RH200 sounding rocket, which will remain as a lifetime memory. The valedictory program was organized at SDSC-SHAR on 28th May, 2022, which was chaired by Chairman, ISRO/ Secretary, DOS, wherein he interacted with the students, answered their queries, and gave away the certificates. The program ended with a feedback cum concluding session on 30th May Chaired by Director, NESAC. All the students gave very positive feedback and mentioned that they were mesmerized by the program and thanked ISRO and NESAC for the opportunity given to them as well as for the arrangements.



The students with Director, NESAC; YUVIKA Mentor and course coordinators

Trainings and Workshops

One day training on “Application of RS & GIS tools in implementation of watershed development project”

Soil Conservation Department of Assam is implementing new generation WDC-PMKSY2.0 in Assam. Currently, the entire project is in a preparatory stage. In this connection, Soil Conservation Department, Government of Assam sent a group of state level and project level officers to NESAC as an exposure visit to learn about the application of Remote Sensing and GIS Tools for planning, implementing and monitoring of different projects. To meet the requirements of the officers, three classes were arranged covering basics RS and GIS, different case studies on watershed management and development, Hydrology, Water Resources development and usage of advance GPS system. A hands on session was also conducted on usage of GPS. Inaugurating the the training programme, Director NESAC highlighted on applications of Space technology on watershed development and management. Subsequently, Shri Ranjit Das, Scientist-SF and Shri Shanbor Kurbah, Scientist-SC delivered lectures on “Application of Geospatial technology for Watershed Development” and “Application of Geospatial technology for Hydrologic analysis in watershed level”. Dr. Gopal Sarma also delivered a lecture and hands on usage of GPS. At the end of the

training, participants visited different facilities at NESAC.

NESAC conducted two weeks basic course in Remote Sensing and GIS



The two-week Basic Course in Remote Sensing and GIS was conducted at NESAC from 6th to 17th June 2022. 24 participants registered for the course including a number of professionals from State User Departments, Assistant Professors, Research Scholars and post-graduate students. The course consisted of 5 modules delivered in the form of theoretical lectures, practical sessions, a field visit and the implementation of a domain-specific mini project. Dr Shashi Kumar, Scientist/Engineer-SE from the Indian Institute of Remote Sensing delivered an invited lecture on microwave remote sensing. Further, a field visit was conducted on 11th June 2022 to Sohra where the activities at the Doppler Weather Radar were demonstrated. The valedictory program was conducted on 17th June, 2022 chaired by Dr. S.P. Aggarwal Director NESAC. The training was coordinated by Dr



Trainings and Workshops

Dibyajyoti Chutia, Course Director and Smt. Ritu Anilkumar, Course Officer.

NESAC hosted World Bank Sponsored training program under National Hydrology Project



NESAC hosted a three-day World Bank sponsored training programme on “Assessment of River Morphological Changes and Coastal Erosion using Remote Sensing” as part of the National Hydrology Project. NESAC with the support of Stockholm Environment Institute (SEI), Bangkok, Thailand and the Water Resources Department (WRD) of tGovt. of Meghalaya conducted the training during July 22-27, 2022. The training was coordinated by Mrs. D. Blah, Additional Chief Engineer, WRD, Meghalaya, Dr. Diganta Barman, Sci/Engr. ‘SF’, NESAC, Mr. Shanbor Kurbah, Sci/Engr. ‘SC’, NESAC and Dr. Arjun B M, Sci/Engr. ‘SD’, NESAC. The training was attended by 29 participants from the different departments, viz., : Water Resources Department, Meghalaya; Irrigation and Waterways Department, West Bengal; Brahmaputra Board, Guwahati; National Institute of Hydrology, Guwahati; Indian Institute of Technology, Guwahati; Water Resources Department, Assam; Central Water Commission, Shillong; and Irrigation and Water Resources Department, Mizoram. The course was

designed to train the participants how on utilization of the Google Earth Engine (GEE) platform to assess erosion and accretion of the river banks,. The training also covered the studies on the phenomenon of coastal erosion of the Indian coast and assessment of area loss as a result of its effects.

State Level Workshop on Silk Samagra-2 for the state of Arunachal Pradesh

The Silk Samagra-2 is a centrally sponsored scheme of Ministry of Textiles, Govt. of India sanctioned for the period of 2021-22 to 2025-26. The programme is executed by Central Silk Board (CSB) in collaboration with State Department of Sericulture in the entire country. NESAC has been assigned the responsibility of developing the SILK Samagra mobile application and the dashboard system for monitoring of the assets to be created under the scheme. CSB is organizing state level workshops in all the states for creating awareness among the Govt. Officers and Progressive Farmers. The State Level Workshop of Silk Samagra-2 for the state of Arunachal Pradesh was organized at Namsai district on August 03, 2022. Namsai district is the only district of Arunachal Pradesh included under Prime Minister’s Aspirational Districts Programme. The programme was graced by Chau Zingnu Namchoom; Hon’ble Member of Legislative Assembly (MLA), 47-Namsai constituency as the Chief Guest and attended by Deputy Commissioner of Namsai,



Trainings and Workshops

Senior Scientists and officers from CSB, Director of Handloom & Textiles, Director of Sericulture and Senior Officers of Sericulture Dept. of Arunachal Pradesh. Dr. B.K. Handique and Dr. Chandan Goswami from NESAC attended the programme on August 03, 2022 at Namsai. Dr. Handique has made a detailed presentation on geo-tagging and monitoring of assets using Silk Samagra mobile app.

NESAC conducted two days training for NDMA Officials



NESAC with its expertise in applications of Space technology and financial support from National Disaster Management Authority (NDMA), conducted a two days training program on “Applications of Geographic Information System in Disaster Risk Mitigation for officials working in the field of disaster Management during 17 -18 August, 2022 at NESAC. The training course focused on effective use of Remote Sensing and GIS for proper management and monitoring of various disasters. A total of 21 participants from State and Central Government departments/organizations attended the training course. The program was inaugurated

by Dr. S.P. Aggarwal, Director, NESAC. The inauguration started with a welcome address by Dr. K.K. Sarma, Senior Scientist and the Course Director of the program. He thanked the participants for joining the course and also presented the outline of the course contents. Director, NESAC in his address informed about the expertise of NESAC and insisted the participants to take its benefit for applying in their respective field of work. He also thanked NDMA for providing the required fund to conduct the training program. The program ended with a formal vote of thanks proposed by Dr. Arjun B.M., Course Officer. During the valedictory session on 18th Aug, 2022, participants shared their feedbacks and suggested to include more hands-on exercises and field visits. Director NESAC congratulated all the participants on successful completion of the course and distributed the certificates. The program ended with a formal vote of thanks by Dr. Gopal Sharma, Course Officer.

One week Course on UAV Remote Sensing Technology & Applications for CAPF and IB officials conducted at NESAC

A one week course on ‘UAV Remote Sensing and its Applications’ was conducted at NESAC for Central Armed Police Forces (CAPF) and Intelligence Bureau (IB) officials working in space cell from 22nd August to 26th August 2022. The 17



Trainings and Workshops

participants were senior level officers from CRPF, SSB, ITBP and IB. The course focused on imparting knowledge to participants on UAVs and its components, flight planning for data acquisitions for various remote sensing applications. Special emphasis was given on mapping and surveillance applications, 3D printing & its applications in UAV, different data processing techniques such as generation of Orthomosaic, digital elevation model (DEM), digital terrain model (DTM), contour maps, volumetric analysis etc. The five day course also included practical sessions on flight simulator, mission planning and data acquisition, data processing and data analysis. The course concluded with a valedictory session chaired by Dr. S.P. Aggarwal, Director, NESAC. The participants were presented with certificates of course completion by the Director, NESAC.

NESAC conducted two week short course on Applications of RS & GIS in Agriculture and Allied areas

The third short course on “Applications of Remote Sensing & GIS in Agriculture and Allied areas” was conducted from 29th August to 9th September, 2022 at NESAC Outreach Facility, Umiam. Twenty three participants were enrolled for the course that included Officers from state agriculture departments, faculty members from college and universities,



scientists, research scholars and post-graduate students. The inaugural programme on 29th August, 2022 was started with the welcome and briefing on the course schedule by Dr. B.K. Handique, the Course Director. Dr. S.P. Aggarwal Director, NESAC welcomed all the participants of the course and highlighted the importance of geospatial technologies in Agriculture and allied areas. Dr. V. K. Mishra, Director, ICAR-NEH Region, Umiam was invited as the Chief Guest of the inauguration programme.

A total of 15 theory classes and 11 practical sessions were conducted during the two weeks course. Three guest faculties, viz.. Dr. Dipanwita Halder (Scientist, IIRS, ISRO), Dr. B.K. Bhattacharya (Group Director, SAC, Ahmedabad) and Prof. J. Adinarayana (CSRE, IIT Bombay) delivered lectures on Microwave Remote Sensing, Hyperspectral Remote Sensing and IoT applications in agriculture respectively. A field visit was conducted on 3rd September 2022 to Sohra, where the activities at the Doppler Weather Radar were demonstrated. Five mini projects were assigned group-wise on relevant agricultural topics, which the participants carried out meticulously within the short time period. The valedictory program was conducted on 9th September, 2022 and Shri. J.C Deka Joint Secretary, CSB, RO, Guwahati was invited as the Chief Guest for the event. Course completion certificates were distributed during the valedictory Session. The program concluded with the vote of thanks offered by Dr. Pradesh Jena, Course Officer.\

NESAC conducted five days training for ASDMA and NDMA Officials

NESAC conducted five days training program on “Applications of Geographic Information System in Disaster Risk Mitigation” for officials nominated by various state disaster management departments and National Disaster Management Authority (NDMA) during 12-16

Trainings and Workshops

September 2022 at NESAC Outreach Facility. A total of 21 participants attended the training course. The training focused on use of Remote Sensing and GIS tools and techniques, in disaster management and monitoring. A field visit with demonstration of UAV, DGPS, GNSS, and DWR was conducted to provide knowledge about data sources and uses. The program was inaugurated by Dr S P Aggarwal, Director, NESAC. The course was designed to cover



several domains of disasters such as forest fire, rainfall, flood, earthquake, landslide, industrial hazards, and crop damage etc. The training also covered lightning, cyclone, and hazards risk vulnerability assessment followed by dashboard demonstration application in disaster management. A Valedictory session was arranged on 16th September, 2022. A good number of suggestions were shared by the participants during the valedictory session. Dr S P Aggarwal, Director NESAC congratulated all the participants on successful completion of the course and distributed the course certificate. He also lauded the efforts of Dr K.K. Sarma, the Course Director and Dr (Mrs)

Kuntala Bhusan, Course officer for successful conduct of the course. The program ended with vote of thanks offered by by Dr Abhay Srivastava, Course Officer of the training.

Two-weeks course on UAV Remote Sensing conducted at NESAC

A two-week course on “UAV Remote Sensing Technological Advances and its Applications” was conducted at NESAC from 19th to 30th September, 2022. A total of 21 participants from different states of India with diverse academic backgrounds participated in the course. The course focused on imparting theoretical and practical knowledge on flight planning and data acquisitions for various remote sensing applications. Focus was given on aerial mapping, 3D printing & its application in UAV, different data processing techniques, e.g. generation of Orthomosaic, digital surface model (DEM), digital terrain model (DTM), contour maps, volumetric analysis etc. The two-week course also included extensive practical sessions on the flight simulator, mission planning and acquisition, data processing and analysis. The participants also carried out a two-day mini project mentored by a domain expert in four different thematic areas, namely Agriculture, Urban Planning, Geo-Sciences, and Water resources.



Inauguration of MCF Station at NESAC

The MCF station at NESAC, known as MATRIS (MCF Augmented Telemetry & Ranging Infrastructure Shillong) has been inaugurated by Shri S. Somanath, Secretary, Department of Space & Chairman, ISRO on 18th June, 2022 on a virtual mode, in presence of Shri Shantanu Bhatawdekar, Scientific Secretary, ISRO, Shri H. Premananda Shenoy, Director, MCF and Dr. S. P. Aggarwal, Director, NESAC. NESAC has hosted this station for MCF by providing land and other amenities. It will be operational on 24x7 basis for telemetry and ranging operation for communication satellite and NESAC will continue to provide all logistics support to it.



IIT Guwahati organised two days Symposium on “Socio-Technological Aspects of Seismic Disaster” in association with NESAC and ASDMA

Centre for Disaster Management and Research (CDMR), Indian Institute of Technology (IIT) Guwahati in collaboration with North Eastern Space Applications Centre (NESAC) and Assam State Disaster Management Authority (ASDMA) has conducted a two days symposium on



Socio-technological aspects of seismic disaster during June 23-24, 2022 at IIT, Guwahati. The symposium consists of a total of four plenary talks, thirteen invited speakers and eight parallel technical sessions followed by panel discussion. There were forty presentations during the technical sessions covering wide spectrum of topics on seismic disaster study such as seismic micro zonation, site characterization, liquefaction, retrofitting etc. Dr. S. P. Aggarwal, Director, NESAC stressed on the importance of space technology and Unmanned Aerial Vehicle (UAV) interventions in seismic studies in his inaugural speech. He highlighted the work carried out by NESAC in earthquake precursors, deformation and tectonics. During the panel discussion, he suggested to utilize space technology inputs in seismic disaster study.

International Moon Day Celebration at NESAC

NESAC organized a popular talk, quiz, and painting competition as part of the International Moon Day celebration on 20th July, 2022. Students from eight nearby schools participated in the competitions. The group of students was from classes VII to X. There was



another group of kids from NESAC staff. The popular talk on ‘The moon: our nearest neighbor’ was delivered by Dr Vishal Joshi, Scientist, Physical Research Laboratory, Ahmadabad. Space on wheel- exhibition bus was parked in the venue for participants of the moon day celebration. The day long program was concluded with a concluding session where prizes were distributed to the winners of various competitions.

Mobile exhibition on Indian launch vehicles and rockets as part of Azadi Ka Amrit Mahotsav

The ‘Space on Wheels’ exhibition bus provides an insight on ISRO’s prowess in Space Sector by displaying 75 Indian Satellites of India’s Space Programme. An exhibition was organized at NESAC Outreach Facility, Umiam on 20th July, 2022 as a part of Mobile Exhibition on Indian Launch Vehicles and Rockets under Azadi Ka Amrit Mahotsav. Azadi Ka Amrit Mahotsav is an initiative of the government of India to celebrate and commemorate 75 years of independence and the glorious history of its people, culture and achievements. The exhibition aimed at bringing awareness about the achievement of India in the areas space science and technology particularly among school children. The exhibition was attended by students from Kendriya Vidyalaya (North Eastern Police Academy), Barapani; Christ International School, Nongder, Alpha English Higher Secondary School, Nongpoh; MeECL School, Umiam and Army Public School, Umroi Cantt. The event was coordinated by Shri P.S. Singh, Dr. Chandan Goswami and Shri Anjan Debnath with the support and cooperation from Dr. Aniket Chakraborty, Dr. Francis Dutta and Shri Himanshu Jyoti Das.



NESAC signed MoU with Government of Tripura for accelerating Space Technology Applications



Department of Science, Technology & Environment (DSTE), Government of Tripura signed a Memorandum of Understanding (MoU) with NESAC on 25th July, 2022 at Agartala, Tripura for collaboration in extensive utilization of space technology in the state of Tripura. The MoU was signed by Shri P. K. Chakraborty, Secretary, DSTE, Government of Tripura and Dr. S. P. Aggarwal, Director, NESAC. The MoU will facilitate joint execution of projects requiring Space Science and Technology intervention by different user departments in the state of Tripura. Tripura Space Applications Centre (TSAC) under DSTE will coordinate with all relevant user departments, institutions, agencies, and organisations in the state of Tripura to assess the requirement of space technology support for development planning, while NESAC will provide technical support in terms of assessing different project proposals, technical feasibility, budget, timeline, etc. and jointly execute such projects. The MoU will help towards better coordination between NESAC and DSTE, Government of Tripura for successful and on time execution of 20 projects taken up as part of the Plan of Action (PoA) prepared for the state to utilize Space

Technology inputs for development and Governance. The MoU will also help in capacity building in geoinformatics and other areas of space applications in the state.

NESAC organized programme on 75 key moments of Indian Space Program under AKAM

As a part of the Azadi Ka Amrit Mahotsav (AKAM), commemorating the 75 Anniversary of India's independence, NESAC has been organizing a number of programs during Aug 15, 2021 to Aug 15, 2022. One such program on 'Historical journey of India's Space Program-75 key moments' was organised on 12th Aug, 2022 at Laban Assamese Girls Higher Secondary School, Shillong. Selected students from Class IX and X from nearby schools were also invited to the program. The program started with a welcome address and briefing about the program by Dr. B.K. Handique, Scientist, NESAC. Two documentaries, one on Indian Space Program and another on 'Historical journey of India's Space Program-75 key moments' were shown to the students and participants of the program. An open Quiz program was also organized as part of the program, which was conducted by Dr Aniket Chakraborty and Dr Francis Dutta, Scientists from NESAC. Space on Wheel exhibition was organized in the school premise which attracted a large number of

National Flag was hoisted by Director, NESAC at 09:00 am at NESAC office campus followed by singing of the national anthem. CISF unit, NESAC gave a guard of honour to Director, NESAC, which was followed by a brief speech by Director, NESAC, where he highlighted the importance of the ongoing nationwide celebration of Azadi Ka Amrit Mahotsav activities and put forward the NESAC community the directions given by the Hon'ble Prime Minister of the



Country on the occasion. He commended the works being done by NESAC staff in all fields and expected that even higher quantum of research work would be carried out by the NESAC community. He wished

NESAC Staff a happy and prosperous Independence Day to conclude his speech. A demonstration of CISF Weapons Drill was made by the CISF Unit as part of the Independence Day celebration. A cultural program was also organized as part of the celebration at NESAC auditorium. CISF Unit and NESAC Staff presented various cultural

performances including Singing, Dancing, Taekwondo exhibition by kids etc.

Director, BCCI visited NESAC

Dr. Amal Chandra Kataki, Director, Dr. Bhubaneswar Borooh Cancer Institute (BCCI), Guwahati along with a team of doctors visited



visitors. Shri Himanshu Jyoti Das, Scientist from NESAC coordinated the Space on Wheel exhibition.

NESAC celebrated the 76th Independence Day of the Nation

NESAC celebrated the 76th Independence Day of the nation in an eventful manner on 15th August, 2022. The

NESAC on Aug 17, 2022. BBCI is a Grant In-Aid Institute of the Department of Atomic Energy, Government of India, and a Unit of Tata Memorial Centre, Mumbai for treatment of cancer specifically the patient from NE region. NESAC and BBCI are collaborating for the purpose of developing a digital platform on spatial distribution of cancer incidences in NER. Both the institutions have signed an MoU for collaborating in the research and applications of advanced geospatial technology in reducing the



burden of cancer in the region. The team from BBCI had a detailed discussions with NESAC team led by Dr. S.P. Aggarwal, Director, NESAC.

Celebration of National Remote Sensing Day 2022

Indian Society of Remote Sensing, Shillong Chapter (ISRS-SC) organized the National Remote Sensing Day – 2022 (NRSD-2022) jointly with Indian Society of Geomatics – Shillong Chapter (ISG-SC), North Eastern Space Applications Centre (NESAC), Umiam and North Eastern Hill University (NEHU), Shillong on

22.08.2022 at Conventional Hall, NEHU, Shillong, Meghalaya. In the inaugural session, Dr. K.K. Sarma, Secretary ISRS-SC welcomed the Chief Guest Dr. S.P. Aggarwal Director, NESAC and the other Invitees to the program. The Chief Guest and other speakers highlighted the importance of space technology in our daily life and urged the young generation to study geospatial technology which can also be taken as carrier choice. Dr. B.K. Handique, Secretary ISG-SC offered the vote of thanks in the inaugural session. A popular talk was delivered by Dr. S.P. Aggarwal Director, NESAC on the topic “Indian Space Programme and societal benefit”. There were about one hundred participants in the program comprising of faculties and students from NEHU, officials from NESAC and members of ISRS-SC and ISG-SC. There was a debate competition on the topic “Space technology has helped in improving life in India” organized among the students from various departments, where many students including research scholars from NEHU had



participated. First, second and third winners were awarded with trophies and certificates. As a part of the celebration, the “Space on Wheels” bus containing exhibition material of ISRO was also displayed.

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