

Reflections

TRIANNUAL NEWSLETTER



Release of Souvenir and Abstract Book by the Hon'ble Governor of Meghalaya, Shri Ganga Prasad during the National Seminar on Advances in Remote Sensing & GIS Applications at NESAC auditorium

From the Director's Desk



The pre-monsoon season and the monsoon season brings a large number of disasters in North Eastern Region (NER) of India every year. NESAC was ready to face the disasters and provide early warning of a few hydro-meteorological disasters that the center has committed. We have extended the Flood Early Warning System (FLEWS) project to entire NER of India to cover all major flood prone river basins. More than 40 major river basins are now covered by the FLEWS project, and all these basins are monitored continuously during the monsoon season. With the increase in number of basins, the challenges of accurate forecasting of flood have also increased. We are making our best effort to forecast all major flood events in NER with an actionable lead time. Recently, under the national hydrology project, these forecasting efforts are integrated to include even the inundation forecasting. Several other organizations from NER and beyond are also approaching NESAC seeking support in management of their hydro-meteorological activities.

While we continued to provide nowcasting of severe storms, we are putting extensive effort to nowcast lightning as well. The lightning is the leading life threatening disaster at national level and NER is no exception. NESAC has recently got access to lightning data over this region from a private lightning detector network. Efforts are also being made to install more lightning detectors in collaboration with IITM, Pune and NRSC, Hyderabad. There are more than ten lightning detectors already installed in NER and the number is expected to increase soon. Research is conducted to assimilate the data collected by these sensors into

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National seminar on Advances in Remote Sensing and GIS Applications

A national seminar on “Advances in Remote Sensing & GIS Applications” was held at NESAC, during 10-11 May, 2018. The seminar was jointly organized by NESAC, ISRS-Shillong Chapter, ISG-Shillong Chapter, and the Department of Geography, NEHU. Focus of the seminar was on optical, microwave, LiDAR and hyperspectral remote sensing including high resolution data processing with emphasis on issues and challenges of north eastern region of India.



Lighting of the lamp by Hon'ble Governor of Meghalaya along with other dignitaries

Hon'ble Governor of Meghalaya, Shri Ganga Prasad, inaugurated the seminar in presence of around 245 delegates from different parts of the country. Shri C.H. Kharshiing, Planning Adviser, NEC attended the programme as the Guest of Honour. The programme began with an invocation and lighting of the ceremonial lamp followed by welcome address from Shri Sandeep Hamilton, Chairman, ISRS-Shillong Chapter, and opening remarks by Shri P.L.N. Raju, Director, NESAC. The President of ISG-Shillong Chapter, Prof. B.S. Mipun and Vice President of ISRS, Dr. Prakash Chauhan, also delivered their speeches. The Chief Guest of the Programme formally inaugurated the seminar with his inaugural address followed by release of the souvenir and abstracts book and he also inaugurated the exhibitions hall where various organizations displayed their stalls at the seminar venue.

The technical program consisted of two plenary sessions, i.e. 1) space programme for social benefit and 2) recent advancements in space technology, and grouped into ten technical sessions on various themes.



Chief Guest addressing the dignitaries

There were 17 invited talks and lead talks by experts in their respective areas, 75 technical paper presentations by academicians, researchers, professionals and students from various institutions from different parts of the country.

The first plenary session was chaired by Dr. Prakash Chauhan who gave a talk on ‘Mysteries of the Solar System: Indian planetary exploration program’. This was followed by three lead talks by Dr. Surya Srinivas, spoke on ‘Spatial semantics and high performance computing (HPC) for rapid disaster assessment’, Shri K.C. Bhattacharyya on ‘Technology imperatives for integrated development of the Brahmaputra river basin’ and by Dr. A.K Misra on ‘Societal benefit of geospatial technology with special reference to NER’.

The second plenary session was chaired by Shri K.C. Bhattacharyya, former Director, NESAC. The speakers of the session were Dr. Shiv Mohan on ‘Radar remote sensing-recent advancements’ followed by Shri Rajaraman Ramachandran, on ‘Computational imaging methods in satellite data processing’, Shri P.L.N Raju on ‘UAV remote

National seminar on Advances in Remote Sensing and GIS Applications

sensing – technological advancements, applications and future prospects’, Dr. S. Sudhakar on ‘Use of satellite remote sensing coupled with GIS / GPS in successful implementation of NER-DRR in NE region’.

A total of 75 papers were presented in the 10 technical sessions during the two days deliberation. Technical sessions were themed as Advances in Earth observation applications, Water resources; Snow and glaciers-1; Agriculture; horticulture and allied areas; Water resources-2; Snow and glaciers-2; Geosciences and mineral exploration; Atmosphere; weather and climate; Industry and exhibitor presentation; Societal and urban applications; forestry; biodiversity; ecology; Wildlife; and Disaster risk reduction.

A pre-seminar tutorial on “UAV (Unmanned Aerial Vehicles) Remote Sensing” was also held at North Eastern Hill University (NEHU) Campus, Shillong on 9th May, 2018. Sixty seven participants attended the tutorial which comprised of two lectures, two demo sessions and a hands-on practical session. The topics covered in the lectures included UAV technology and its components, payload & sensors, flight planning – autonomous and manual, imagery acquisition, photo alignment, keypoint extractions and matching, point cloud generation, DEM & DTM and UAV case studies and applications. The demo and hands-on sessions included demonstration on UAV flying, UAV data acquisition, UAV data processing, Planimetric analysis/volumetric analysis and Index calculations (NDVI, NDRE).

Three best papers were awarded from students and research scholars’ category and three best exhibitors were also awarded during the valedictory session.

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From the Director’s Desk

numerical models to nowcast lightning with 2-3 hours of lead time. We are expecting to operationalise such location based lightning nowcasting services for entire NER of India from next season.

A few new projects/activities have been taken up while we have completed a few projects during last few months. The Sericulture Phase II project for the NER is in final stage of completion and we will soon provide detail map on potential areas for sericulture development in NER. The project for rest of India is also progressing well. The CHAMAN project for the NER of India is also progressing well and the results shall be handed over to the concerned authorities soon. Under the AMRUT project, NESAC has been providing training on formulation of GIS based master plans and also actively participating in the project. We have provided consultancy services to Border Roads Organization for providing the suitable road alignments in Arunachal Pradesh. Under the NESDR project, we have connected all the state remote sensing centers in NE region for seamless data transfer.

NESAC conducted a two days national seminar on “Advances in Remote Sensing and Geographic Information System applications”, during 10-11 May, 2018 in collaboration with ISRS-Shillong Chapter and ISG-Shillong Chapter. More than 150 professionals and students participated in the seminar and deliberated on different aspects of RS and GIS applications. This seminar provided NESAC an unique opportunity to engage with all major stakeholders and also familiarize with new state-of-the art technologies in this field. NESAC will continue to organize such large scale seminars to provide a platform for the researchers in NE region of India to present their work and get an opportunity to interact with the best personalities in different scientific areas.

We are not only confining ourselves in scientific activities, but also and taking up several social activities as well. Recently a blood donation camp was organized at NESAC, which was first of its kind in this locality. An Ayurvedic and Homeopathic medicine camp was also organized for the benefit of the local population here. Additionally, NESAC scientists visited SOS children village and trained the children there on the benefits of Yoga and Meditation. Cleaning drives are regularly conducted at Umiam and nearby areas under the Swachh Bharat Abhiyan of Government of India. NESAC is also constructing a few public toilets with funding support from Antrix Corporation.

Launching of GeoPortal on North Eastern District Resources Plan

Dr. Dibyajyoti Chutia

Shri Ravi Shankar Prasad, Hon'ble Union Minister for Electronics & Information Technology and Law & Justice, Government of India launched the updated version of North Eastern District Resources Plan (NEDRP) GeoPortal on 11th August, 2018 in august presence of the Hon'ble Chief Ministers and IT Ministers of North Eastern States. The launching of the NEDRP portal took place during the release programme of the Vision document for Digital North East 2022 at Guwahati at the initiative of Ministry of DoNER, Government of India. The vision document emphasizes leveraging digital technologies to transform lives of people of the north eastern states and enhance the ease of living. During the event, foundation stones were laid for four National Institute of Electronics and Information Technology (NIELIT) permanent centres in Guwahati, Shillong, Lunglei and Gangtok. Hon'ble Union Minister for Electronics & Information Technology and Law & Justice, Government of India also launched the Secure, Scalable and Sugamya Website as a Service (SwaaS) websites for Arunachal Pradesh and Tripura, State level MyGov portals for Arunachal Pradesh, Manipur and Tripura. Software Technology Park of India (STPI) incubation facility was inaugurated in Agartala, Aizawl and Shillong. A BPO centre under the North East BPO Promotion Scheme was also inaugurated at Majuli, Assam.



A part of the program on release of vision document for Digital NE 2022

NEDRP was also previously awarded with the most prestigious National award for e-Governance for the year 2017-18 for outstanding contribution using spatial technology and GIS in e-Governance by the department of Administrative Reforms & Public Grievances, Government of India. The award was received from Dr. Jitendra Singh, Hon'ble Minister of State (MoS) (Independent Charge) for the Ministry of DoNER; Prime Minister's Office; Personnel, Public Grievances and Pensions; Department of Atomic Energy and Department of Space, during national conference on e-Governance held in Hyderabad on 27th February, 2018.



Team NESAC receiving the national award

NEDRP is one of the unique activities of NESAC towards strengthening the Governance policy through effective mechanism of geospatial framework. The project was sponsored by the North Eastern Council (NEC), Ministry of DoNER Government of India, Shillong and executed in collaboration with the State Remote Sensing Applications Centres of NE region.

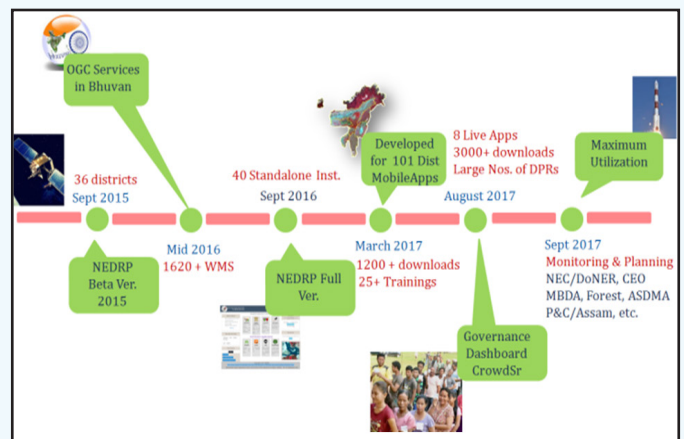
NEDRP was initiated with 36 selected districts of NE region and later on extended to remaining districts (65 districts) of the region. The beta version with 36 districts' database was released by Shri C.H. Kharshiing, Adviser (Planning), NEC during 16th foundation day of NESAC celebrated

Launching of GeoPortal on North Eastern District Resources Plan

Home page of NEDRP (www.nedrp.gov.in)

on 5th September, 2016. The database for each of the districts comprised of around 30-35 geospatial layers categorized into six major modules- i) Administrative or base data, ii) Infrastructure, iii) Land and Water resources, iv) Planning inputs, v) Terrain module and vi) Disaster management. In addition, NEDRP dashboard is populated with the Governance Applications on Election, Census, Project monitoring, Geo-Tourism, Village resources information, etc. The geoportal is hosted at www.nedrp.gov.in using 1Gbps NKN network. NEDRP Geoportal is developed using the open source software and standards. It provides an interactive and responsive user interface (UI) for visualization of geospatial layers, on the fly-statistics with proximity and multi-dimensional querying capability. Live dashboard for governance applications are powered by various

web tools and APIs. A number of spatial decision support systems (SDSSs) like land resources planning based land and climatic condition, suitable sites for check dam construction, etc. are part of the NEDRP system.



Overall achievements and success of NEDRP towards governance activity

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Remote Sensing and GIS based inputs and analysis for suitable road alignment planning in Arunachal Pradesh

Victor Saikhom and M Somorjit Singh

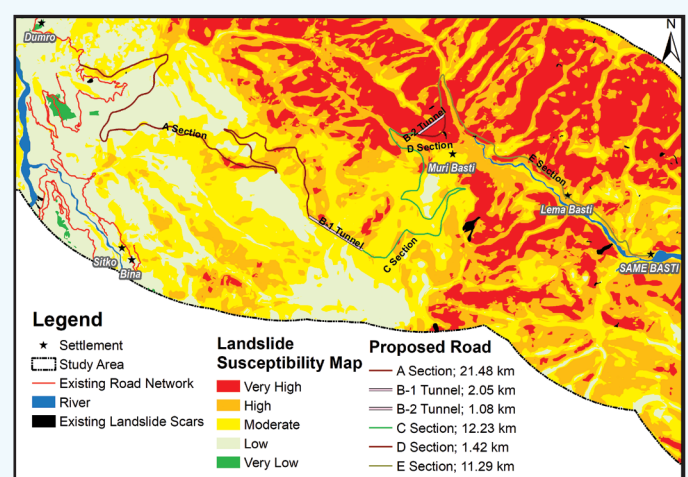
Road alignment aims at evaluating the ground condition of a very large area between two end points. Planning for development of a new route to connect between two end points is based on the various factors such as the socioeconomic, administrative, as well as strategic importance of the area, region, or the country. The position or the layout of the centre line of the highway on the ground is called alignment. In general, alignment is of two types – horizontal alignment and vertical alignment. Alignment in hilly areas is more winding/curving in nature upto certain extent in comparison to horizontal alignment and it is mostly controlled by the topography.

This project has been carried out for Border Road Organisation (BRO), 761 BRTF (GREF), project Brahman, Arunachal Pradesh to find a best suitable route to connect Dumro village of Upper Siang and Same Basti village of Lower Debang Valley districts of Arunachal Pradesh using IRS LISS-IV data of 2014, 10m Cato-DEM and other collateral data with limited ground surveys. The methodology to generate and suggest a new road alignment has been categorized broadly into two parts. The first part includes the preparation of landslide susceptibility zonation map and the second part includes alignment of most feasible route (centre line) using the susceptibility map and Digital Elevation Model (DEM, for vertical alignment) as input along with the criteria as suggested by the user, i.e. for every 20m horizontal length, the permissible vertical raise is 1m (i.e. 1: 20 gradient).

Three exercises were carried out to conclude the final proposed aligned road. In the first exercise, it has been observed that the total length of the road is 64.08 km. It is also observed that there are about 22 numbers of major hairpin bends/curves/bridges and maximum of the curves are

more or less in the same slope/ aspect. As the maximum portion of the proposed route falls in the same slope/ aspect, in the event of disaster (i.e landslide) in the upper slopes, high risk is also expected at the lower slopes.

During the third exercise, it has been observed that the number of major hairpin bends/ curves/ bridges is reduced to 8. In this exercise, as the alternate proposed route of 43.47 km length traverses along very steep slope and also passes through very high landslide category as per the susceptibility map, the route of 48.47 km is considered as the proposed aligned route. A part of the route falls under very high category in the susceptibility map and also observed that this section is passing just above the crown of an active landslide area that may reactivate at any time, this section was proposed to pass through a tunnel (B-2) of length 1.08 km. Finally, the total length of the proposed aligned route was found to be 48.13 km.



Final proposed road alignment

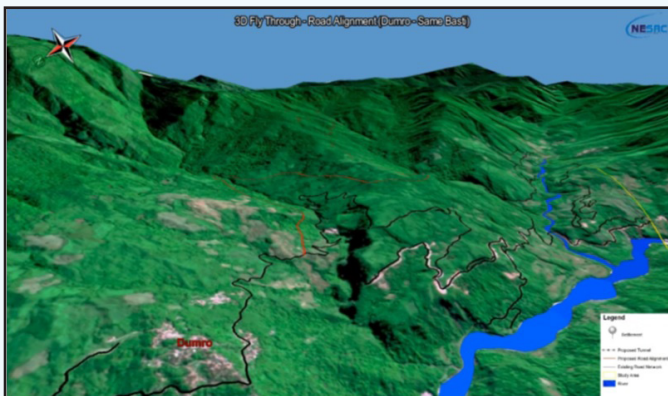
The tunnels are proposed in such a way that gradient is less than 1.5 degree. The cross section profiles at every 100 m and the longitudinal profiles at every 1 km length are also generated. Hairpin bends, major bridges & curves are also suggested along the proposed aligned route.

Remote Sensing and GIS based inputs and analysis for suitable road alignment planning in Arunachal Pradesh

During the entire process of the alignment, an attempt has been made to follow the criteria strictly as per the user requirement and maximum effort has been given to avoid the existing active landslide areas as well as high and very high categories as indicated in the landslide susceptibility map. However, it may be noted that during and/ or after the construction of the road, different category of susceptibility zone may change into another due to the disturbance of the stability of slope. The environment of the area may

be affected in micro or meso scale due to felling of trees as well as wildlife habitats. The following points were also put forward as recommendations in the final technical project report submitted to the user agency:

1. Proper channelization of seepage zones
2. Adoption of slope and landslide protection measures wherever possible such as afforestation and other conservation measures (engineering & bio-engineering), terrace cultivation on steep slopes, etc.
3. Protection of river bank erosion or toe cutting.
4. A proper site should be identified or selected as a corridor for the movement of wildlife with caution signboard, speed limit, etc.



3D Visualization of proposed aligned road

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Launching of GeoPortal on North Eastern District Resources Plan

Subsequently, around 1620 maps via public domain and 1200 geospatial layers through Bhuvan node have been already released to the various users for their developmental planning activities. Around 40+ NEDRP standalone versions were installed in the district level offices with high quality internet bandwidth. NEDRP is now becoming decision making platform for the governance applications in many government departments and agencies for their planning and monitoring activity. NEDRP data services have been effectively utilized by various line departments for preparing disaster management support plan, forest resources management plan, DPRs for integrated watershed

management programme (IWMP)/Meghalaya basin development authority (MBDA) and roads/ Pradhan mantri gram sadak yojana (PMGSY). NEDRP is also used to generate inputs for election management, inputs for development of MoSQuIT, an integrated surveillance system for malaria, etc. Various investigation agencies including special investigation branch (SIB), Police etc., line departments like agriculture & horticulture, Water resources, PWD, etc., research institutes like Indian Council of Agriculture Research (ICAR), Indian Institute of Technology (IIT), Guwahati, University have been utilizing NEDRP portal for their planning activities.

भाषा न सिर्फ संप्रेषण का माध्यम है, बल्कि यह हमारे देश की संस्कृति है। भाषा मनुष्य और समाज की पहचान होती है। इसीलिए मनुष्य और समाज दोनों भाषा से जुड़े रहते हैं। मनुष्य जिस समाज में रहता है वहाँ की भाषा का प्रभाव उस पर पड़ता है। हम चाहते हैं कि जो भाषा हम आसानी से बोलते और समझते हैं उसी में विविध विषयों की अभिव्यक्ति हो। इन्हीं बातों को ध्यान में रखते हुए जब हमारा देश अंग्रेजी शासन से मुक्त हुआ तब यह विचार किया गया कि विविध प्रयोजनों के लिए देश में सबसे अधिक बोली जाने वाली भाषा, हिन्दी को सरकारी कामकाज की भाषा बनाई जाए ताकि आम जनता सरकारी कामकाज में हिन्दी का प्रयोग आसानी से कर सके। इसे ध्यान में रखते हुए भारतीय संविधान में 14 सितंबर 1949 को हिन्दी को राजभाषा के रूप में दर्जा दिया गया ताकि सरकारी कामकाज राजभाषा हिन्दी में किया जा सके। संविधान के अनुच्छेद 343 से लेकर 351 तक राजभाषा संबंधी बातें कही गई हैं।

राजभाषा और राष्ट्रभाषा दोनों एक होते हुए भी दोनों में केवल यही अंतर है कि राजभाषा का प्रयोग केवल सरकारी कर्मचारी ही करते हैं जबकि राष्ट्रभाषा का प्रयोग देश की समस्त जनता करती है। राष्ट्रभाषा हो या राजभाषा दोनों का प्रचार प्रसार जितना अधिक बढ़ेगा संविधान के निर्देशों का अनुपालन उतना होगा ही। साथ ही, हमारे देश की भाषा एवं संस्कृति और अधिक मजबूत होगी। इसीलिए सरकार यह चाहती है कि समाज के हर क्षेत्र एवं सरकारी कार्यालय में हिन्दी का प्रयोग बढ़े। वर्तमान सामाजिक और आर्थिक परिवर्तन के कारण सभी के लिए हिन्दी जरूरत की भाषा बन गई है और कार्यालय में हिन्दी का प्रयोग कर संविधान के आदेशों का पालन करना आवश्यक है।

आइए अब हम बताते हैं हिन्दी की उपलब्धियाँ क्या-क्या हैं :-

1. साइनबोर्ड नामपट्ट आदि

केंद्रीय सरकार के कार्यालयों में साइनबोर्ड, नामपट्ट, रबर की मुहरें आदि में हिन्दी का प्रयोग किया जाता है तथा इसके अलावा कुछ फार्म द्विभाषी में होते हैं। प्राथमिक स्तर पर यह एक बहुत बड़ा कार्य है, क्योंकि कार्यालयों में हिन्दी प्रयोग की शुरुआत यहीं से होती है।

2. यूनिकोड का प्रयोग

यूनिकोड के प्रयोग से हिन्दी प्रयोग में एक क्रांति आई है, जिसके प्रयोग से कंप्यूटरों में हिन्दी का प्रयोग दिन व दिन बढ़ता जा रहा है। कंप्यूटर पर एकरूपता के लिए एक मात्र विकल्प कैरेक्टर इनकोडिंग के लिए यूनिकोड ही है। इससे हिन्दी तथा अन्य भारतीय भाषाओं में कंप्यूटर पर अंग्रेजी की तरह सरलता से 100 प्रतिशत कार्य हिन्दी में किया जा सकता है। कंप्यूटर पर सभी

प्रकार के कार्य, जैसे - वर्ड प्रोसेसिंग, डाटा प्रोसेसिंग, ई-मेल, वैबसाइट निर्माण आदि किया जा सकता है। हिन्दी में बनी फाइलों का आसानी से आदान प्रदान किया जा सकता है।

राजभाषा विभाग ने अंतर्राष्ट्रीय स्तर पर एंकोडिंग की एकरूपता को ध्यान में रखते हुए सभी केंद्रीय कार्यालयों को कंप्यूटरों में यूनिकोड एंकोडिंग प्रणाली अथवा यूनिकोड समर्थित ओपन टाइप फॉन्ट का प्रयोग करने का निर्देश दिया है।

3. अधिकारियों एवं कर्मचारियों के लिए सेवाकालीन हिन्दी का प्रशिक्षण

केंद्रीय सरकार, बैंक और उपक्रम आदि के अधिकारियों एवं कर्मचारियों के लिए राजभाषा विभाग द्वारा कई सालों से सेवाकालीन हिन्दी प्रशिक्षण, जैसे - हिन्दी भाषा के प्रशिक्षण, कंप्यूटर आदि का प्रशिक्षण चलाया जा रहा है। कर्मचारी प्रत्येक वर्ष भारी संख्या में इन प्रशिक्षण में भाग लेकर इसका पूरा-पूरा लाभ उठा रहे हैं। यह राजभाषा संवर्धन की दिशा में एक महत्वपूर्ण कदम है।

4. समाचार पत्र

आज भारत में बहुत से समाचार पत्रों का प्रकाशन होता है, जिनमें से हिन्दी समाचार पत्रों का प्रकाशन सबसे अधिक है, जैसे दैनिक जागकण, जनसत्ता, नवभारत टाइम्स, दैनिक भास्कर, अमर उजाला आदि और इनके पाठक भी बड़ी संख्या में पाए जाते हैं। यह राष्ट्रभाषा और राजभाषा प्रचार प्रसार के कार्य को बढ़ाता है।

5. विदेशों में हिन्दी

वर्तमान में विश्वभर में सबसे अधिक बोली जानेवाली भाषा चीन की मंदारिन भाषा है और हिन्दी दूसरे स्थान पर है। अंग्रेजी आज भी तीसरे स्थान पर है। 135 देशों के विश्वविद्यालयों में हिन्दी पढ़ाई जाती है। सूरीनाम, फीजी, मॉरिशस, ट्रिनीडाड, गुयाना, आदि देशों के लोग हिन्दी को अपनी संस्कृति समझते हैं जिसे छोड़ना नहीं चाहते, नेपाल, भूटान, श्रीलंका, पाकिस्तान, चीन, अमेरिका, कनाडा, जर्मनी, जापान आदि देशों में बसे हुए भारतीय लोग आपस में हिन्दी बोलते हैं। हाल ही में अमेरिका की पेनिनसिल्वेनिया युनिवर्सिटी ने एम.बी.ए के छात्रों के लिए दो वर्षीय हिन्दी कोर्स अनिवार्य कर दिया गया है ताकि वे भारत में व्यवसाय कर सकें।

6. तकनीकी शब्दावली आयोग की पहल

भारत सरकार ने तकनीकी शब्दावली आयोग की स्थापना की है। विभिन्न विभागों की सामग्रियों को अनुवाद करते समय

राजभाषा हिन्दी की वर्तमान स्थिति

अंग्रेजी के एक ही शब्द के लिए अलग-अलग विभागों में हिन्दी में अलग-अलग अनुवाद किए जाते थे अर्थात् उनमें एकरूपता नहीं थी, जबतकनीकी शब्दावली आयोग ने शब्दावली नामक पुस्तक का निर्माण किया तब से अनुवाद की शब्दावलियों में एकरूपता आ गई, जिसकी बदौलत आज केन्द्र सरकार, बैंक एवं गैर सरकारी संगठनों में अनुवाद में एकरूपता आई है।

7. अनुवाद

आज अनुवाद के जरिए विभिन्न प्रकार की सामग्रियों एवं पुस्तकों का हिन्दी में अनुवाद किया जा रहा है। सरकारी, गैर सरकारी एवं व्यक्तिगत स्तर पर अनुवाद हो रहा है। आज ऑन लाइन अनुवाद को जीविका उपार्जन का एक माध्यम बना लिया गया है जिससे हिन्दी का प्रचार प्रसार अवश्य बढ़ा है। हिन्दी अनुवाद ने न सिर्फ हमारे हिन्दी साहित्य संस्कृतियों के भण्डार को समृद्ध किया है बल्कि विभिन्न देशों की संस्कृतियों से हमारा परिचय भी करवाया है।

8. राष्ट्रीय स्तर पर आयोजित परीक्षाओं में हिन्दी का विकल्प

वर्तमान में भारतीय प्रशासनिक सेवा के अलावा राष्ट्रीय स्तर की अनेक परीक्षाओं में हिन्दी माध्यम से परीक्षा देने का विकल्प है। साथ ही, कई राज्यों में बी.एड, एम.बी.ए तथा अन्य परीक्षाएँ हिन्दी में दिए जाने की सुविधा भी उपलब्ध है और कई संगठनों में नौकरी की बाबत लिए जानेवाले साक्षात्कार हिन्दी में दिए जाने का विकल्प भी होता है। इस दिशा में महात्मा अंतर्राष्ट्रीय विश्वविद्यालय का योगदान बड़ा ही प्रशंसनीय है जो सभी प्रकार के पाठ्यक्रम हिन्दी माध्यम से चलाते हैं।

9. हिन्दी में ई-मेल की सुविधा

आज पहले की तरह केवल अंग्रेजी में ही ई-मेल नहीं भेजा जाता बल्कि हिन्दी में इसे पूर्ण रूप से भेजा जाता है। वर्तमान में हिन्दी में ई-मेल भेजने की संख्या दिन प्रतिदिन बढ़ती जा रही है। इससे यह प्रमाणित होता है कि तकनीकी क्षेत्र में हिन्दी पीछे नहीं है।

सुविचार -

1. जिस भाषा में तुलसीदास जैसे कवि ने कविता की हो, वह अवश्य ही पवित्र है और उसके सामने कोई भाषा नहीं ठहर सकती। - महात्मा गाँधी।
2. इस समग्र देश की एकता के लिए हिंदी अनिवार्य है। - राजा राम मोहन राय।
3. हिंदी भारतवर्ष के हृदय - देश स्थित करोड़ों नर - नारियों के हृदय और मस्तिष्क को खुराक देने वाली भाषा है। - हजारी प्रसाद द्विवेदी
4. जो राष्ट्रप्रेमी है, उसे राष्ट्रभाषा प्रेमी होना चाहिए। - रंगनाथ रामचंद्र दिवाकर।
5. हिंदी हमारे राष्ट्र की अभिव्यक्ति का सरलतम स्रोत है। - सुमित्रानंदन पंत।
6. निजभाषा उन्नति अहै, सब उन्नति को मूल
बिन निज भाषा ज्ञान के मिटत न हिय को शूल। - भरतेन्दु हरिश्चंद्र

10. विज्ञापनों में हिन्दी का प्रचार प्रसार

आज कई राष्ट्रीय तथा बहु राष्ट्रीय कंपनियाँ अपने उत्पाद की जानकारी आम जनता तक पहुंचाने के लिए उत्पादों का विज्ञापन हिन्दी में दे रहे हैं। बैंक भी अपने उत्पादों का विज्ञापन अन्य भाषाओं के साथ-साथ हिन्दी में भी दे रहे हैं। प्रेशर कूकर, अन्य खाद्य सामग्रियाँ तथा विविध प्रकार की दवाइयाँ जो जनता के लिए अति आवश्यक हैं, उनका विज्ञापन तथा प्रयोग संबंधी जानकारीवाली पर्ची भी हिन्दी में होती हैं।

11. सोशल मीडिया में हिन्दी का प्रयोग

आज यह सभी जानते हैं कि मोबाइल, व्हाट्सैप और फेसबुक पर बहुत बड़ी संख्या में लोग हिन्दी में मैसेज भेज रहे हैं और प्राप्त भी कर रहे हैं। इससे लोग हिन्दी के प्रति आकर्षित हो रहे हैं क्योंकि इसमें अपनापन का बोध होता है।

12. शहरीकरण का विकास और हिन्दी

आज रोजगार की तलाश, व्यवसाय आदि के लिए गाँव के युवा वर्ग शहर की ओर बढ़ रहे हैं और शहरों में उन्हें विविध राज्यों की युवा पीढ़ी तथा अन्य लोगों से संपर्क करना पड़ रहा है। ऐसे में सभी को सभी भाषाएँ जानना संभव नहीं है। ऐसी स्थिति में एक दूसरे से संपर्क साधने के लिए लोग देश की संपर्क भाषा हिन्दी का प्रयोग करते हैं।

उपसंहार

पहले की तुलना में हिन्दी का प्रयोग बढ़ा है। कंप्यूटर, फेसबुक, सोशल मीडिया, एस.एम.एस, व्हाट्सैप आदि में हिन्दी के प्रयोग दिन व दिन बढ़ता जा रहा है इसके अलावा शिक्षा, व्यवसाय तथा सामाजिक परिवर्तन के कारण भी हिन्दी का प्रयोग बढ़ा है। राष्ट्रीय स्तर पर ही नहीं वरन अंतर्राष्ट्रीय स्तर पर भी हिन्दी की पहुँच बढ़ी है।

संदर्भ ग्रंथ :

राजभाषा भारती - राजभाषा विभाग द्वारा प्रकाशित पत्रिका।

1st Project Monitoring Board Meeting of NeSDR Project held at NESAC



The first Project Monitoring Board Meeting of NeSDR Project was conducted at NESAC on 8th May, 2018. The meeting was chaired by Shri SN Pradhan, Joint Secretary, Ministry of Development of North Eastern Region and was attended by respective heads of State Remote Sensing Applications Centres of NER. Shri SN Pradhan emphasized on the importance of space technology with regard to data gathering for solving the problems of the common man and need to fully utilize the RS/GIS technology for the benefit of NER. He has appreciated the overall progress of NeSDR project and felt happy to see the infrastructure setup available at different state nodes for the project. All the respective state centres gave presentations on the present setup and details on the spatial database availability for the project. Shri Nilay Nishant, Kum Ritu Anil Kumar, Shri Avinash Chouhan, scientists from NESAC gave brief demonstrations on the various g-Governance applications for NeSDR Dashboard. Shri Victor Saikhom made a presentation on the database related aspects of NeSDR and need for submitting proper structured database based on NeSDR Metadata standards. Shri P.S. Singh, NESAC gave a presentation cum demonstration on NeSDR SDI Prototype.

Capacity Building under AMRUT Sub-Scheme on plans formulation of GIS based master plan formulation

NESAC in collaboration with Town and Country Planning Organisation, Ministry of Housing and

Urban Affairs, Govt. of India, conducted training programmes on 'Formulation of GIS based Master Plans' for decision makers from 29-31 May 2018 and for middle level officers from 14-25 May 2018. Altogether 20 officers were trained during the two programmes.



A separate training program for senior level officers was also held during the month of August, 2018 (6th to 31st August, 2018) where about 20 officers were trained.



Celebration of World Environment Day

World Environment Day was celebrated at NESAC on 05th June, 2018. Staff of NESAC led by Director Shri. P L N Raju participated in the Celebration. Saplings were planted at various locations of NESAC office and NESAC residential campus to make the environment cleaner.



Scientific Lecture on ‘Is there Life on Mars?’



Dr. S.M. Ahmed, Principal Scientific Officer, Central Instruments Laboratory, Hyderabad University gave a scientific lecture on 13th June, 2018 on the topic ‘Is there Life on Mars?’ He described about India’s maiden successful interplanetary mission, the ‘Mars Orbiter Mission’ and briefly described about the scientific payloads carried by the MOM, scientific challenges faced by the mission, its journey and findings. He gave a comparative analysis of the Mars Exploratory Missions from other countries and presented his scientific logic why life, as we know it on earth, is not feasible on Mars.

International Day of Yoga

4th International Day of Yoga was celebrated at NESAC from 19th to 21st June, 2018. Preparatory



Yoga sessions were organized for the regular staff, CISF personnel, students & trainees of NESAC as well as their family members on 19th and 20th June, 2018 with 75 participants. On International day of Yoga, 21st June, a morning session of Yoga was organized for all staff of NESAC. The Common



Yoga Protocols circulated by Ministry of AYUSH, Government of India were practised by all and the yoga sessions were conducted by professional yoga trainers. Reputed international Art of Living teacher, Shri Samir Jolly presented a lecture on use of yoga for stress relief at workplace and conducted a yoga and meditation session for the staff of NESAC from 03:00 PM to 05:00 PM on 21st June.

Ayurvedic and Homoeopathic Medical Camp at NESAC



NESAC and NEIAH (North Eastern Institute of Ayurveda & Homoeopathy), Ministry of Ayush, Shillong, jointly organized a free Medical Check-up and free medicine distribution camp for Ayurveda & Homoeopathy at NESAC on 25th June, 2018. Eight officials including one Ayurveda doctor and two Homeopathy doctors from NEIAH conducted the daylong check-up and medicine distribution

for NESAC employees and the patients from nearby villages (Umiam, Nogsder, Rongmen) and Institutes.

Yoga, Meditation and knowledge session to children of SOS village



Yoga, meditation and knowledge session was conducted for children of SOS village, G.S Road, Meghalaya on 1st July 2018. SOS is a self implementing child care NGO, working for the holistic development of parentless children situated at Ri-Bhoi District of Meghalaya. Children were taught about importance of exercise, yoga and meditation. Yoga session was held for one hour, which was followed by a lecture on “Space science and Indian Space Research Organization”, followed by question answer sessions. Director, NESAC interacted with children answering their queries on various topics. Refreshment with snacks, fruits and chocolates was provided to all the children and staff. More than 70 children of different age groups participated in the program.

Space Based Information Kiosk for Sikkim, installed and demonstrated

The Space Based Information Kiosk for Sikkim State was installed at the Chief Secretary’s Office in Gangtok on 4th July, 2018. The SBIK for Sikkim consisting of 30 layers on different themes was demonstrated to Shri. Alok Kumar Srivasatav, IAS, Chief Secretary, Govt. of Sikkim. In the meeting, Dr. Dibyajyoti and Shri PS Singh, from North Eastern Space Applications Centre (NESAC), Shillong briefed the effectiveness and usefulness of SBIK portal in the planning and developmental

activities for the various states in the North Eastern Region. They also highlighted that, the SBIK portal was earlier launched in 7 NE States, NEC, Ministry of DoNER in Delhi and more than 17 line Departments.



Blood donation camp at NESAC



A blood donation camp was organized on 25th July 2018 at NESAC community hall by Confederation of Ri-Bhoi People (C.O.R.P) & Regional Blood Bank, Pasteur Institute, Shillong in collaboration with NESAC. The blood donation camp was inaugurated by Shri George Bankyntiewlang Lyngdoh, MLA, Umroi Legislative Constituency and Shri P L N Raju, Director, NESAC. Altogether 49 people donated blood during the camp.



Chairman, Brahmaputra Board visit NESAC

Hon'ble Chairman, Brahmaputra Board Sri Rajiv Yadav visited NESAC for a day long appraisal programme on 26th July, 2018 accompanied by Vice Chairman, Brahmaputra Board, Secretary, Brahmaputra Board and other Senior Officials of the Board. Accompanied by Director, NESAC, he visited all the prime facilities of NESAC including IRNSS tracking station, Atmospheric and Space Science division, SATCOM studio facility, NER-DRR, etc.



Basic course on 'Remote Sensing and GIS - Technology and Applications'

NESAC conducted Basic course on 'Remote Sensing and Geographical Information System-Technology and Applications' of two weeks duration during July 16-27, 2018 focusing the area of geospatial and earth observation applications. The course was designed so that the participants develop clear understanding of appropriate tools, exposure to new methods and techniques, gaining competence in developing tools for the acquisition,



processing, analysis and presentation of spatial data.

The course included topics related to Remote Sensing (RS) and digital image analysis, Global Navigation Satellite Systems (GNSS), Geographical Information system (GIS), open source software and data standards, ground truth and field validation with hands on training on relevant topics. The first week of the training was devoted to topics on basics of RS, GNSS, GIS and image processing, while the advanced topics were covered during the second week. Morning sessions consisted of lectures and demonstrations while hands on training with RS and GIS software were covered during afternoon session. The last two days of the course were dedicated towards formulation of mini-projects by the participants in groups covering various topics of their interest.

Independence Day Celebration

The 72nd Independence Day of the nation was celebrated at NESAC with a day-long colourful programme. Director, NESAC hoisted the tricolour flag amidst singing of national anthem by the staff of NESAC at 09:00 am. The CISF unit of NESAC



offered a guard of honour to Director, NESAC and performed Independence Day parade. Director, NESAC addressed the staff of the centre with an informative speech, where he highlighted the significance of Independence Day celebration and briefed about the activities and achievements of NESAC vis-à-vis Department of Space.

The CISF unit demonstrated various skills in front of the gathering. This was followed by a cultural program organized by recreation committee of NESAC, in which the staff of NESAC and their family members participated in various interactive games, quiz and other activities at the auditorium. Prizes were distributed among winners of various sports & recreational events organized as a part of the Independence Day celebration. The programme ended with a movie show arranged at NESAC Auditorium for the staff of NESAC and their family members.

Telemedicine Awareness Workshop for North-East



NESAC jointly organized Telemedicine awareness workshop for North-East and 5th Annual Continuing Telemedicine Education program of the Telemedicine Society of India with Regional Resource Centre - NEIGRIHMS, Guwahati Medical College, Ministry of Health and Family Welfare (GOI), TSI and NEC at Guwahati during 24-25 August 2018.

Students' visit to NESAC

29 students of M.Sc. Earth Science & Geology from University of Science and Technology, Meghalaya (USTM) and Gauhati University, Guwahati visited

NESAC on 3rd May, 2018. The students were familiarized with space technology and space applications through presentations and video demonstrations. The students were also taken to NESAC exhibition areas and some of the facilities including IRNSS, Satcom, Atmospheric science laboratory and UAV laboratory.



One day DGPS Training to officials from Forest Dept., Government of Meghalaya



A oneday training on “Differential GPS handling & survey technics” has been conducted for Officials of Meghalaya Forest Wildlife Shillong Division, Dept. of Forest, Govt. of Meghalaya at NESAC on 12th June, 2018. The training was conducted by Shri Victor Saikhom, Scientist/ Engineer-SE and Shri Gopal Sharma, Scientist/ Engineer-SC. About 12 officials which include DFO and MFS had participated the training programme.

Corruption- Corruption is misuse of public authority by politicians, civil servants etc. for private gain. In other words it is dishonest or fraudulent conduct by those in power.

Corruption is embedded in ones behavior since beginning (childhood), best example is parent preferring a particular child. Many times, an affluent corrupt person is valued in the society and such things create a bad impression in the mind of a child. It takes draconian shape when the same child becomes a part of the system (an authority or a politician). In this stage it is mandatory for the government to come up with some legislation so that corruption can be controlled.

A committee was constituted by the government of India under the chairmanship of Shri K Shanthanam in 1962 which submitted its report in 1964. Measures suggested by the committee to control corruption were:

- Independence to vigilance officers to investigate complaint
- Reducing number of stages in government procedure to check delay.
- Imparting trainings to lower level staff in vigilance department as 80% of crime vigilances are enquired at lower level.
- Central Vigilance Commission to be represented by central civil service and technical service personnel.
- Prevent vigilance officers from investigating cases of higher officials in parent department.

It was on the basis of the report of the committee that Central Vigilance Commission (CVC) was set up in 1964 for looking into the cases of government employees.

Some of the suggestions given by former Chief Information Commissioners to reduce corruption are:

- Lokpal institutions should be given the power in initiating action against central ministers and MPs so that political corruption can be dealt.

- Lokpal should have own independent investigating and prosecuting agency without CBI dependence.
- CVC should be redesigned as central lokayukt.
- Central lokayukta should be linked to lokpal through common officers and staff
- Lokpal should have legal power to prosecute an accused minister.
- Charged minister must resign after filing of charge sheet in the court.

Transparency international a Germany based international NGO that publishes corruption perception index has given 5 key ingredients to fight against corruption:

End Impunity- Effective law enforcement to ensure that the corrupt is punished and cycle of impunity is broken.

Promote transparency and access to information- Countries should have government openness, freedom of press, transparency and access to information. RTI in India plays a vital role in this and Maldives has the strongest RTI in the world.

Empower Citizen- Community monitoring initiative to detect corruption, reduce leakage, improve quantity and quality of public service.

Reform Public administration and Financial Management- Promoting transparent and participatory budgeting by training local communities to comment on the budgets of their local government.

Close international loopholes- Without access to international financial system, the corrupt officials worldwide will not be able to launder or hide the proceeds of looted assets.

Above mentioned suggestions to curb corruption are only external factors which can be legislated or imposed by government. Mere imposition will not have significant gain. Changes should come from inside. If ones ethics and integrity should abstain him/her from involving and participating any corrupt practices then only we can see the change and make India corruption free.

Achievements

Achievements

Ms. Pooja Shah, an M. Tech intern from CEPT University, Ahmedabad, received the student award (1st runners up for best paper) during the 39th ACRS at Kaula Lumpur,



Malaysia during 15th-19th October 2018 for her paper titled “Building Vulnerability Assessment for Seismic Hazard” which was an M. Tech dissertation work carried out at NESAC during December 2017 to May 2018 under the guidance of Dr. Jenita Mary Nongkynrih.

Mr. Junaid Mushtaq Lone, JRF at NESAC was awarded second prize in oral presentation for his paper titled “Measuring the change in Kolahoi glacier by Automated method using Geospatial technology” during the National Conference on “Climate change, Societal Consequences and Mitigation: Future Vision” held during 26-27 April, 2018 at Central University of Jammu.



Ph.D. degree awarded

Smt. Jonali Goswami, Scientist/Engineer SE was awarded the Doctorate degree by Assam Agricultural University, Jorhat for her thesis titled “Assessment of crop conditions under abiotic stress using remote sensing techniques in upland rice crop” under the guidance of Prof. Ranjan Das, Department of Physiology, Assam Agricultural University, Jorhat.



Shri. Aniket Chakraborty, Scientist/Engineer SC was awarded the degree of Doctor of Philosophy from IIT-Delhi for his thesis titled “Regional analysis and spatiotemporal behavior of soil moisture in partitioning the heat fluxes: a theory based on model” on 21st April 2018. He worked under the guidance of Dr. BR Chahar, Dr. O.P Sharma and Dr. C.T. Dhanya.



NESAC Welcomes new colleague

Shri Snehashish Dash joined NESAC on 13th June 2018 as Library Assistant ‘A’. He did his Graduation from Ravenshaw University in 2012 and did his Master’s in Library and Information Science from Utkal University in 2014.



Editorial Board

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