

GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE

RAJYA SABHA

**UNSTARRED QUESTION NO. 2536**

TO BE ANSWERED ON THURSDAY, AUGUST 10, 2023

**NORTH EASTERN SPACE APPLICATIONS CENTRE**

2535. SHRI BIPLAB KUMAR DEB:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Ministry is operating a dedicated centre for augmenting the developmental process of the North-Eastern Region of the country;
- (b) the details of the activities undertaken by the North Eastern Space Applications Centre (NESAC) during last three years, year-wise, State-wise; and
- (c) the details of the funds utilized during last three years, year-wise, State-wise?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC  
GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

**(DR. JITENDRA SINGH):**

- (a) The North Eastern Space Applications Centre (NESAC) was established in September 5, 2020 at Umiam, Shillong, Meghalaya as an autonomous institution under Department of Space (DOS), jointly with North Eastern Council (NEC), MoDONER to provide space technology inputs and services to the process of developmental planning of the North Eastern Region.
- (b) & (c)

Since inception, NESAC has been carrying out a number of projects across the domains to natural resources management, monitoring of infrastructure development, disaster management support, governance, weather & atmosphere science and satellite communication services for education & health towards space based support for the development of the region.

The details of the activities undertaken by the North Eastern Space Applications Centre (NESAC) during last three years is given in Annexure-I.

The details of the funds utilized during last three years, year-wise, state-wise is given in Annexure-II.

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Annexure referred to in reply to part (b) & (c) of the Rajya Sabha Unstarred Question No. 2536 for answer on 10.08.2023

**Annexure-I**

**Details of the activities undertaken by the North Eastern Space Applications Centre (NESAC) during last three years**

<b>States covered</b>	<b>Sl. No.</b>	<b>Details of projects/activities</b>
Regional level projects covering all 8 states of NER	1.	North Eastern Spatial Data Repository (NeSDR)
	2.	Tele-Education project in North Eastern States during 2020-21
	3.	Desertification and Land Degradation: Monitoring, Vulnerability Assessment and Combating Plans (excluding the states of Assam & Meghalaya)
	4.	Analysis of Vegetation Phenology of NER using Time Series Satellite Data in North Eastern India
	5.	Geotagging of assets created under NERTPS programme of CSB in NER
	6.	Geotagging and geo-monitoring of NEC/MDoNER sponsored project sites
	7.	Monitoring and Evaluation of IWMP watersheds for NE India
	8.	Analysis of forest cover change dynamics in North Eastern India
	9.	Mapping of shifting cultivation area at 1:10,000 scale and estimation of <i>Jhumia</i> population depending on shifting cultivation in the NER
	10.	Development of methodology for delineation of bamboo growing areas in North Eastern India
	11.	Development of a GeoTourism Dashboard Application for planning, management and monitoring tourism activity in the NE region
	12.	Development of Automated System for Monitoring of Deforestation in North Eastern India
	13.	Carbon Dynamics Assessment in Tropical Forests of Northeast India using Multi-Sensor Data

	14.	Identification and rejuvenation of depleted wetlands, oxbow lakes to utilize for occasional flood water diversion and development of tourism sites
	15.	Applications of Space Technology for Agricultural Assessment in NER (ASAAN)
	16.	Space-based Support for the Integrated Development of Horticulture in NER (SSIDH)
	17.	Flood Early Warning Systems (FLEWS) NER
	18.	River Atlas for NER
	19.	Identification of degraded forests/ forest gap areas in Reserve Forest areas of NER
	20.	Assessment of the malaria situation and role of Anopheles species in its transmission in selected International border areas adjoining the Districts of the North-Eastern States and North East Corridor
	21.	Gati Shakti Based Planning & Site Selection Using Geospatial Technology for 8 states of NER
	22.	Development of location based lightning nowcasting system for NE region of India
Arunachal Pradesh	1.	GIS based inputs for border fencing in Longding district of Arunachal Pradesh
	2.	RS and GIS inputs for preparation of forest working plan in Arunachal Pradesh
	3.	Rural Development action Plan for Model Villages (Kaho, Kibithoo and Meshai) of Arunachal Pradesh
	4.	Mapping forest fire prone areas at 1:10k in Arunachal Pradesh
	5.	Identification of suitable areas for kiwi & walnut cultivation in and around Kaho, Kibithoo & Mosai village of Arunachal Pradesh
	6.	Generation of rural development action plan for two village clusters in border districts of Arunachal Pradesh
	7.	Development of GIS based cadastral information system for Arunachal Pradesh
	8.	Capacity building on utility of Geo-spatial data and available data on NeSDR portal
	9.	Expansion of CHAMAN Project in 6 districts of Arunachal Pradesh
	10.	Mapping of cold and freshwater aquatic resources

	11.	Route Alignment input for construction of road along India -China Border
	12.	Web Based Livestock Information Management System (WBLIMS)
	13.	Route alignment mapping for proposed power transmission lines
	14.	GIS based Health Information and Management System (HIMS)
	15.	Site suitability analysis using geo-spatial technique for air traffic control in various locations in Arunachal Pradesh
Assam	1.	Feasibility study for the construction of roads of NH standard with major bridges over the river Brahmaputra
	2.	Study on wetland change detection in DeeporBeel, Guwahati, Assam
	3.	Flood Early Warning Systems (FLEWS) for Assam
	4.	Preparation of Assam River Atlas
	5.	UAV technology development under the project "UAVs (Drones) for Disaster Response Rescue & Relief Management (U-DRRRM)"
	6.	Integrated WebGIS Platform for Dissemination of Real-Time Early Warnings/Alerts and Enabling Analytics in Spatial Domain for Monitoring and Management of Disaster Events
	7.	Space-based land-use Intelligent System for Guwahati (SLIS-G)
	8.	Development of Decision Support System (DSS) for controlling and monitoring of all major Transboundary Animal Diseases (TADs) including African Swine Fever (ASF)
	9.	Space technology support for utilization of Brahmaputra River Islands (Chars) area for productive cultivation in Assam
	10.	Bank line migration studies of Brahmaputra, Barak and selected tributaries
	11.	Watershed delineation for the State of Dhemaji District (Assam) using high resolution DEM
	12.	Mapping & Monitoring of Embankments and its vulnerable reaches WRD
Manipur	1.	Election e-ATLAS for Manipur
	2.	Geospatial assessment of forest fire in different divisions of Manipur

	3.	Study on temporal dynamics of Loktak Lake with space based inputs or conservation planning, Manipur
	4.	RS &GIS based inputs for suitable route Alignment Planning for Construction of Mahadev-Toloi-Pfutsero road
	5.	Space based inputs for conservation of Loktak Lake
	6.	Setting up a new township near the Makhru river bank in Tousem subdivision, Tamenglong district, Manipur
Meghalaya	1.	Remote Sensing and GIS based Inputs for Hazard, Vulnerability and Risk Assessment for Tura, Williamnagar, Nongstion, Nongpoh and Jowai towns in Meghalaya
	2.	GIS based Masterplan under Atal Mission for rejuvenation and Urban Transformation (AMRUT), Shillong Planning Area, Meghalaya
	3.	Geodatabase creation of Shillong planning area, Meghalaya under AMRUT sub-scheme
	4.	Mapping of bamboo resources for the state of Meghalaya
	5.	Expansion of paddy in Umling block of Meghalaya using remote sensing and GIS
	6.	Expansion of Khasi Mandarin in Pynursla block of Meghalaya using Geospatial Technology
	7.	Geospatial mapping of forest fire in Meghalaya
	8.	Meghalaya Rice Information System (MeRIS)
	9.	Geospatial technology for acreage estimation of selected crops and development of a mobile app for planning and monitoring of CCE in Meghalaya
	10.	Assessment of socio-ecological vulnerability to climate change among agro-forestry managers along an altitudinal gradient in the eastern Himalayas
	11.	Integration & Application of Unmanned Aerial Vehicle (UAV) for Crop Health Monitoring with Integrated Information Dissemination System (IIDS)
	12.	Mapping of district wise soil fertility status of Meghalaya
	13.	Village Level Mapping for Garo Hills Districts of Meghalaya using High Resolution Geospatial Data

	14.	Space based inputs for planning and restoration of coal mining affected areas of South West Khasi, West Khasi, South Garo & Jaintia Hill District, Meghalaya (phase-1)
	15.	National Wetland Inventory and Assessment (NWIA) II- Meghalaya
	16.	DGPS and UAV surveying of Dalmia Cement Lease areas at Thangskai, East Jaintia Hills, Meghalaya
	17.	SISDP-Update
	18.	Surveying of the Mining Lease boundary pillars of Star Cement Limited, East Jaintia Hills, Meghalaya, using Differential Global Positioning System (DGPS) techniques
	19.	Geo-Tagging and Monitoring of Projects/schemes in Meghalaya State funded by Govt. of Meghalaya using Geospatial Technology and Tools
	20.	The role of the Dauki Fault in the evolution of the Shillong Plateau
	21.	Village Level Mapping for Khasi and Jaintia Hills Districts of Meghalaya using High Resolution Geospatial Data
	22.	Forest cover and associated land use/ land cover change analysis in Nokrek Biosphere reserve, Meghalaya
	23.	Vulnerability assessment and Prioritization of micro-watersheds for interventions to check degradation
	24.	Survey & Mapping for Umiam Reservoir
	25.	Mapping of water bodies- small multi-purpose reservoirs, ponds, jalkunds, etc and mapping of potential areas for creation of new rain water harvesting bodies/ water bodies in Meghalaya
	26.	Applications of geospatial technology for in-situ conservation of Muga Silkworm in Jaintia Hills district, Meghalaya
	27.	Preparation of Master Plan for Potential Small Multipurpose Reservoirs/ Water Harvesting Sites/Locations in the state of Meghalaya
Mizoram	1.	Preparation of Agro-climatic Atlas under “Fostering Climate Resilient Upland Farming Systems (FOCUS)” Project Mizoram
	2.	Forest growing Stock Assessment using geospatial techniques for preparation of Forest Working Plan for Mizoram (Funded by Forest Dept Mizoram)

	3.	Capacity building of line departments on applications of GIS techniques and promote utilization of NeSDR portal
Nagaland	1.	Preparation of Agro-climatic Atlas under “Fostering Climate Resilient Upland Farming Systems (FOCUS)” Project for Nagaland
	2.	Application of geo-spatial techniques for site specific Crop Planning in Nagaland
	3.	Generation of geospatial database for Tea, Coffee and Rubber growing areas, and Geodatabase updation of major agri and horticultural crop growing areas in Nagaland
	4.	Vegetation study using UAV based Multispectral Sensors
	5.	3D Printing, Visualization & Artificial Intelligence Training & Capacity Building, Awareness and Data Dissemination on space based technology
Sikkim	1.	Development of Sikkim Water Resources Atlas (SWRA)
	2.	Developing a Medical Emergency mobile application for telemedicine support in linkage with nearest Health centre, District Hospital as well as State Hospital
Tripura	1.	Development of SAR model for estimating Forest Above Ground Biomass (AGB) in Tripura
	2.	Operational Feasibility of additional intervention package for accelerated malaria control in areas with <i>jhum</i> cultivators in Tripura (funded by ICMR)
	3.	Election e-ATLAS for Tripura
	4.	Updation of Hazard Risk and Vulnerability assessment for Tripura
	5.	Estimation of Water Bearing Capacity (Storage Volume) of a Rainwater Harvesting Structure (Dam)
	6.	Siltation study of Dumbur Reservoir
	7.	Mapping of Embankment structures in Urban Local Bodies (ULB) of Tripura



Annexure referred to in reply to part (b) & (c) of the Rajya Sabha Unstarred Question No. 2536 for answer on 10.08.2023

**Annexure-II**

**The details of the funds utilized during last three years, year-wise, state-wise, for the activities undertaken by the North Eastern Space Applications Centre (NESAC)**

<b>States covered</b>	<b>Details of fund utilized (in lakhs)</b>		
	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>
Regional level projects covering all 8 states of NER	512.22	185.99	418.76
Arunachal Pradesh	77.49	69.23	103.93
Assam	41.64	96.43	339.57
Manipur	5.84	5.91	29.6
Meghalaya	178.66	74.18	138.44
Mizoram	6.56	3.92	8.52
Nagaland	2.12	3.54	41.54
Sikkim	-	-	9.74
Tripura	35.65	26.29	54.15