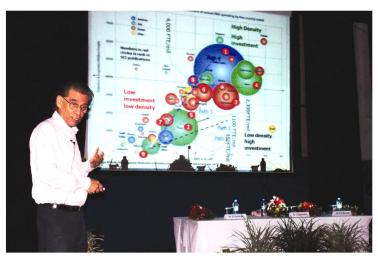


# ISSN 2231- 5926 VEIST NEWS

उत्तर-पूर्व विज्ञान तथा प्रौद्योगिकी संस्थान, जोरहाट NORTH-EAST INSTITUTE OF SCIENCE & TECHNOLOGY, JORHAT VOL. XXXVIII NO. 1 MARCH 2014 - JUNE 2014

Connecting Science & Technology for a Brighter Tomorrow

## PADMA BHUSHAN DR T RAMASAMI VISITED CSIR-NEIST



Padma Bhushan Dr T Ramasami, Former Secretary, DST, GOI and DG-CSIR delivering lecture

Padma Bhushan Dr T Ramasami, Former Secretary, DST, Govt. of India and DG-CSIR visited CSIR-NEIST from 15 to 16 May, 2014. A special function was held on 15 May, 2014 wherein Dr Ramasami delivered a lecture on "Research and Development in Nation Building-Role of CSIR; a Perspective". He opined that CSIR has a special role in current changing scenario of India in Global Science, Technology and Innovation Space. He talked about the scale of transformations in R&D with respect to national objectives and the nation building role of science as emerging paradigm for socio-economic uplift. Dr D Ramaiah, Director, CSIR-NEIST spoke about the Institute's vision in various spheres of activities and acknowledged the role of different funding agencies in supporting the R&D programmes of various Institutes/organizations/academics etc. On the occasion, a book titled "Birds of CSIR-NEIST campus" authored by Dr Mantu Bhuyan, Scientist, CSIR-NEIST was released by Dr T Ramasami. He interacted with the scientists at an interactive meeting held on 16 May, 2014. Dr Ramasami also inaugurated a "Common Facility Centre on Weaving and Textile Product Manufacturing" at New Sonowal Mising Gaon on 16 May, 2014 in presence of Dr D Ramaiah, Director, CSIR-NEIST and Dr R C Boruah, Outstanding Scientist, CSIR-NEIST. Dr Ramasami informed about similar activities supported by the Department of Science & Technology (DST), Govt. of India in other parts of the country while mentioning that in its 12th Five Year Plan, the Department aims to direct more investment for S&T interventions benefitting directly the



Dr Ramasami inaugurating the Common Facility Centre

weaker sections of the populace. The Centre is implemented in association with a local NGO, Society for North East Handmade P a p e r D e v e l o p m e n t (SNEHPAD).

# DR M LAKSHMI KANTAM, DIRECTOR, CSIR-IICT VISITED CSIR-NEIST



(From left) Dr M Lakshmi Kantam, Director, CSIR-IICT with Dr D Ramaiah, Director CSIR-NEIST

Dr M Lakshmi Kantam, Director, CSIR-IICT, Hyderabad, visited CSIR-NEIST during 15-17 June, 2014. She delivered a lecture titled "Surging ahead to catalyze one CSIR: Glimpses of common R&D interests of IICT and NEIST in the era of collaboration" on 16 June. She talked about the history and different R&D activities of CSIR-IICT and its correlation with the type of work going on at CSIR-NEIST and expressed her wish to collaborate with CSIR-NEIST in certain areas. She further described the R&D contributions in the area of Drug Development & Pharmaceuticals, Agrochemicals, Coal & Energy, Disaster Management, Catalysis with some highlights on IICT's contribution in North East. Dr Kantam also interacted with the scientists in an interactive meet.

### MULTI-STATE MEGA MOCK EXERCISE FOR PREPAREDNESS ON REPEAT OF M 8.7 SHILLONG EARTHQUAKE HELD







The great Assam Earthquake of 1987 of M 8.7, highest in the region till date, had killed 1,500 people and demolished almost all masonry structures within the Epicentral zone. If such an earthquake repeats today, the loss and damage could be quite unprecedented due to increase in population density, rapid urbanization and industrialization and due to the change in building typology in the region. Under this backdrop, CSIR-NEIST is actively engaged in developing a scenario for a repeat of M 8.7 earthquake under a programme sponsored by National Disaster Management Authority, New Delhi. The programme aims in understanding the direct and indirect consequences of a big earthquake, updating of response plans, undertake capacity building exercises, facilitate inter-departmental and inter-state coordination to assess multi-state earthquake preparedness and identify gaps. Recently, a Multi-State Mock Exercise (MMEx) was performed during 10-13 March, 2014 to create mass awareness, increase coordinated preparedness, mitigation and response for refinements of disaster management plans in the region. During the exercise, the State and District Emergency Operation Centres (EOC) were fully activated for management and coordination with various stake holders for the flow of information with respect to activities associated with rescue and relief operations carried out

as per the Incident Response System (IRS). The teams from the National Disaster Response Force (NDRF) and State Disaster Response Force (SDRF) were put into action for search and rescue operations in participation with the State Police, Paramilitary Force, Home Guard and Civil Defense, NCC cadets, Fire and Emergency Services, all line Departments, civil administration, various NGOs and community volunteers. During the mock exercise, observations were made with regard to the response time, communication flow, coordination and skills of these emergency support functionaries so as to identify the gaps and mistakes for rectification of such loopholes in the future. The exercises helped to identify about what more needs to be done to meet the need during an emergency. The first phase of the MMEx was organized at Guwahati and Jorhat (Assam), Itanagar and Ziro (Arunachal Pradesh), Shillong and Tura (Meghalaya) and Gangtok and Mangan (Sikkim) on 10 March and the 2nd phase in Silchar (Assam), Dimapur and Kohima (Nagaland), Imphal and Thoubal (Manipur), Agartala and Ambassa (Tripura) and Aizawl and Serchhip (Mizoram) on 13 March, 2014. The MMEx drill was conducted in all the eight NE states across 16 cities in over 80 locations to make the residents aware of earthquake hazards and the coping mechanism.

### TRAINING ON RAPID VISUAL SCREENING OF LIFELINE STRUCTURES AND BUILDINGS ORGANISED



Participants with the organising team

Under the NDMA sponsored program "M8.7 Shillong 1897 Earthquake Scenario Development: NE Multi-State Awareness Campaign", CSIR-NEIST organized a training workshop on Rapid Visual Screening (RVS) of lifeline structures and buildings during 15-16 June, 2014 in the institute. Welcoming the gathering, Dr R Duarah, Chief Scientist & PI of the explained about the current seismic hazard scenario of NE India ce of different capacity development programs. He emphasized the usefulness of simple RVS techniques in assessing seismic vulnerability of Life-line structures & buildings. Dr D Ramaiah, Director, CSIR NEIST presided the inaugural session. Fifty two participants including Civil Engineers from various Govt departments under DDMA Jorhat, Geologists/engineers from DGM, Govt of Nagaland, the State Coordinating Officers from NE SDMAs and the Scientists of GeoScience Division, CSIR NEIST Jorhat attended the training. The resource persons, Dr Hemant Vinayak of NIT Hamirpur and Mr Shashank Mishra, Consultant, TARU Leading Edge, Gurgaon delivered lectures on RVS techniques in relation with IS Codes for different building types, and also imparted practical training on the subject concentrating on assessing buildings (NEIST Office & housing Campus) using RVS technique.

### SHORT TERM COURSE ON COMPUTATIONAL METHODS FOR SOURCE CHARACTERIZATION AND STRESS FIELD HELD



Chief Guest Dr B K Bansal delivering inaugural address

CSIR-NEIST organized a Ministry of Earth Sciences, GOI sponsored short term course on "Computational Methods for Source Characterization and Stress Field Analysis" during 21-26 March,

2014. Dr D Ramaiah, Director, CSIR-NEIST presided over the Inaugural session wherein Dr B K Bansal, Advisor/Head (Geosciences), Ministry of Earth Sciences, GOI, graced as Chief Guest and inaugurated the programme. Prof S N Bhattacharyya, Former Deputy Director General, IMD, New Delhi delivered a keynote address. Altogether 33 scientists and researchers from IIT-Roorkee, IIT-Kanpur, CSIR-National Geophysical Research Institute, Hyderabad, Institute of Seismological Research-Gandhinagar, Indian School of Mines- Dhanbad, Indian Meteorological Division- New Delhi, Centre for Seismology, MoES- New Delhi, Mizoram University, Gauhati University, Dibrugarh University and CSIR-NEIST attended the programme. The theory and practical sessions on waveform inversion and stress tensor inversion were covered. Hands-on training with softwares under various platforms like LINUX, MATLAB, FORTRAN and DOS was given. Dr N Purnachandra Rao and Dr D Shashidhar of CSIR-NGRI, Hyderabad; Dr Devajit Hazarika, Wadia Institute of Himalayan Geology- Dehradun; Prof J R Kayal, CSIR Emeritus Scientist, Jadavpur University; Prof S N Bhattacharyya, Former Dy-DG, IMD, New Delhi; Prof S Kalita, Gauhati University; Dr Saurabh Baruah and Dr Santanu Baruah, CSIR-NEIST were the resource persons.

### TOWN OFFICIAL LANGUAGE IMPLEMENTATION COMMITTEE MEET AT CSIR-NEIST



The 27th meeting of the Town Official Language Implementation Committee (TOLIC), Jorhat was held at CSIR-NEIST on 25 March, 2014 under the chairmanship of Dr D Ramaiah, Director, CSIR-NEIST in presence of Shri S L S Purty, Dy. Director, Rajbhasha (NE Region), GOI. The Committee's function is to guide and review the progress of Rajbhasha Hindi in such offices as per Rajbhasha Rules such as bilingual/trilingual board, name plate, stamp, letter pad, publication, news etc. To promote Hindi among the officials, the second issue of the Hindi magazine 'ANUNAAD' published by TOLIC was released by the Chairman in the meeting.

### SOCIETAL ACTIVITIES

### MOTIVATION PROGRAMME FOR SCHOOL STUDENTS HELD



- · A 'Motivational programme for talented students' was organized by CSIR-NEIST during 26-31 May, 2014. The programme was sponsored and catalyzed by NCSTC, DST, GOI, New Delhi in which 38 class XII science students along with 10 teachers from different schools of Assam, Nagaland and Arunachal Pradesh participated. Inaugural session was held on 26 May which was presided over by Dr R C Boruah, Outstanding Scientist & In-charge, CSIR-NEIST where Dr P C Neog, former Chief Scientist, CSIR-NEIST attended as Chief Guest while Dr Pinaki Sengupta, Chief Scientist, CSIR-NEIST was the Guest of Honour. The programme included popular science lectures; science elocution competition; face-to-face with scientists, practical project work under the supervision of scientists, cultural programme and visit to nearby research Institutes, biosphere reserve spots and ancient engineering heritage sites.
- Motivational programme was held on 20 June, 2014, in which 30 students and 3 teachers from Kakojan College, Kakojan, Assam and Teok Girls' Higher Secondary School, Teok participated. The

inaugural session was presided over by Dr R C Boruah, Outstanding Scientist in which Dr N C Barua, Chief Scientist, attended as Guest of Honour. Dr Boruah spoke about the importance of science in human lives while encouraging the students to imbibe the spirit of science and take up science as a career option. Dr Barua shared some of his life's experiences. The programme included two popular science talks, a semi-extempore speech competition on science topics and visit round the Institute. Dr M J Bordoloi, Sr Principal Scientist and Mr Dipankar Neog, Scientist, delivered the talks on "Environment and Global warming" and "Mathematics through fun" respectively.

### **CSIR-NEIST DEMONSTRATES BANANA FIBRE PROCESSING**

Dr T Goswami, Head and Dr Dipul Kalita, Scientist, Cellulose, Pulp & Paper division conducted a training on Banana fibre processing as resource persons on 11 March, 2014 at Boko, Kamrup district. The programme was organized by The Energy and Resource Institute, North Eastern Regional Centre, Guwahati. Besides technical lectures on Banana fibre processing and product development, a detailed demonstration on the extraction process by Manual, Mechanical and Chemical processes were demonstrated along with the methods of manufacturing different products from the fibre. About 50 rural entrepreneurs mostly women from different NGOs and SHGs participated. Samples of value added products from Banana fibre produced by CSIR-NEIST were displayed.

### **DEMONSTRATION ON MUSHROOM CULTIVATION FOR TEA ESTATE WORKERS**

A demonstration on cultivation of Mushroom was organized on 21 May, 2014 at Horuchorai Tea Estate, Jorhat under 44 no. Madhya Sarucharai Gaon Panchayat at Horuchorai, Jorhat under a DSIR sponsored project. Total 110 women from the area participated in the programme.

### **INTERNATIONAL WOMEN'S DAY 2014**



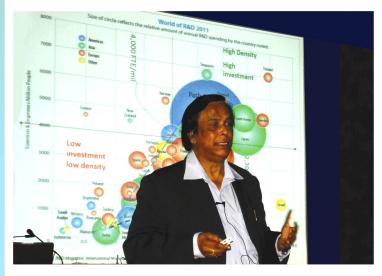
Dr D Ramaiah, Director, CSIR-NEIST addressing the gathering on 10th March 2014. (From right) on the dais Guest of Honour Ms Krishna Gohain, Registrar, Assam Agricultural University; Chief Guest Prof Charu Lata Mahanta, Dean (R&D), Tezpur University and Coordinator of the program Mrs Lakhimi Borah

### **53RD NEIST FOUNDATION DAY**



Chief Guest Dr Ch Mohan Rao, Director, CSIR-CCMB, Hyderabad (right) releasing the CSIR-NEIST Highlights 2013-14 in presence of Dr D Ramaiah (centre), Director, CSIR-NEIST and Dr R C Boruah (left), Outstanding Scientist, CSIR-NEIST on 18th March 2014

### **NATIONAL TECHNOLOGY DAY 2014**



Prof T K Chandrashekhar, Secretary, Science and Engineering Research Board, DST, GOI, delivering Technology Day lecture on 12th May 2014

### **PATENTS**

### Granted abroad

Title: Method for the Preparation of 17-Acetamido-3-Acetoxy-16-Formyl-Androst-5,17-Diene and 3-Acetoxy-2'-Chloro-5-Androsteno [17,16-B] Pyridine.

Patent No. ZL200980118933.

Inventors: Romesh Chandra Boruah, Moyurima Borthakur, Madan Gopal Barthakur, Paruchuri Gangadhar Rao, Sudip <mark>Kumar Kar,</mark> Annalakshmi Chinniah, Suchandra Goswami and Pratap <mark>Kumar Das.</mark>

Granted on: 12.03.2014.

Title: Pyridin-2-yl Sulfanyl Acid Esters and Process for the preparation thereof.

Patent No. 8680288.

Inventors: Jadab Chandra Sarma, Dilip Chandra Bora, Paruchuri

Gangadhar Rao, Balaram Ghosh and Sakshi Balwami.

Granted on: 25.03.2014.

### **PROJECT CONTRACTED**

Title: Mining the metagenome for Bacterial diversity in extreme areas of

North East India. PI: Dr Ratul Saikia

Project cost: Rs.32,12,000.00 Funded agency: ICAR, NBAIM.

Title: Micro Earthquake Studies for the Lower Kopili Hydro Electric Project

(120 MW), Assam.

PI: Dr Ranju Duarah, Chief Scientist.

Project cost: Rs.40,00,000.00

Funding agency: Assam Power Generation Corporation Ltd., Guwahati.

### **KNOWHOW TRANSFERRED**

Knowhow

The Party

Liquid Deodorant Cleaner

M/s Ethereal Aromatics,
R G Baruah Road, Guwahati

### **CSIR-NEIST RESEARCH ARTICLE CREATES IMPACT**

- CSIR-NEIST research paper entitled, "Low b-value prior to the Indo-Myanmar subduction zone earthquakes and precursory swarm before the May 1995 M 6.3 earthquake" authored by Sangeeta Sharma, Saurabh Baruah, Om Prakash Sahu, Pabon K Bora and Ranju Duarah published in the Journal of Asian Earth Sciences, 73 (2013), pp: 176-183 has been downloaded or viewed 154 times since publication (measured through 31 January, 2014) as reported by Elsevier.
- CSIR-NEIST research article on "Biosynthesis of Au nanoparticles by Gymnocladus assamicus and its catalytic acivity" authored by Chandan Tamuly, Moushumi Hazarika and Manobjyoti Bordoloi published in Materials Letters (IF: 2.3), 2013, 108, pp: 276-279 has been downloaded or viewed 173 times since publication (measured through 31 March, 2014), as communicated by Elsevier.

### CSIR-NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY

JORHAT-785006, ASSAM

Phone: 0376-2370012, Fax: 0376-2370011

Website: www.neist.res.in

Published by : Director, CSIR-NEIST

Produced by : Information & Business Development Division

Printed at: Saraighat Offset Press, Guwahati

Editor: R L Bezbaruah

Editorial Staff: Pramila Majumdar, Illika Zhimo, Probin Baruah

Photo & Graphics: Paresh Saikia