

## 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.

## Talk delivered

Dr D Ramaiah, Director, CSIR-NEIST

- Delivered plenary lecture at the National Symposium on "Sustainable Chemistry: Frontiers and Challenges (SCFC-2014)" held at North Eastern Hill University, Shillong on 1 March, 2014.
- Delivered invited lecture at the International Conference held at CSIR-Indian Institute of Chemical Technology, Hyderabad on 4 March, 2014.

## Honour/Recognition/Nomination

Dr B G Unni, Chief Scientist

- Nominated to review a research paper for the International Journal, World Journal of Microbiology, Biotechnology.

## Seminar/Conference/Workshop/Meeting attended

Dr D Ramaiah, Director, CSIR-NEIST

- Attended 3rd meeting of the Subject Expert Committee on Chemical Sciences– Women Scientist Scheme (WOS-A) held at Goa during 7-8 March, 2014.

## Project contracted

### Consultancy

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.

## Papers published

### International Journals

- Borah Bibek Jyoti, Borah Subrat Jyoti, Saikia Lakshi, Dutta D K: Efficient One-pot Three-Components Coupling Reactions Catalyzed by CuO-nano-particles stabilized on Modified Montmorillonite Clay, *Catalysis Science & Technology*, 2014, 4, p:1047-1054.
- Tamuly Chandan, Hazarika Moushumi, Das Jadumoni, Bordoloi M J, Borah Dipankar J, Das M R: Bio-derived CuO nanoparticles for the photocatalytic treatment of dyes, *Materials Letters*, 2014, 123, p: 202-205.
- Amin Karishma S, Jagadeesh Shankar, Baishya Gakul, Rao P G, Barua N C, Bhattacharya Samir, Banerjee Partha P: A Naturally Derived Small Molecule Disrupts Ligand-Dependent and Ligand-Independent Androgen Receptor Signaling in Human Prostate Cancer Cells, *Molecular Cancer Therapeutics*, 2014, 13, p: 341.
- Saikia Binoy Kumar, Khound Kakoli, Baruah B P: Extractive de-sulfurization and de-ashing of high sulfur coals by oxidation with ionic liquids, *Energy Conservation and Management*, 2014, 81, p: 298-305.

## Condolence held

The Director and members of the staff of CSIR-NEIST deeply condoled the sad demise of its former employee, Shri Ramdhan Nayak, at a condolence meeting held in front of the administrative block on 4 March, 2014.

## CSIR-NEIST celebrated International Women's Day



Dr D Ramaiah, Director, CSIR-NEIST delivering his address on the occasion. Ms. Krishna Gohain, Registrar, Assam Agricultural University; Prof Charu Lata Mahanta, Dean (R&D), Tezpur University and Mrs Lakhimi Borah, Coordinator of the program are seen on the dais (from right).

CSIR-NEIST celebrated International Women's Day 2014 on 10 March (instead of 8 March which fell on a closed holiday) with a special function held at Dr J N Baruah auditorium which was presided over by Dr D Ramaiah, Director, CSIR-NEIST. Prof. Charu Lata Mahanta, Dean (R&D), Department of Food Engineering & Technology, Tezpur University and Ms. Krishna Gohain, Registrar, Assam Agriculture University, Jorhat graced the occasion as Chief Guest and Guest of Honour respectively. While delivering lecture on her chosen topic "Status of Women in Higher Education in India", Dr Charu Lata mentioned about the multiple dimensions in inequalities in Higher Education. Quality of the education should not be compromised while taking some corrective measures like scholarships, stipends, assistantships and loans particularly for women, she mentioned. Ms. Gohain mentioned that women have already proven their role to uplift the society in various fields of work. "Educate women, teach them to take decision and make them responsible for the assigned task and for the betterment of the society", she emphasized. On the occasion Dr D Ramaiah mentioned that women play an integral role in the society and added that in the recent years various schemes and initiatives have been taken by the Government to ensure empowerment of women in various sectors. The function was largely attended by invited lady dignitaries from various institutes from in and around Jorhat, distinguished scientists, students, teachers and others besides CSIR-NEIST fraternity both retired and present. The programme started with an opening song. Dr Lakhimi Borah, Principal Technical Officer and convenor of the celebration committee

briefly spoke about the struggle of the women for equal right to wages, to caste vote and for rights in the working place and society throughout the globe, citing examples of remarkable achievements of a few lady scientists of in her welcome address. Dr Archanamoni Das and Ms. Kalyani Medhi, Scientists, introduced the Chief Guest and Guest of Honour respectively. Poetry, short story and essay writing competitions were held during the celebration week and the winners were given prizes on the occasion which was coordinated by Ms. Alakananda Sengupta, Senior Principal Scientist. The programme concluded with vote of thanks delivered by Ms Purna Jyoti Deka Bhuyan, Senior Technical Officer.

## Societal activities

### CSIR-NEIST demonstrates Banana fibre processing



Dr T Goswami, Head, Cellulose, Pulp & Paper division, delivering technical lecture on the occasion.

Dr T Goswami, Head, Cellulose, Pulp & Paper division and Dr Dipul Kalita, scientist conducted a training programme on Banana fibre processing as resource persons on 11 March, 2014 at Boko, Kamrup district. The programme was organized by Tata Energy Resource Institute (TERI) 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 by the scientists along with the methods of manufacturing different products from the fibre. More than 50 rural entrepreneurs comprising mostly women from different NGOs and SHGs took part in the training programme. Samples of value added products from Banana fibre produced by CSIR-NEIST were displayed for the benefit of the entrepreneurs.

## CSIR-NEIST organized Multi-State Mega Mock Exercise for Preparedness on Repeat of M 8.7 Shillong Earthquake



Debriefing of Disaster Management plan.

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



Clock-wise from top right: Rescue operation in action. Open ground medical camp. Public rally on mega mock exercise. Awareness rally by school students in Meghalaya. Road sign for public awareness campaign. Awareness Bike rally.

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 2<sup>nd</sup> 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.

## CSIR-NEIST celebrated its 53<sup>rd</sup> Foundation Day



Top: Dr Ch. Mohan Rao, Director, CSIR-CCMB, Hyderabad delivering Foundation day lecture. Right above: Release of CSIR-NEIST Highlights 2013-14 by the Chief Guest in presence of Dr D Ramaiah (centre), Director, CSIR-NEIST and Dr R C Boruah (extreme left), Outstanding Scientist .

CSIR-NEIST celebrated its 53<sup>rd</sup> Foundation Day on 18 March, 2014 at its premises. Befitting the occasion, a special function was held at Dr J N Baruah auditorium which was presided over by Dr D Ramaiah, Director, CSIR-NEIST. Dr Ch. Mohan Rao, Director, CSIR-Centre for Cellular and Molecular Biology, Hyderabad, graced the occasion as Chief Guest. The function was largely attended by scientists, engineers, distinguished guests, eminent personalities, besides CSIR-NEIST fraternity both retired and existing. Dr R C Boruah, Outstanding Scientist, CSIR-NEIST delivered the welcome address wherein he briefed some highlights on the activities and achievements of the Institute. Delivering the Foundation Day lecture, Dr Mohan Rao spoke about the origin of Life on earth and DNA (Deoxyribonucleic Acid) Biology. Various theories and studies done by scientists on evolution of life and DNA Biology were elucidated in the lecture. Speaking about DNA and its biology, Dr Rao said that DNA sequencing has become a very

important tool in studying the molecular and biological characteristics of any living organisms which decides and determine how different protein molecules function in our body. Dr Rao demonstrated some early works done by Frits Miescher, Phoebus Levene, Allam Maxam & Walter Gilbert and Sanger method on DNA and DNA sequencing. On the occasion, Dr Rao appealed to all to keep innovating to meet the demands of future times and also to nourish the innovation ecosystem of India. It may be mentioned that earlier, Dr P R Bhattacharyya, Chief Scientist & Head- MAEP Division briefly introduced the Chief Guest to the audience. On the occasion, CSIR-NEIST Highlights 2013-14 was released by the Chief Guest. Commemorating the Foundation Day, the members of staff, researchers, etc. who delivered exemplary performance in various R&D fields, Management, Administration works etc. in the year 2013-14 were felicitated by awarding Certificates of Appreciation. The Day was also observed by felicitating the retired members of staff, who retired during the March, 2013 to February, 2014 with mementoes as a token of appreciation for the services rendered to the Institute in particular and the CSIR in general. In his Presidential address, Dr Ramaiah appealed to all to inculcate the spirit of working together for the Institute and bring many more achievements. The programme concluded with vote of thanks proposed by Dr R L Bezbaruah, Head- I&BD division. As a part of the celebration programme, the Institute was declared 'Open day' for the visit of students and general public from 1.30 pm to 4.00 pm wherein a large number of students, teachers and general public visited the Institute.

## Societal activities

### CSIR-NEIST supports Entrepreneurship Development Programme

Dr T Goswami, Head, Cellulose, Pulp & Paper division and Dr Dipul Kalita, scientist participated as resource persons in Entrepreneurship Development Programme at Golaghat organized by the Institute of Handicraft Development (IHD) with the support of Development Commissioner (H), Ministry of Textiles, Govt. of India during 19-20 March, 2014. On the occasion, Dr Goswami delivered a lecture on, "Possibilities of development and utilization of natural dye for dyeing of fibres and fabrics" while Dr Kalita spoke on "Extraction and processing of Banana fibre and possibilities of certain lignocellulosic materials for making value added products". The programme was attended by about 40 rural women entrepreneurs from different SHGs of Golaghat district.

## CSIR-NEIST organized a short term course on Computational methods for source characterization and stress field



Dr B K Bansal, Advisor/Head (Geosciences), Ministry of Earth Sciences, Govt. of India, delivering inaugural address as Chief Guest. Dr R C Boruah, Outstanding Scientist, CSIR-NEIST; Dr D Ramaiah, Director, CSIR-NEIST and Dr S N Bhattacharyya, Former Dy Director General, IMD, New Delhi are seen seated on the dais (from right).

With an objective to generate trained manpower in computational methods for seismic studies, CSIR-NEIST organized a short term course during 21-26 March, 2014 on "Computational Methods for Source Characterization and Stress Field Analysis", sponsored by Ministry of Earth Sciences, Govt. of India. Dr D Ramaiah, Director, CSIR-NEIST presided over the Inaugural session wherein Dr B K Bansal, Advisor/Head (Geosciences), Ministry of Earth Sciences, Govt. of India, graced the occasion as Chief Guest and inaugurated the week-long programme. Dr R C Boruah, Outstanding Scientist, CSIR-NEIST delivered the welcome address while Prof S N Bhattacharyya, Former Deputy Director General, IMD, New Delhi delivered a keynote address in the inaugural session. Altogether 33 participants comprising 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 including CSIR-NEIST scientists attended the programme. The topics covered included both theory and practical sessions on waveform inversion and stress tensor inversion. The programme also emphasized on



Participants of the short term programme along with the dignitaries and organizing team members.

hands-on training programme with softwares under various platforms like LINUX, MATLAB, FORTRAN and DOS. Leading scientists from national organisations namely, 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. The programme was articulated and designed by Dr Saurabh Baruah, Head-Geoscience, CSIR-NEIST & Principal coordinator and Dr Pabon K Bora, Senior Principal Scientist, Geo-science, CSIR-NEIST & Coordinator. The short term course concluded with a valedictory session wherein certificates were distributed to all the participants.

### Visit under RMSA programme

At the instance of the Deputy Commissioner, Jorhat district, CSIR-NEIST organized the visit of students under Rashtriya Madhyamik Siksha Abhiyan (RMSA) programme, to the Institute during 21-28 March, 2014. Around 2000 students of class IX along with their teachers from different schools in Jorhat visited the Institute. During the visit, a film on "CSIR-NEIST activities" was screened at its Dr J N Baruah auditorium followed by brief address to the students by Mr Probin Boruah, Principal Technical Officer, who coordinated the week-long programme at the Institute.

## Town Official Language Implementation Committee (TOLIC) Meet at CSIR-NEIST



27th meeting of TOLIC at CSIR-NEIST.

The 27<sup>th</sup> 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), Govt. of India. The Committee includes members from all Central Govt. offices, Banks and Public Sector Undertakings including military and paramilitary whose 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. The meeting was attended by all Heads/Directors of member offices or representatives which was coordinated by Mr Ajay Kumar, Secretary & Head, Rajbhasha section, CSIR-NEIST. 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.

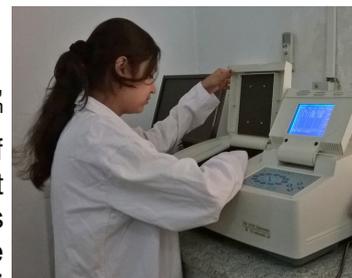
## Seminar/Conference/Workshop/Meeting attended

Dr B G Unni, Chief Scientist

- Attended meeting of the Institution Biosafety Committee at Tezpur University as DBT's nominee on 25 March, 2014.

## Training imparted

Ms. Mayuri Borthakur, B.Sc (Hon) 6<sup>th</sup> Semester Student of J B College, Jorhat has undergone hands-on training in the area of Seri biochemistry and completed a mini



Ms. Mayuri Borthakur during her training at CSIR-NEIST.

project work entitled "Impact of food plants on Eri silkworm (*Philosamia ricini*): Studies on protein profiles" during February-March, 2014 under the guidance and supervision of Dr B G Unni, Chief Scientist & Area Coordinator, Biological Sciences.

## Memorandum of Agreement signed



Dr D Ramaiah, Director, CSIR-NEIST (2<sup>nd</sup> from right) handing over the Memorandum of Agreement (MoA) to Dr Dhattatreya H, Chief Executive, Institute of Integrated Resources Management (IIRM), Tezpur. Also present on the occasion were Dr S P.Saikia, Principal Investigator of the Project (extreme right) and Dr R L Bezbaruah, Head, I&BD Division (extreme left).

CSIR-NEIST signed a Memorandum of Agreement (MoA) with an NGO, Society for Institute of Integrated Resource Management (IIRM), Tezpur on 24 March, 2014 for implementation of the Institute's 12<sup>th</sup> Five Year Plan project, "S&T Interventions to combat malnutrition in women and children".

## Visit

A group of 114 students of class IX and X from Batomara Jatiya Vidyalaya, Sivasagar visited CSIR-NEIST on 18 March, 2014.