



CESS ORGANISES XVIII KERALA SCIENCE CONGRESS - 2006



Dr. A.E. Muthunayagam, Executive Vice President, Kerala State Council for Science, Technology and Environment delivering the presidential address. Seen on the dias from left to right are Dr. K.R.S. Krishnan, Member Secretary, KSCSTE, Prof. C.G. Ramachandran Nair, Chairman, KSC Committee, Dr. V.N. Rajashekar Pillai, Acting Chairman, University Grants Commission, Dr. Harsh K. Gupta, former Secretary, Department of Ocean Development, Government of India, Dr. P.K. Iyengar, Former Chairman, Atomic Energy Commission, Dr. M. Baba, Director, CESS, Dr. J.K. Sharma, Director, Kerala Forest Research Institute, Dr. Prakash Kumar, PSO, KSCSTE.

The Eighteenth Kerala Science Congress was held at the Centre for Earth Science Studies between 29th to 31st January 2006. In the inauguration function held on 29th January, Dr. A.E. Muthunayagam, Executive Vice President, Kerala State Council for Science, Technology and Environment (KSCSTE), presided. In the absence of the Hon'ble Chief Minister Sri. Oommen Chandy, Dr. J.K. Sharma,

Director, Kerala Forest Research Institute, read out his inaugural speech. In his speech, the Chief Minister reminded the scientists of the Prime Minister's speech at the 93rd session of the Indian Science Congress in which he stressed the need to evolve a knowledge based system for farmers to make full use of the newer technologies. He highlighted the formation of the Kerala State Council

for Science, Technology & Environment and the creditable endeavours such as "Sastraposhini" – a scheme for science education, SPYTiS – scheme for financial and technical assistance to talented young high school students, Biotechnology Incubator Facility in support of new biotechnology products and a programme to enhance the livelihood of traditional bamboo dependants. The CM talked about the state's proneness to natural hazards of different kinds and the pioneering efforts made by CESS to suggest mitigative measures. He also announced the government's plan to bring out a new policy and an act for disaster management.

In his presidential address, Dr. A.E. Muthunayagam, Executive Vice President, Kerala State Council for Science, Technology and Environment spoke about the importance of science and technology in modern life. He highlighted the efforts the Council has taken to stimulate scientific research



Dr. V.N. Rajashekar Pillai, Acting Chairman, University Grants Commission releasing the proceedings of the 18th Kerala Science Congress.



Clockwise from top left (1) Dr. P.K. Iyengar, Former Chairman, Atomic Energy Commission delivering the P.K. Gopalakrishnan Memorial Lecture. (2) Dr. V.N. Rajasekharan Pillai, Acting Chairman, University Grants Commission delivering the P.R. Pisharoty Memorial lecture. (3) Prof. C.G. Ramachandran Nair, former Chairman of the erstwhile State Committee for Science Technology and Environment delivering the first P.T. Bhaskara Panikkar Memorial Lecture. (4) Dr. Harsh K. Gupta, former Secretary, Department of Ocean Development, Government of India delivering the Keynote Address in the theme session.

December 2004 event and the contributions made by CESS in understanding the phenomena behind this event. India has gone ahead with the development of an integrated monitoring system for the oceanogenic disasters that include tsunami and storm surges. This system is expected

to be operational by 2007.

The following speakers delivered lectures on various topics of the Congress focal theme “Natural Hazards and Management Strategies”:

Dr. C.V.R. Murty, former Director, Central Buildings Research Institute,

Roorkee; Dr. R.N. Iyengar, IIT, Kanpur; Dr. P.K. Thampi, Advisor (Retd), CESS; Dr. C.P. Rajendran, Dr. N.P. Kurian and Dr. S. Murali Das (Scientists of CESS).

Topical lectures on science were delivered by Dr. K.G. Nair, former Director, Sophisticated Test and Instrumentation Centre, Prof. M.K. Prasad, former Pro-Vice Chacellor, Calicut University and Dr. K.R.S. Krishnan, Director, Kerala State Council for Science, Technology and Environment.

On the second day more than 200 papers were presented in five parallel sessions and a poster session. The papers belonged to nine subject categories, namely, physical sciences, chemical sciences, life sciences, forestry, wildlife and environment, earth system science, health science, agriculture, fisheries and veterinary science, engineering and technology and biotechnology. There were about fifty papers in the competition section for the Young Scientist Award in each subject category.

The third and final day of the Kerala Science Congress 2006 had three sessions followed by the valedictory session. The first session showcased four science and technology institutions of the State.

- Departments of Biosciences of Kerala University
- National Transportation Planning and Research Centre.
- Sri Chitra Tirunal Institute of Medical Sciences and Technology
- Kerala Minerals and Metals Ltd.

The second session had presentations by sixteen school students who participated in the National Children’s Science Congress. The children were awarded a cash incentive of Rs. 2000 by the Kerala State Council for Science, Technology and Environment. In the third session, Prof. C.G. Ramachandran Nair, former Chairman



A scene from the poster presentation hall.

NATIONAL WORKSHOP ON CLOUD PHYSICS

A National Workshop on Cloud Physics was conducted by CESS during March 24-25, 2006. Organised as a part of the project on Cloud Physics being taken up by CESS, the workshop brought together several scientists working in areas related to cloud physics and research students from different Universities and institutions. The Workshop was inaugurated by Dr. A.E. Muthunayagam, Executive Vice President, Kerala State Council for Science, Technology and Environment, in a function chaired by Prof. R.R. Kelkar, former Director General, India Meteorological Department.

The speakers at the Workshop included Prof. R.R. Kelkar, Dr. P.V. Joseph, Emeritus Scientist, Atmospheric Science Department, CUSAT, Prof. J. Srinivasan, Chairman, Mechanical Sciences Division, and Professor, Centre for Atmospheric and Ocean Sciences (CAOS), Indian Institute of



Prof. J. Srinivasan, Chairman, Mechanical Sciences Division and Professor, Centre for Atmospheric and Ocean Sciences, Indian Institute of Science, Bangalore speaking during the panel discussion at the National Workshop on Cloud Physics held at CESS during March 24-25, 2006.

Science, Bangalore, Dr. R. Vijayakumar, Indian Institute of Tropical Meteorology, Pune, Dr. Someshwar Das, National Centre for Medium Range Weather Prediction, NOIDA, Dr. K. Parameswaran, VSSC and others. The Workshop concluded with a Panel Discussion which recommended, among other things, that:

- A national facility for conducting cloud microphysical parameters with

at least one instrumented aircraft has to be established.

- Suitable co-ordinated programmes in cloud physics, including airborne measurements and modelling, should be evolved by CESS, SPL, IMD and CUSAT, and
- CESS should take the initiative to conduct SERC schools in cloud physics and related themes

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Trivandrum on 20 February 2006.

- “Environmental sustainability and institutions” at the Department of Architecture, College of Engineering, Trivandrum as part of a short term course on ‘Role of technical institutions and experts in local level development’ on 17 March 2006.
- “Environmental protection and local self government institutions” as part of the Regional Seminar on Human Rights awareness for elected representatives of local self government organized by ‘Human Rights Commission’ at Kottayam on 18 March 2006.

Dr. K. Soman delivered lectures “Landuse landscape changes in the Western Ghats and implications: need for resource conservation” and “Biogeochemical indicators of landuse changes in the provenance of south Kerala rivers” for participants of the State Level Awareness Training – cum workshop organised by the Western Ghats Cell, Planning Board during 16 - 19 January 2006.

Dr. A.S.K. Nair delivered a lecture on “Watershed Based Development and Management Practices in India with special emphasis to the Western Ghat Development Programmes in Kerala” to the participants of the ‘Management Development Programme for Officers of Agriculture Department at IMG on 1 February 2006

PARTICIPATION IN TRAINING PROGRAMMES

C.K. Sasidharan attended the Training Programme on “Data warehousing and Data Mining - transforming information into insight” sponsored by Dept. of Science & Technology, Govt. of India, conducted by Administrative Staff College of India, Hyderabad during 27 February to 3 March 2006.

CESS ESTABLISHES PERMANENT GPS STATIONS IN ANDAMANS



GPS station at Hut Bay, Little Andaman

CESS has established 3 permanent GPS stations in the Andaman and Nicobar Islands, to monitor the crustal deformation in this active plate boundary that has generated a great earthquake in 2004. These stations are in Diglipur, Car Nicobar and Hut Bay. These research efforts are part of the Centre’s research initiatives.

CONFERENCE / SEMINAR / WORKSHOP

Dr. Srikumar Chattopadhyay delivered a lecture on “Disaster management lessons from Tsunami” in the UGC sponsored national seminar held at Lekshmipuram College of Arts and Science, Neyyoor, Kanyakumari on 17 March 2006.

Dr. M. Baba gave a talk on “Geoinformatics for Environmental Management” in the National Workshop on ‘Space Application for Mankind’ organised jointly by Systems Society of India and VSSC on 2 January 2006.

Dr. N.P. Kurian delivered a talk on “Geomorphological Impacts of December 2004 tsunami” in the seminar on post - tsunami changes organized by SIFFS & MPEDA on 14 March 2006.

Dr. R Ajaykumar Varma delivered a talk on “Solid Waste Management - issues and initiatives in Kerala” as part of the National Seminar on ‘Environmental Management and Waste Disposal’ at NSS

College, Pandalam on 27 March 2006.

Dr. Srikumar Chattopadhyay attended the International Conference on “An agenda for Kerala’s development, 2006-2016” as a convener of the panel and panelist of “Urban development”, organised by the AKG Centre for Research and Studies during 9 - 11 December 2005.

Dr. R. Ajaykumar Varma functioned as one of the Session Conveners in the International Congress on Kerala Studies, organised by the AKG Centre for research & Studies, during 9 - 11 December 2005 at Trivandrum.

Following papers were presented in the seminar on “Sustainable Natural Resource Development” organised by Western Ghat Cell, Planning and Economic Affairs Department on 19 January 2006.

- Narayanaswamy, “Significance of water harvesting structures in lateritic terrain: A case study from Amachal watershed region”.

through Coastal Regulation Zone for Coastal Hazard Management”.

- Jeena, V.S., Mohan Kumar, G. and Sampath, S., “Diurnal patterns observed in Ambient Carbon Monoxide (Co) during weekdays and weekends at three different environments”.
- Sachith Mohan, Anuroop, R.L., Sankar, G. and John Mathai., “Human interaction and its effect on the stability of slopes. A case study of the recent debris flows in the Pashukkadavu area in the Maruthonkara Panchayat, Kozhikode.
- Sreebha, S. and Padmalal, D., “Sand mining and its Environmental Impact on the river catchments of Vembanad lake, Southwest India”.
- Unnikrishnan, P., Sobha, V. and Arun, P.R., “Nitrogen, Phosphorus, Silica and Iron loading in the surface waters of Parvathyputhenar (Kerala), Southwest India.
- Ouseph, P.P., Abhilash, P.P. and Sajithkumar, A., “Interpretation of Cochin esturine water quality data using SPSS”.
- Mahesh Mohan and Omana, P.K., “Distribution of mercury and the threat to Vembanadu ecosystem, Ramsar site, Kerala”.
- Johnny, C.J. and Zachariah, E.J., “Methane emission from Ashtamudi Estuary”.
- Majula Unnikrishnan, Rajendran, R.K. and Ajaykumar Varma, R., “Geoenvironmental appraisal of a Heavy Mineral Prospect of Kerala”.
- Rupananda Mallia, J., Shiny Sara, T., Rajanish Kumar, R., Anitha Mathews, Paul Sebastian, Jayaprakash Madhavan and Subhash, N., “Diagnosis of Oral Cavity Neoplasms with Fluorescence Spectroscopy”.

Dr. Mahamaya Chattopadhyay & Ms. Nitha Bhuvaneni presented a paper on “Application of RS and GIS in the generation and synthesis of environmental statistics: A case study from Man Ar basin, south Kerala” in the National Seminar on Geoinformatics in Osmania University, during 10 - 11 February 2006 at Hyderabad.

Dr. N.P. Kurian presented a paper ‘Beach and innershelf sedimentary dynamics in an open coast’ in the International Conference of Mesoscale Processes in Atmosphere, Ocean and Environmental Systems (IMPA) 2006 Conference held at IIT Delhi during 14 - 17 February 2006.

Dr. N.P. Kurian made a presentation on the Coastal Hazards Project in a meeting of the National Disaster Management Authority at New Delhi on 8 March 2006.

Dr. Terry Machado delivered a talk on “Post Tsunami Changes On Marine System, Environment And Socio Economic Status Of Coastal People” in the UGC sponsored National Seminar, held on 17 March 2006 at Lekshmipuram College of Arts and Sciences, Kanyakumari.

MEETINGS CONDUCTED

A meeting of the Advisory Committee of the Kerala Coastal Protection Project was organized at CESS on 10 March 2006.

NOMINATIONS

Dr. Kusala Rajendran was nominated as a member of the Thematic Group 4 on Earthquakes, for the Indian Disaster Management Congress, November 2007.

P. Sudeep, Registrar, CESS has been elected as the Chairman, National Institute of Personnel Management (NIPM), Trivandrum Chapter for the period 2006-08.

Nandini gets best paper award

Ms. Nandini Ray Chaudhury, Project Assistant, DST sponsored Tsunami project got the best presentation award for her paper entitled “Nearshore-Backshore Morphological Congruence and its relevance to Tsunami Inundation on the Coastal Zone between Colachal and Tuttur of Kanyakumari District, Tamil Nadu”, presented in the National Seminar on Quaternary Climatic Changes and Landform organised by the Indian Institute of Geomorphologists (IIG) at MS University, Thirunelveli, during 26-28 December 2005.

Dr. M. Baba was nominated to following committees

- Member of the Kerala Dam Safety Authority’ constituted by the Government of Kerala.
- ‘Consultative Group for Forestry Research and Management of KFRI constituted by KSCSTE, Government of Kerala.

Dr. R. Ajayakumar Varma was nominated to the following committees

- Member in the State Level Committee of Experts on Management of Chemical Accidents constituted vide G.O.(RT)No.1796/2005/LBR dated 01/07/2005.
- Member in the Board of Studies in Environmental Science of the Kerala University vide Notification No.Ac.AIII/1/624/05/ dated 28/10/2005.

Dr. A.S.K. Nair is nominated to following committees

- Member, District Level Technical Advisory Committee, Thiruvananthapuram District in the Subject committees of (i) agriculture, soil conservation, rain water