**4th Session of the IAG Working Group on Geomorphological Hazards**

**(IAGEOMHAZ)**

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**INTERNATIONAL WORKSHOP ON GEOMORPHOLOGICAL HAZARDS**

**-A REPORT**

An international workshop on "Geo Morphological Hazards & 4th Session of the IAG Working Group on Geomorphological Hazards (IAGEOMHAZ)" were organized by the Centre for Geo-Technology, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India, at Kanyakumari on July 21-23rd 2010. The conference venue at Kanyakumari was selected for it had faced the devastating blow by 2004 tsunami. Dr.S.Kaliappan, Vice Chancellor, Anna University, Tirunelveli inaugurated the workshop and focused on the need for better and effective coordination of fields of study like civil engineering, environmental engineering, GIS and remote sensing technologies, natural hazards and mining besides geomorphology. The Vice chancellor observed that unless such coordinated efforts among professionals and scientists in these fields materialized, the society at large will not benefit entirely and completely the fruits of the scientific and technological advancement. This is specially true in respect of mitigation and management of natural hazards. Prof.N.Chandrasekar (Convenor of the workshop) welcomed the delegates.

The workshop was presided over by Prof. Dr.G.Victor Rajamanickam (Dean of Research, SAIRAM, a renowned scientist and coastal process-GeoTechnologist) in place of Dr.R.T.Sabapathy Mohan Vice-Chancellor M.S.University, Tirunelveli who had to rush to Chennai on an official business. Dr.G.V.Rajamanickam underscored the point that protecting people and properties and investments in the coastal lands, the natural protective barriers like coastal dunes, beach ridges and mangrove regimes, called for more careful analysis and synthesis of data, to design management measures and processes. He further added, the devastation in Cuddalore and Nagapattinam probably was due to focussing of Tsunami (2004) wave energy by the submarine canyons - a role that needs to be verified by further research investigation in the coastal ocean.

Prof. Sunil Kumar De (Vice-Chairperson of the IAG Working Group on Geomorphological Hazards) delivered the key note address on *Landslide Susceptibility Zonation of the Kurseong Subdivision of Darjiling Himalayas*. A special lecture *on Fluvial Geomorphological Hazards of the Brahmaputra Basin* was given by Prof. S. C.Mokhopadhyay (UGC Emeritus Professor, Kolkata) and he delivered the key paper in the first Technical session. A Technical session on Coastal/Marine Geomorphology and Hazards was chaired by Dr. K.P Trivikaramji. (UGC Emeritus professor, Centre for Geotechnology, MSU, Tirunelveli). In this Sesssion Prof. Ashis kr. Paul delivered a special lecture on *Habitat Dynamics of coastal vegetations in Response to Geomorphological Hazards.*

Prof. N. Chandrasekar delivered a special lecture on *Tsunamigenic changes on geomorphology and sedimentation on Kanyakumari coasts, Tamlnadu* in the Technical session on Fluvial Geomorphology and Hazards chaired by Prof. S.R Basu, Kolkata. Prof. S. Rajendran, Kerala and Prof. Ashis kr. Paul chairs the other Technical sessions.

The workshop had 57 papers presented by eminent scientist from various research organizations for discussion, the papers covered areas like landslides, coastal erosion, storm surges, river & shore erosion, sea water intrusion in coastal aquifers, sea level raise due to climate change and anthropogenic impact and consequent hazards to people and property. Prof. Mohammed Abdullah Al- saleh, Department of Geography College of Arts Kings Soud University Riyadh, Saudi Arabia presented a paper on *Application of Remote Sensing Data to Evaluate and Map Floods Influencing Factors in Western Saudi Arabia*. Ramani Bai Varadarajan, Associate Professor, Department of Civil Engineering, University of Nottingham, Malaysia Campus presented a paper on *Determination of Seawater Intrusion hazards by Geo-Chemical Analysis of Ground water*. Prof. Abdullah A. Al. Taher, Geography Department College of Arts Kings Saud University, Riyadh, Saudi Arabia. Presented a paper on *Human Adjustment to sand Drift and Sand Dunes Movements in the Eastern Province of Saudi Arabia.* Ram Anand Bheeroo, Mercellement, St.Jean Quatre Barnes, Mauritius presented a paper on *Shoreline Change Analysis Using Spatial Technology along the Coast Between Trou aux Biches and Mont Choisy- Mauritius Island.*

Dr. Pani Padmini Centre for the Study of Regional Development Jawarharlal Nehru University, New Delhi presented a paper on *Gully Erosion and their spatial Pattern Analysis for Geomorphic Hazard Evaluating using Geo-Information Techniques Dr.* Pardeshi Sudhakar. D Pune University, Pune presented a paper on *Landslide Analysis Using Sear Geometry in Western Ghat Region of Ahmednagar District, Maharashtra*. Dr.Anju Gupta University of Jammu, Jammu presented a paper on *Landslides Along Western Himalayas: An Environmental Perspective.*

Dr. S. Manickam (The Registrar, MSU, Tirunelveli) presided over the valedictory function held on July 22,2010. Dr. Y. Srinivas, Associate professor, Centre for Geotechnology, MSU, Tirunelveli proposed vote of thanks.

On 23 rd July 2010, A field workshop was arranged in the coastal segments, viz.,Manakudi, Shankuthurai, Rajakkamangalam, Muttam, Manavalakurichi and Colachal in Kanyakumari District. These sectors were affected by the deadly blow of 2004 tsunami, still preserve the

destructive foot print of the tsunami. The Field work shop was organized by Prof. N.Chandrasekar - Tirunelveli, Prof. Ashish K. Paul – Kolkata and Prof. Sunil Kumar De - Tripura. Prof. Ashis Kr. Paul prepared a field manual and was circulated to the participants in the field monitor and various land form features and its vulnerability.

In the Field, the young geomorphologists were given intensive training on geomorphic Technologies adopted in costal studies.

Suggestion from the participants to conduct special workshop on:

1. Ecological and Eco hydrological characteristics of coastal ecosystems.
2. Tsunami Impact on coastal wetlands
3. Coastal sea intrusion and its control by geomorphological process.
4. Dynamics of Coastal Process.
5. Preparation of vulnerability and hazards zones in coastal areas due to natural hazards.

**Prof. N. Chandrasekar**

*Convener*