Geology and Geo-Resources of Himalaya and Cratonic Regions of India – B.P. Singh, U. K. Shukla, R. Bhatla*, D. Prakash, A.S. Naik, Kuldeep Prakash and C.K. Singh, Centre of Advanced study in Geology and *Department of Geophysics, Banaras Hindu University, Varanasi- 221 005

A National Seminar on “Geology and Geo-resources of the Himalaya and the cratonic regions of India” was organised by the Department of Geology, (Centre of Advanced Study), Kumaun University, Nainital during 10-12th March, 2012. The Seminar was co-sponsored under the CAS Programme by the University Grants Commission, New Delhi; Department of Science and Technology, New Delhi; Uttarakhand State Council for Science and Technology, Dehradun; Kumaun University, Nainital; Censico International (P) Ltd., Agra. In all, 125 delegates from all over India actively participated in this national seminar.

The seminar began with its inauguration on 10th March, 2012 in the Department of Geology, Kumaun University by the Chief Guest M. Ramakrishnan, Ex Senior Deputy Director, Geological Survey of India, while Prof. V.P.S. Arora, Vice-Chancellor, Kumaun University presided over the inaugural function. R.S. Tolia, Ex-Chief Secretary of Uttarakhand and presently Chief Information Commissioner of Uttarakhand, graced the function as the Guest of Honour. On this occasion, the Society of Earth Scientists presented Life time achievement award-2012 to Prof. V. K. Verma, Ex. Professor and Head, Department of Geology, University of Delhi for his contributions in Earth Science. S.N. Lal, Organising Secretary of the National Seminar briefly introduced the themes and sub-themes of the seminar along with the details of the technical sessions and field work.

Technical session started in the afternoon on 10th March 2012 with the keynote address by M. Ramakrishnan on the geology and geo-resources of cratons of India. Prof. B.P. Singh from CAS in Geology, BHU, Varanasi, gave an invited talk on the geological evidences of the northward drift of India during Paleogene supported by the paleosol data present in the Himalayan foreland basin. Prof. Vibhuti Rai presented his work on Precambrian life and Precambrian-Cambrian boundary occurring in the Lesser Himalaya. A. Manglik from

NGRI, Hyderabad delivered a talk on geomagnetism. S.P. Rai from National Institute of Hydrology, Roorkee expressed his view about the isotopes in the management of lakes of western Himalaya. Dr. Binita Phartiyal from Birbal Sahni Institute of Paleobotany spoke on the Quaternary sedimentation in Ladakh area and illustrated their role in interpreting tectonics and climate. Prof. B.K. Rastogi presented the global picture of the seismicity and the research work on the Himalaya with very good examples from the entire Himalayan syntaxis carried out by the Institute of Seismological Research. He also focused on the future work plan of the Institute by installing a denser networking of seismic stations and acquiring GPR, geodetic data of this young mountain belt. N.J. Raju talked on the fluoride poisoning in the Sonbhadra region with examples of the fluorosis affected people in the region and highlighted a need for safe drinking water from the phyllitic terrain. An invited talk on ultrahigh-temperature granulites from central Madurai block, southern India was delivered by D. Prakash from Centre of Advanced Study in Geology, BHU, Varanasi. Prof. Deepak C. Srivastava from IIT Roorkee talked on sinistral transpression along the Main Boundary Fault zone in Amritpur area, Kumaun Lesser Himalaya. Prof. Manish A. Mamtani of Department of Geology & Geophysics, IIT, Kharagpur focused on microcrack anisotropy quantification and its application in exploration of mineral resources. Mr. Mayank Joshi from WIHG, Dehradun gave his presentation on Ravi river terraces in Chamba region. Dr. P.K. Singh from Directorate of Geology and Mining, Lucknow talked about the variable distribution of PGE in ultramafic/mafic rocks of Ikauna area, Bundelkhand Craton.

Dr. Pankaj Mehta from School of Environmental Sciences, Jawaharlal Nehru University, New Delhi delivered his talk on geochemical mobilization of elements during weathering of amphibolites and gneisses in different climate zones of

Mysore plateau, southern India.

Dr. R. Bhatla from Department of Geophysics, BHU, Varanasi gave his presentation on study of energetics for different phases of Indian Summer Monsoon. Dr. R.K. Bikramaditya Singh from WIHG, Dehradun, presented his talk on the metamorphic history of the Himalayan Crystallines in western Arunachal Himalaya. The invited talk on the Revisit to the Sulphide Ores in the Crystalline Rocks of the Lesser Himalayan Klippen was delivered by Dr. Rajesh Sharma from WIHG. Mr. Ravish Lal from University of Delhi gave presentation on sea level fluctuations – contributions from the Himalayan Cryosphere. Another invited talk on the geological significance of the Ganga River at Varanasi was delivered by Prof. U. K. Shukla from BHU, Varanasi. Ms. Rekha Rani from GSI talked about the lithofacies supported granulometric analysis of the Middle Siwalik Subgroup of Mohand area, Western Himalaya.

Dr. Pradeep Srivastava from WIHG, Dehradun presented poster on morpho-tectonic and climatic development of Ladakh Himalaya with emphasis on palaeohydrology and OSL dating. Another poster on Fluoride remediation from water by two aquatic macrophytes *Hydrilla verticillata* and *Lemna minor* was presented by Sadaf Nazneen, N. Janardhana Raju and AL. Ramanathan of the School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.

The seminar concluded on 12th March 2012 with a field excursion along the sedimentary sequences of Siwalik Group and Outer Lesser Himalaya exposed around Nainital- Bazun- Bhimtal- Amritpur- Ranibagh transect. The fieldwork was supervised by Prof. P.D. Pant, Dr. S.N. Lal, Kumaun University, Nainital along with Prof. D.C. Srivastava, IIT Roorkee and Prof. Manish A. Mamtani, IIT Kharagpur. The fieldwork was attended by over 35 participants that included GSI officers, research scholars and scientists from all over India.