

Workshop on Landslides and Environmental Degradation in Hilly Terrains – R.A. Singh, Dept. of Geology, L.S.M. Govt. P.G. College (Email: singhdr.ramautar@yahoo.com)

The Three day national workshop was held from June 4th to 6th, 2010 at L.S.M. Govt. P.G. College, Pithoragarh, Uttarakhand. 75 eminent scientists from universities, colleges, national laboratories, public and private sectors attended. A total of 45 papers were presented during the Workshop. The event was presided over by Bhagirathi Bhatt, Principal of the L.S.M. Govt. P.G. College.

V. K. Gairola, Chief Guest, spoke at length on the causes and triggers responsible for landslides in the Himalayan regions, and suggested methods for their mitigation. C. M. K. T. Sharma, C.O., ITBP, Pithoragarh was of the view that frequent seminars on natural disasters should be organized to educate people on prevention and mitigation. B. S. Kotlia briefed the audience on the theme of the workshop. R. A. Singh, organizing secretary and convener, gave an outline of the workshop and also welcomed the delegates. On this occasion Souvenir and Abstract Volume were released.

In the session on landslides, V. Srivastava based on field evidences, categorized landslide hazard zones around Kishau in Dehradun district and adjoining Shillai area of Sirmour district of Himachal Pradesh. L.M. Joshi spoke on the use of GPS in landslides monitoring in the Himalaya. Arvind Bhatt presented the study of slope stability on the basis of field data, remote sensing and GIS, in Balkhila sub-watershed in the vicinity of Main Central Thrust, Uttarakhand Himalaya. Several models for management of instable slopes were also suggested based on environmental impact on the area. Manju Pandey elaborated on the working of the Uttarakhand Disaster Management Department where pre-, during and post-disaster planning is carried out.

S.N. Lal classified the landslide zones into high, medium and low threat depending on the risk factors. Alpana Hyanki presented

a case study of landslide occurred in September 2004, in Aamparao and Chopra region in Nainital district, Uttarakhand. R.A. Singh gave an account of landslide which occurred on 8th August, 2009 in La-Jhekla, Pithoragarh. P.D. Pant discussed the wedge failure analysis of landslides along the Main Boundary Thrust. R.S. Rana explained in detail about standard operating procedure for landslide incidence management and identification of site specific mitigation activities in Rudraprayag district, Uttarakhand. D. Ojha spoke on landslide and environment in Lesser Himalaya. S. Kalgaonkar discussed the mass movement along the Dhauliganga River.

On the basis of experimental modeling, H.B. Srivastava discussed the collision of Indian plate with Asian plate and explained the asymmetric distribution of mountain ranges. B.S. Kotlia stressed on the need of documentation of the high resolution record of palaeoclimates for the past 750 years. N. Punetha, presented an account of rock inhabiting ferns of Uttarakhand, with emphasis on their habitat ecology. Abhimanyu Singh discussed the geo-stone mining activities and their impact on the health in Jhansi region of Bundelkhand. Chitiz Joshi presented the hydrochemistry and groundwater zoning of Ramganga watershed in Pithoragarh district. Deepak Dayal presented the paleoceanography and biozoans of Pliocene Radiolaria section 12H LEG119 site 745. M. Sharma stressed on the significance of deforestation, forest fire, soil erosion on the environmental pollution. V.T. Kukreti explained the relationship between mental health and ecology and the affect of deteriorating physical environment on mental health. M. Pathak told about the national and international effort for the conservation of environment. S. Verma suggested the philosophy of environmental controlled development. A. Shukla discussed pollution

in the hills. N.D. Shukla talked about water pollution, their problems and solutions. R.S. Gangwar explained the pollutions as described in *Balmiki Ramayana*. M. Kumar discussed about modern environmental problems and their Vedic solutions. P.S. Bisht and H. Pant discussed about global warming and their effect on climates. P. Pant outlined the uncontrolled construction in Pithoragarh city is a challenge for environment. R.S. Bisht explained the effect of environment on the society. A. Chand discussed about green chemistry to save environment. R. Pant advocated for ecotourism in Pithoragarh district and explained their effect.

Anju Bisht explained that there is a need to revamp what we eat and what we grow for a healthier body and planet. G.S. Bohra talked on the effect of environment on athletes at high altitude. S.R. Katiyar encouraged the cultivation of ringal bamboo that boosts the rural development and environment in Uttarakhand. K.K. Shah described an aquatic ecosystem for fish production in hilly regions. B.C. Joshi discussed quassinoids from *Ailanthus Excelsa* and their chemotaxonomic significance with special reference to the environment. C.D. Suntha talked about the role of microfinance in sustainable development of weaker section in hilly regions. H. Chandra discussed the thermal and elastic properties of minerals present in the lower mantle.

Field work was carried out in the landslide areas on the way to Rameshwar under the guidance of R.A. Singh, P.D. Pant and S.N. Lal. Cultural activities were also organized.

The valedictory session was organised, which marked the closing of the three-day workshop. R.A. Singh delivered vote of thanks and told that the workshop and field excursion were made possible by the financial support of several organizations.