ABOUT THE VENUE

IIT Roorkee is situated at the foothill of the Himalayas, in Haridwar district, within the state of Uttarakhand. It is a quiet town of moderate size located on the banks of the upper Ganga Canal, which takes off at Haridwar, 30km away. It is the gateway to the pilgrim centres of Hardwar, Rishikesh, Badrinath and Kedarnath, and tourist destinations of Dehradun and Mussoorie. It is well connected to Delhi by rail and road.

CLIMATE

Roorkee enjoys a pleasant climate during March-April when temperature rarely goes above 30 and occasional shower may bring chilly weather. Therefore, summer clothing, light woolens and an umbrella are recommended for a comfortable stay at Roorkee.

ACCOMODATION

The course participants would be provided with accommodation in well furnished Guest Houses located within the sprawling campus of IIT Roorkee.

For details contact:

SAARC

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SAARC

SAARC Training Programme on EARTHQUAKE RISK MITIGATION

September 15–21, 2010

for
Geoscientists/Civil Engineers/Architects & Planners/ Disaster Management Professionals

Organized by
SAARC Disaster Management Centre, New Delhi (India)

In collaboration with
Centre of Excellence in Disaster Mitigation & Management, Indian Institute of Technology, Roorkee (IIT-R), Roorkee, Uttrakhand (India)

PURPOSE

South Asia is highly vulnerable to earthquakes due to presence of active seismic source regions of world. Out of eight SAARC countries, six are located in this active belt (Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan). Many of the important and densely populated cities of these countries including the capital cities of Kabul, Dhaka, Thimphu, Delhi, Kathmandu and Islamabad are located in moderate to severe seismic hazard zones. Liquefaction and seismically induced landslides further add to the seismic hazard of the region. Many of the prevalent construction practices and building typology result in dwelling units that are extremely vulnerable to earthquake hazards.

Therefore, in the past SAARC countries have experienced severe losses in terms of human casualty and property; most notable are the Bhuj earthquake of 26 January, 2001; Sumatra Earthquake of December 26, 2004 leading to Tsunami and Kashmir earthquake of 8 October 2005. Most of the causalities were due to collapse of poorly constructed buildings in geologically vulnerable regions. Earthquakes do not kill people but poorly designed or constructed buildings do. The devastation during past earthquake have clearly brought out the need to have comprehensive strategy for earthquake mitigation which should include proper assessment of seismic hazard and planning, design and construction of earthquake resistant buildings through strict compliance of code provisions. As of today, it is unfortunate that in spite of having all the scientific know-how in the field of earthquake engineering and the Code provisions for construction in seismic areas we continue to find that our engineers and builders are not following these either due to ignorance or fear of added cost. Common people are not aware of many aspects of earthquake disaster and better building practices in seismic high hazard zones of the South Asia. The problem is further aggravated by inappropriate land use planning due to lack of knowledge on geology and geotechnical condition of the region.

Therefore, it is proposed to organize a one week short term training program at IIT Roorkee so as to train Architects, Town Planners, Structural Engineers and all stakeholders of SAARC countries to acquaint them about the current practices of hazard assessment, safe construction, code provisions etc. This will also provide an opportunity to all stakeholders to share experiences on this important issue of earthquake hazard assessment, mitigation methods, relief and rehabilitation measures undertaken in recent times.

COURSE OBJECTIVES

The main objective of the training course is to train stakeholders (particularly dealing with geology/geophysics, construction/ engineering, disaster management) from SAARC countries about assessment of earthquake hazard and vulnerability of buildings and immediate need to adopt different mitigation measures, exchange of knowledge and sharing of best practices on earthquake resistant design, construction and other mitigation measures.

THE TRAINING COURSE

The course will be conducted by Centre of Excellence in Disaster Mitigation & Management, and Department of Earthquake Engineering, IIT Roorkee wherein lectures and practicals will be delivered by experienced faculty members from Earthquake Engineering Department, Earth Sciences Department, IIT-Roorkee and SAARC Disaster Management Centre (SDMC). Other resource faculty members may be drawn from Geological Survey of India, Wadia Institute of Himalayan Geology (WIHG), etc. Participants will be exposed to practical problems and they will have hands on experience on seismic hazard mitigation measures. It is hoped that the course will be very useful for all stake holders in the area of Earthquake Disaster Mitigation.

WHO SHOULD ATTEND

Engineers/ Architects/ Geoscientists/ Planners and stake holders (particularly dealing with geology/geophysics, construction/ engineering, disaster management) who are involved in earthquake disaster mitigation activities in member countries can attend this course. It is also useful for teachers and research scholars working in this area.

DURATION OF COURSE

Course duration is 7 days consisting of daily two lectures of 1½ hr duration and practical sessions in the afternoon.

COST OF COURSE

There is no course fee for government sponsored candidates from member countries. However, as per the SAARC Harmonized Provisions for the Regional Centres, the travel expenses for the participants shall be borne by the member countries whereas local hospitalities like hotel accommodation, food and local transport shall be borne by the SAARC Disaster Management Centre.

COURSE CONTENTS

- **Seismic Hazard, Risk and Vulnerability Assessment:**
  - i. Engineering Seismology, Seismotectonics and Seismic Hazard in South Asia
  - ii. Concept of Seismic Zones, Risk and Vulnerability assessment
  - iii. Seismic Microzonation