One of the greatest challenges of practical importance is the useful prediction of monsoon on weather and climate time scales. To address the problem of paucity of skilled scientific manpower required for improving the quality of weather and climate forecasts in the country, the Ministry of Earth Sciences (MoES) is embarking on a world class training programme in the field of Earth System Sciences and Climate with a view to understand the science of climate variability and change and to build capacity to make world class weather and climate forecasts with particular focus on the Indian monsoon. A large pool of trained and dedicated climate and earth system modellers is proposed to be created through this programme. In depth hands-on expertise building on individual physical processes of the land, ocean, atmosphere, biosphere and cryosphere is envisaged. The program, however, will go beyond the conventional training on individual systems and address weather and climate as processes arising from interactions between the component systems. The Centre will have its own campus with all training and other infrastructural facilities. In addition to the already available advanced facilities/systems at IITM and other institutions of MoES, advanced High Performance Computing facility and other state-of-the-art infrastructure for scientific research will be made available for the Centre.

Meritorious students with master's in science or bachelor's in engineering degree will be eligible for this integrated degree program leading to M.Tech. and/or Ph.D. admissions to this job linked training programme will be based on rigorous national eligibility tests and the first batch will start in July/August 2011. The announcement for induction of trainees will be made in January 2011. The selected trainees will receive consolidated monthly pay of Rs 25,000 on entry and on successful completion of the program, will be placed in any one of the institutions of MoES, viz. IITM, IMD, INCOIS, NIOT, NCAOR, NCMRWF, ICMAM and CMLRE or other leading research centres at appropriate scientific positions.

The Centre initially established by IITM, will be a leading centre of research in tropical meteorology with excellent environment for academic activities and research in fundamental and applied aspects of land–ocean–atmosphere interactions in the tropics. IITM has an efficient pool of scientists in theoretical and modelling studies strongly supported by diagnostic and field observational studies. It has strong linkages and collaboration with various national and international organizations and it has academic programmes leading to M.Sc., M.Tech. and Ph.D. degrees. It has state-of-the-art advanced infrastructural facilities like High Performance Computer (HPC) system with 70 TF peak performance and have a suite of state-of-the-art instruments for atmospheric and oceanographic observations as well as palaeoclimatic studies.

The Advanced Training Centre located in Pune, will have the best of the national faculty and regular international/national visiting faculty to guide the trainees. Starting with a few, a core faculty of about 20 outstanding scientists is proposed for the Centre. In association with the scientists of IITM, the core faculty would be expected to conduct cutting edge research on the grand challenge mentioned above and inspire the trainees using theoretical, modelling and observational techniques. Currently, the Advanced Training Centre is looking for highly qualified faculty in the areas of earth system science, climate change research, climate dynamics and climate modelling. Individuals with exceptional credentials in research and teaching in these areas may send resume to the Executive Director, Advanced Training Centre, IITM, Dr Homi Bhabha Road, Pashan, Pune 411 008, India (edatc@tropmet.res.in). The selected faculty will be placed in the Scientist-C, D, E or F levels depending on their credentials.