

**INTERNATIONAL COURSE ON PLANNING, DESIGN AND IMPLEMENTATION OF
SMALL HYDRO PROJECT, ALTERNATE HYDRO ENERGY CENTRE,
UNIVERSITY OF ROORKEE (INDIA), MARCH 15-25, 1999**

PARTICIPATING COUNTRIES: 11 (INCLUDING 8 MEMBER COUNTRIES OF THE NAM S&T CENTRE)

NUMBER OF PARTICIPANTS: 28 (INCLUDING 24 FROM THE MEMBER COUNTRIES OF THE NAM S&T CENTRE)

In order to consider the rapid advances in technology for harnessing small hydro power (SHP) and to provide a forum for exchange of experience to facilitate the flow of technology, NAM S&T Centre and the Ministry of Non-conventional Energy Sources (MNES) of the Government of India jointly sponsored a 10-days International Course on 'Planning, Design and Implementation of Small Hydro Power Projects' at Alternate Hydro Energy Centre (AHEC), University of Roorkee (India) during March 15-25, 1999. The course was designed to help participants in providing vital inputs to planning, design and implementation of small hydro power projects on canal falls, irrigation dams and hilly terrain, train the participants in the planning, design and implementation of small hydro power projects, and to facilitate exchange of information on latest developments made in the target countries in the field of SHP to create an awareness of technological options available and optimal solution.

28 participants from 11 countries attended the course. Of these, those from Bangladesh (Mr. Rupesh Chandra Roy of Bangladesh Council of Scientific and Industrial Research), Bhutan (Mr. Dhanapati Guragai of the Ministry of Trade and Industries), India (Mrs. Anita Kumari of M/s Pareek & Company in Bihar, Mr. C. Vijaya Kumar of M/s Tungabhadra Steel Products Ltd. in Karnataka, Mr. Deepak Kumar Misra of the Council of Science & Technology, Lucknow, Mr. Joy Chakraborty of WB REDA in Siliguri, Mr. R.K. Chopra of Madhya Pradesh Electricity Board in Jabalpur, Mr. Venkatranan Gujala of M.G.I.I.R.E.P&D in Delhi, Mr. Manoj Kumar, Mr. M.R. Gopala Rao and Mr. Philip Zachariah), Indonesia (Mr. Andhika Prastawa of BPP Teknologi in Jakarta), Malaysia (Mr. Fuad Bin Abas of the Universiti of Putra Malaysia in Serdang), Nepal (Mr. Shyam Kishor Yadav of the Ministry of Water Resources, Mr. Binaya Aryal of Royal Nepal Academy of Science and Technology, Mr. Gyanendra Lal Shrestha of BPCH in Kathmandu, Mr. Hirakaji Manandhar of Nepal Electricity Authority, Mr. Krishna Prasad Dulal of M/s Arun Valley Hydropower Development Company Pvt. Ltd. in Kathmandu, Mr. Deepak Dhital, Mr. Manil Nidhi Tiwari, Mr. Raju Rimal and Mr. Sanjay Devkot), Sri Lanka (Mr. T.A. Wickramasinghe of the

National Engineering Research & Development Centre, Ja-Ela) and Zimbabwe (Mr. Partick Mabyurira of the Research Council of Zimbabwe) represented the member countries of the NAM S&T Centre. The other participants were one each from Ghana and Kazakstan and two from Sudan.

Prof. N.C. Nigam, Vice Chancellor of the University of Roorkee inaugurated the course on March 15, 1999. Dr. Arun Kumar, Director AHEC gave an over-view of the activities of his Centre and the contents of the course. Besides industry, the course faculty consisted of experts from AHEC and other related departments of the University of Roorkee, Ministry of Non-Conventional Energy Sources (MNES) of the Government of India, Indian Renewable Energy Development Agency (IREDA) and Asian Institute of Technology (AIT), Bangkok. The topics covered in the presentations included investigation and site selection, water power studies, turbine selection, power house design, integrated governor and plant control, self removal, GIS optimization techniques for hydro power planning, environmental and funding aspects etc.