

International Dam Safety Conference to be held at Thiruvananthapuram

India will be hosting the **International Dam Safety Conference - 2018** at Thiruvananthapuram on January 23-24. Shri Pinarayi Vijayan, Chief Minister of Kerala will inaugurate the conference and Shri Arjun Ram Meghwal, Union Minister of State for of Water Resources, River Development and Ganga Rejuvenation will preside over the inaugural function. Central Water Commission is organizing the event in association with Kerala Water Resources Department (KWRD), Kerala State Electricity Board, National Institute of Technology Calicut and College of Engineering, Trivandrum.

Dam safety conferences are organized as an annual event under the **Dam Safety Rehabilitation and Improvement Project (DRIP)** project being run by the Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD & GR) in the seven states of Jharkhand, Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu, and Uttarakhand. Launched in the year 2012 with a financial outlay of Rs. 2100 Crores, this World Bank aided project aims at the rehabilitation of old dams in the country that may be experiencing distress and are in need of attention for ensuring their structural safety and operational efficiency. The project also aims to strengthen the institutional capacity and project management in this area. As part of this exercise, DRIP has been engaged in bringing greater awareness on dam safety issues and finding novel solutions to address them by pooling the best technologies, knowledge and experience available around the world. In this direction, Dam Safety Conferences are being organized as annual events in the different DRIP states. Dam professionals, academicians, scientists, as well as industries assemble to deliberate on the problems associated with the dam safety and share the concepts, techniques, instruments, materials etc. available to address the design and construction of new dams, and also for monitoring, surveillance, operation, maintenance, rehabilitation along with disaster mitigation measures for existing dams.

The upcoming conference at Trivandrum will see the participation of 550 delegates from over 20 countries. Some of the international experts include Dr Anton J Schleiss, President of the International Commission on Large Dam EPFL Switzerland, Dr Nicholos Schofield, Chief Executive of Australian Water Partnership, Mr Satoru Ueda, Lead Dam Specialist of the World Bank, Dr Martin Wieland, global seismic expert from Switzerland, Dr Ignacio Escuder Bueno, President of Spanish Commission on Large Dams, Technical University of Valencia, Spain, Dr Desmond Harfort, leading dam safety expert, BC Hydro Canada, Mr Angus Swindon, National Director, Entura, Hydro Tasmania, Australia Over 140 technical papers will be presented on several aspects of dam safety including case studies. About 30 national and international organizations are showcasing contemporary developments in technology, materials, instrumentation and their application in addressing dam safety issues during the exhibition being organized during the conference. The themes for various sessions include Sustainable Dam Safety Initiatives; Uncertainties and Risk Management in Dams; Operation, Maintenance, Rehabilitation, and Upgrading of existing dams; Dam Safety Management Practices; and Integrated Flood Management for existing dams.

Seven dam safety guidelines and manuals developed under DRIP will also be released for implementation during the conference. A software programme - **Dam Health and Rehabilitation Monitoring Application (DHARMA)**- will also be launched during the conference. DHARMA is a web tool to digitize all dam related data effectively. It will help to document authentic asset and health information pertaining to the large dams in the country, enabling appropriate actions to ensure need based rehabilitation. It is a new stride in asset management aspect by India.

The key recommendations emerging from the deliberations of the conference will be circulated to stakeholders as well as policy makers for implementation. Select technical papers received for the conference will be published as a compendium to provide a permanent reference in the libraries of the State Agencies responsible for design, construction, operation and maintenance of dams. For wider dissemination, the compendium will also be available on the DRIP website: www.damsafety.in.

Dams have played a key role in fostering rapid and sustained agricultural and rural growth and development, which have been key priorities for the Govt. of India since independence. Over the last seventy years, India has invested substantially in the critical infrastructure required to manage and store the limited surface water resources in reservoirs to ensure food, energy, and water securities. Globally India ranks third after China and the United States of America in terms of number of large dams (5254 large dams in operation and 447 large dams under construction) with a total storage capacity of about 283 billion cubic meters. About 80% of these large dams are more than twenty-five years old, and about 213 dams exceed the age of 100 years and were built in an era whose design practices and safety considerations do not match with the current design standards and the prevailing safety norms. This necessitates special efforts at rehabilitation of old dams and ensuring their long term structural safety.

The project DRIP consists of three main components; Component I: Rehabilitation of selected dams and their appurtenances; Component II: Institutional Strengthening; and Component III: Project Management. Institutional Strengthening includes capacity building in the DRIP Implementing Agencies through national and international training, equipping selected premier academic institutions in dam safety areas so that their expertise can be utilized to provide solutions to dam safety issues, assisting in the development of Emergency Action Plans (EAP) for dams, developing the software tool 'Dam Health and Rehabilitation Monitoring Application (DHARMA)', Seismic Hazard Mapping for the entire Country and development of Seismic Hazard Assessment Information System (SHAISYS), preparation of Guidelines and Manuals, strengthening of Dam Safety Organisations etc. In the year 2017, the project was extended by two years, until June 2020, to finish all the programmed rehabilitation works on 223 dams with a proposed revised cost of 3466 Crore INR.

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