

PATRONAGE



सत्यमेव जयते

Ministry of Jal Shakti, Govt. of India
Department of Water Resources, River Development and Ganga Rejuvenation
Ministry of Power, Govt. of India
Ministry of New and Renewable Energy, Govt. of India

International Conference on
**HYDROPOWER AND DAMS
DEVELOPMENT FOR WATER AND ENERGY
SECURITY – UNDER CHANGING CLIMATE**

7-9 April, 2022
at Rishikesh

ORGANISED BY



THDC India Ltd.



New Delhi

Central Board of
Irrigation & Power



INCOLD

Indian National Committee
on Large Dams

KNOWLEDGE PARTNER



CWC



CEA



ICOLD



ICID



Shri R.K. Vishnoi
CMD, THDC India Ltd.

Large population and fast-growing economy have led to a huge demand for water and electricity, including clean renewable hydropower in India. So far India has tapped about one third of its hydropower potential. With water and electricity demand in India expected to rise, a huge demand-supply gap is looming in the near future. Even though India has made some remarkable progress in energy sector in the recent years, still there is a need for implementing reforms and framing policies – both for water and energy security – towards a secure, affordable, and sustainable water development and energy system to spur high economic growth.

Development of water resources is recognized as a key element in the socio-economic development of many regions in the world. Since water availability and rainfall are unequally distributed both in space and time, so dams are crucial for storage of water as viable alternatives. Besides generation of hydro power, dams play a vital role in satisfying the ever-increasing demand for irrigation and drinking water, for protecting man, property and environment from catastrophic floods, and for regulating the flow of rivers. Dams have contributed to the development of civilizations for over 2,000 years. Worldwide, there are more than 60,000 large dams listed by ICOLD, most of which have a height of over 15 meters except a few with height between 5 meters and 15 meters but having storage above 3mcm. Today, in developing countries, the focus is on the state-of-the-art technology in planning, design, and construction as well as use of new materials for dams, which are essential for the sustenance of human life and also for poverty alleviation.

As dam engineering developed with the advancement of technology and invention of new materials, a number of dams of different types have been envisaged adopting modern designs and methods of construction with due consideration for safety of these structures, which is imperative if we want to derive economic benefits from these dams for a longer period. This warrants special attention for the dams built in earlier times that do not conform to modern designs and construction practices. Such dams need to be rehabilitated through universally accepted current norms and measures in order to make their structures safe. Since there is a continued increase in the demand for higher levels of safety, security and reliability for all critical infrastructures, the design, construction, and operation of dams should be made an integral part of risk management framework to effectively address natural and manmade hazards.

Climate change and global warming issues are compelling nations to plan more and more for green energy sources. Many countries are targeting to cut their thermal power generations in a phased manner and make greater use of solar, wind and hydro power to fill the gap. Hydropower is the second largest contributor of energy generated in India. However, so far the country has utilized only about 32% of its total 145,000 MW hydropower potential and therefore, tremendous opportunities exist for future expansion. The greatest hydropower potential in India exists in the three major transboundary river basins (Ganges, Indus, and Brahmaputra), but all these basins have experienced substantial changes in precipitation and air temperature affecting the availability of water required for hydropower generation. A majority of hydropower projects in India are run-off-the-river (RoR) schemes and in future also, in lieu of storage schemes, RoR schemes with diurnal storage may be preferable due to submergence, site conditions and other environmental issues. But in the climate change scenario, uncertainty in stream flow patterns may have a major impact in peaking power generations due to small pondage of RoR schemes. In order to mitigate this, RoR schemes require certain increase in pondage capacity.

Keeping in view the importance of the subject, THDC, INCOLD (Indian Committee on Large Dams) and CBIP (Central Board of Irrigation and Power) are jointly organizing a two-day International Conference on Hydropower and Dam Development for Water and Energy Security - Under Changing Climate from 7 April 2022 at Rishikesh. One day field visit to Tehri Dam is also being organized for the delegates.

THEMES

- 1. Government Policies for Dams and Hydropower Development for Water and Energy Security**
 - Hydro policy for boosting hydro power development
 - Policy for compensation of cost of enabling infrastructure
 - Dam, Environment and Development
 - The role of dam/hydro in livelihood improvement/ poverty alleviation
 - Compensation for Flood Prevention capacity of a hydro project
 - Mechanism to deal with the uncertainties related disputes of hydro power sector for early commissioning
- 2. Sustainable Development of Dams and Hydro Power**
 - Need for storage dams for water security
 - Development of new water storage infrastructure for multiple purposes.
 - Water security and risk management
- 3. Sedimentation Management**
 - Hydraulic research and modelling
 - Monitoring sedimentation
 - Sediment removal systems
 - Design solutions for siltation and erosion
 - Catchment area management
- 4. Environmental and Socio-economic Aspects**
 - Dams – Saviour of Ecology and Mankind
 - Case studies – Indra Sagar Dam, Bhakra Dam, Sardar Sarovar Dam and Uttarakhand Disaster 2013
 - Other Foreign Case Study
 - Strategic integration of Environmental, Social and Governance aspects
 - Monitoring techniques and improvement measures on Reservoir Water Quality and Sediment issues
 - Hydrology and environmental Flow Assessment/ Downstream management
- 5. Dealing with Hazard and Risks**
 - Adapting management to address challenge of a pandemic due to water
 - Design adaptations and resource management for Climate Change
 - Experience with Climate Adaptation Strategies
 - Climate-resilient infrastructure and projects
 - Challenges of seismicity, landslides, extreme floods and Glacial Lake Outburst Floods (GLOFs)
 - Warning systems, exclusion mapping & evacuation plans
- 6. Financing, Legal and contractual aspects of dams for sustainable development**
 - New approach to project finance
 - Selection and screening of projects for private development
 - Commercial and financial risk management
 - Construction arrangements (alternative procurement models)
 - Legal, contractual and insurance issues
- 7. Future Developments**
 - The role of hydro in the post-COVID recovery
 - Current trends and future challenges in Pumped Storage Hydropower Plants Operation strategies
 - PSP, Modern technologies and large scale RE integration – An overview
 - Sustainable business model for PSP- Market, Regulatory Challenges and policies for PSP Growth
 - The need for flexible grid systems
- 8. Dam Safety Management**
 - Dam Safety Bill
 - Risk Assessment and Management
 - Rehabilitation Technology to enhance Dam Safety

WHO SHOULD ATTEND?

The Conference is of interest to Scientists, Researchers, Engineers, Geologists, Regulatory Bodies, Government Departments, Developers Contractors, Consultants and Students working in Dam Engineering, Dam Design, Hydropower Development, Environmental Engineering, and Structural Hydraulics.

STUDY TOURS

One Day study tour to Tehri Dam on 9 April 2022

CALL FOR PAPERS/CASE STUDIES

The papers/case studies on the subject are invited. Intending authors may send full text of paper(s)/case study(ies) as per the guidelines/instructions given below so as to reach the Conference Secretariat by 15th March 2022. The papers/case studies accepted for presentation will be notified immediately thereafter. Only original contributions that have not been published or presented at any other conference/symposium/seminar are acceptable, otherwise the paper will not be considered. The full length paper will be reviewed by the Technical Committee for oral presentation.

GUIDELINES FOR PREPARATION OF PAPERS/CASE STUDIES

The full text of the papers, not exceeding 08 pages of A4 size, in single space and 10 Point Normal Times Roman Font, both in MS Word and PDF, need to be sent through e-mail only at sunil@cbip.org. The papers will be printed by offset process, therefore, the text of the paper in English must be free from errors. Only original contributions that have not been published or presented at any other forum are acceptable.

Standard and universally accepted abbreviations should be used. When a special abbreviation appears in the text for the first time, it should be accompanied by its extended form.

The figures should be placed nearest to the first reference in the text and should not be larger than the print areas. Tables in the manuscript should be numbered consecutively and referred to in the text by their numbers. A suitable heading should also be provided. References should follow the text to be listed at the end in numerical order with the corresponding number cited in brackets at appropriate places.

At the end of the references, the author(s) must furnish biodata not exceeding 100 words.

SCHEDULE

- | | |
|--------------------------------------|-----------------------------|
| • Submission of Papers | 15 th March 2022 |
| • Intimation of acceptance of Papers | 31 st March 2022 |

OFFICIAL LANGUAGE

The official language of the Conference is English.

DATE & VENUE

The conference is proposed to be held on 7-9 April, 2022 at Rishikesh, Uttarakhand

REGISTRATION

The registration fee payable by the delegates for participation in the conference is as follows:

| Countries | Delegate | Research Student | Accompanying Person | Author |
|------------|-----------|------------------|---------------------|--------|
| Indian | ₹ 15,000* | ₹ 7,500* | ₹ 5,000* | Free |
| Foreigners | US\$ 500* | US\$ 250* | US\$ 250* | Free |

GST @ 18% shall be charged extra. GST No. 07AAAJC0237F1ZU

10% discount will be applicable to Members of INCOLD/CBIP/INHA/IASH

The following are exempted from payment of registration fee

- Senior officers at the Ministry of Jal Shakti, Ministry of Power, MNRE, CWC, CEA
- Principal Secretary, Engineer-in-Chief and Chief Engineers, Water Resource Departments of States
- CMDs and Directors of CPSUs and PSUs
- Authors/Presenters of Papers

ACTIVITIES IN RISHIKESH

River Rafting

Rishikesh is the God for river rafting or white water rafting in India. It will not be wrong to say that this is the best adventure sport that you will get to try in this city of adventures. River rafting in Rishikesh is a water sport where you have to fight through the water and feel the fun in it.

Bungee Jumping

Rishikesh, known for being the best home for adventure sports in India, could definitely not leave bungee jumping. Jumping off from a certain height with just a rope tied to keep you hanging in there will give you the adrenaline rush in just a snap.

Flying Fox

Rishikesh is not just a home for multiple adventure activities but the best of them as well. Flying fox is an adventure sport where the participant gets to descend through a valley while he/ she is attached to a chord. The best part about Rishikesh is that it possesses Asia's longest flying fox track.

Waterfall Rappelling

Have you ever imagined yourself amidst gushing waterfalls, tied to a rope and slowly treading downwards? On your visit to Rishikesh, you can experience this. It is most definitely one of the most exciting activities in Rishikesh.

Paragliding

It is an activity which takes your adrenaline for a ride. Imagine yourself in an open cockpit, cruising through the cool air with the mighty mountains on all sides and a stunning bird's-eye view of the lush green valley along with the rippling river below.

Yoga

Yoga's origins can be traced to northern India over 5,000 years ago. The word yoga was first mentioned in ancient sacred texts called the Rig Veda. The Vedas are a set of four ancient sacred texts written in Sanskrit.

Jungle Safari inside Rajaji National Park

This is the most commonly visited Safari experience offering in Rishikesh. The Rajaji National Park is spread over an area of 820.42 km². It is a home of 23 species of mammals and 315 species of birds. The park is home to Tigers, Leopards, Asian Elephants, King Cobra, Panther, Bear, Chital, Sambar, Wild Boar, Kakar, Python, Monitor Lizard, Wild Cats and many more.

SPONSORSHIP

The Conference provides an excellent opportunity to national and international organizations; central / state government organizations, public sector undertakings, industrial organizations, equipment manufacturers, entrepreneurs, financial and funding institutions, consulting and construction organizations to publicize themselves by being Platinum / Golden / Silver sponsors or Supporter of the Conference. The sponsorship fees payable and benefits are mentioned below. Interested organizations may communicate their willingness to the Conference Secretariat.

Sponsorship Opportunities

| ENTITLEMENT | LEVELS | | | | | | |
|-------------------------------------|----------------------|-------------------|-------------------|----------------------|---------------------------|-----------------------------|------------------------------|
| | Platinum ₹10 Lacs | Golden ₹5 Lacs | Silver ₹3 Lacs | Supporter ₹2 Lacs | Kit Sponsor ₹3 Lacs | Lunch Sponsor ₹3 Lacs | Dinner Sponsor ₹4 Lacs |
| Logo on the Backdrop | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Complimentary Delegates | 15 | 6 | 4 | 2 | 2 | 4 | 6 |
| Audio Visual Presentation (in mts.) | 15 | 10 | – | – | – | – | – |
| Distribution of catalogues | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Table Top display facility | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Advertisements (in page/s) | Two | Two | One | Half | Half | One | Two |
| Display of name during lunch hrs. | – | – | – | – | – | – | – |
| Display of name during Dinner hrs. | – | – | – | – | – | – | – |
| Name & Logo in inner flap of Kit | – | – | – | – | – | – | – |

ADVERTISEMENT OPPORTUNITIES

A limited space will be made available on first-come-first-served basis, for coloured advertisement to the organizations, involved in the concerned field, in the proceedings volume of the Conference. The interested organizations are required to send the CD of the advertisement material in Coreldraw software or in PDF format, in A4 size along with payments as detailed below:

| | |
|-----------------|-------------------------|
| Inner Pages | US\$ 500 / INR 30,000* |
| 2nd & 3rd Cover | US\$ 1000 / INR 50,000* |
| Back Cover | US\$ 1500 / INR 75,000* |

*GST @ 18% shall be applicable extra.
(GST No. 07AAAJC0237F1ZU)

PAYMENT

All payments are to be made by the following methods:

Banker's Cheque payable to : Central Board of Irrigation & Power, New Delhi

Bank Transfer: Name of Bank: HDFC Bank Ltd., 209-214, Kailash Building, 26 K.G. Marg, New Delhi - 110 001

Beneficiary Details

Central Board of Irrigation & Power

Account No. : 00031110004411

MICR Code No. : 110240001

Swift Code : HDFCCINBDEL

Branch IFSC : HDFC0000003

Bank charges if any, must be borne by the organisation/participants and should not be deducted from the amount remitted to the Conference Secretariat.

CONFERENCE SECRETARIAT

Mr. A.K. Dinkar, Secretary
Dr. G.P. Patel, Director (WR)
Mr. Sanjeev Singh, Director (E)

CENTRAL BOARD OF IRRIGATION & POWER

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