

CALL FOR PAPERS

INTERNATIONAL DAM SAFETY CONFERENCE

10-12th October, 2022

Jaipur, Rajasthan (INDIA)



Dam Rehabilitation and Improvement Project



Central Water
Commission



INCOLD

Indian National Committee
on Large Dams



New Delhi

Central Board of
Irrigation & Power

MESSAGE FROM VICE PRESIDENT, ICOLD AND PRESIDENT, INCOLD



Dams being a major infrastructure component of water resources, play a vital role in providing significant benefits to humankind and also overall water security to the country. Storage of water behind dams regulates natural streamflow, allowing for benefits resulting from increased water availability, renewable energy production and reduction of adverse impacts caused by natural extreme events like floods and drought. Growing population is leading to a steady increase in demand for water, food and energy to meet basic needs as well as higher standards of living. At the same time dams may create new hazards with risks to downstream life and property in the event of dam failure resulting from an uncontrolled or catastrophic release of stored water. It is in this context that the Dams Engineering professionals have a profound duty and moral responsibility: namely, building urgently needed dams, reservoirs and levees in the most effective and sustainable way, while also ensuring

that they are safe during their whole lifespan.

INCOLD has played a significant role in improvement of dam safety, through publication of technical papers and exchange of experience during national and international conferences organized every year, to disseminate the state-of-the-art best practices and latest technological developments taking place in the field of dam engineering all over the world, to the Indian professionals and agencies associated with dam engineering development. INCOLD focussed on the theme “**Dam Safety, Risk Assessment and Management and Rehabilitation of Dams**” and covered **sub-themes like** advances in dam safety, risk assessment and management; advances in the rehabilitation of dams and appurtenant works: innovations and adaptations in intakes, spillways and gates; advancement in materials for dam repair and rehabilitation; new approaches in energy dissipation arrangements in high velocity spillways; causes of damages and structural performance evaluation of dams; rehabilitation technologies to enhance dam safety; underwater inspection, robotics and repair methodologies for dams; modernization, optimization and rehabilitation of aging dams; and dam surveillance and monitoring.

ICOLD has come out with **World Declaration on Dam Safety**, to restate the fundamentals of dam safety that have been learned by generations of engineers over the time. Furthermore, all involved institutions are reminded to ensure, through the fulfilment of their responsibilities, that those principles in order to minimize risks to humankind associated with dams and reservoirs be respected. This common effort will contribute immeasurably to the overarching ICOLD vision for “**Better Dams for a Better World.**”

I welcome the ICOLD international experts and national experts in October, 2022 at Jaipur, India and hope that the 6th edition of Dam Safety Conference being organized by INCOLD, CWC and DRIP will be a grand success.

A handwritten signature in black ink, appearing to read 'Devendra Kumar Sharma'. The signature is stylized and cursive.

Devendra Kumar Sharma
Vice President, ICOLD & President, INCOLD

INVITATION FROM CHAIRMAN, CWC

On behalf of the Central Water Commission, Department of Water Resources, RD&GR, Ministry of Jal Shakti, Government of India, I take great pleasure in inviting professionals and agencies associated with dam safety and related disciplines to the International Dam Safety Conference 2022 to be held in Jaipur, Rajasthan, India during 10-12th October, 2022.

The Conference will provide a forum for exchange of knowledge and experience in dam and dam safety engineering. The program will include enlightening presentations from leading professionals, an exhibition of latest products and processes followed by a study tour to dams.

India ranks 3rd globally with around 5300 large dams in operation and around 400 under construction. Government of India, Ministry of Jal Shakti has enacted The Dam Safety Act 2021 which provide for surveillance, inspection, operation and maintenance of the specified dams for prevention of dam failure related disasters and to provide for institutional mechanism to ensure their safe functioning. Policy makers, dam owners, dam professionals, institutions, scientists and industry from all over the world are expected to participate in this event.

Looking forward to seeing you in October, 2022 in Jaipur.

DR. R. K. GUPTA

Chairman

Central Water Commission

New Delhi, India

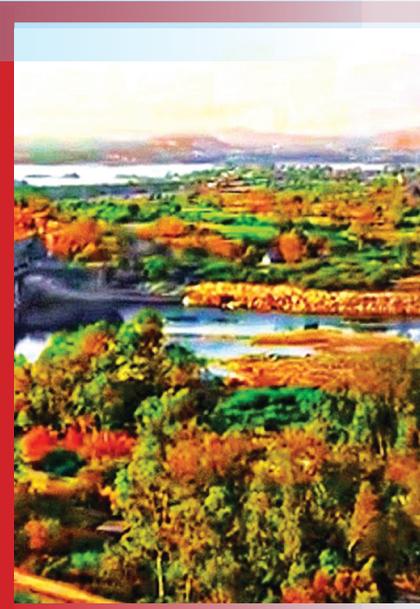


ABOUT THE CONFERENCE

India ranks third globally with 5334 large dams in operation and 411 large dams under construction. Central Water Commission (CWC) is coordinating and implementing the ongoing Dam Rehabilitation and Improvement Project (DRIP) with the support of World Bank. As part of the institutional strengthening component of DRIP, CWC has been organizing the Dam Safety Conference on an annual basis. The conference brings together dam professionals and experts in the various inter-related disciplines from within India and around the world to discuss, reflect and share knowledge, technology and experience in addressing dam safety issues.

The International Dam Safety Conference in October 2022 is 6th in the series of Dam Safety Conferences organized earlier in Chennai (2015), Bengaluru (2016), Roorkee (2017), Thiruvananthapuram (2018) and Bhubaneswar (2019). All these conferences received an overwhelming response in terms of participation by Indian and overseas professionals and organizations.

INCOLD in collaboration with CWC, DRIP, CBIP and Water Resources Department, Government of Rajasthan is organizing the International Dam Safety Conference - 2022 during 10-12th October, 2022 in Jaipur, Rajasthan. The conference will have one Plenary Session, seven Technical Sessions, and one Session dedicated to Industry. There will be valuable presentations during the Plenary Session by eminent dam safety professionals. Several oral presentations are planned during the Technical Sessions which will cover various facets of dam safety. National and overseas organizations will showcase contemporary developments in technologies, construction materials, products, instrumentation, and services in an exhibition to be organized at the Conference venue. Several international organizations of repute including the International Commission on Large Dams (ICOLD) as well as various National Committees on Large Dams have agreed to be the Organizing Partners for this Conference.



ABOUT THE ORGANIZERS

Indian National Committee on Large Dams, India (INCOLD) is the National Committee of International Commission on Large Dams (ICOLD), representing India with its Secretariat at CBIP office at New Delhi, which provides a forum for the exchange of knowledge and experience on various aspects of dam engineering.

Central Water Commission (CWC) is a premier technical Organization under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. CWC is coordinating and furthering in consultation with the State Governments concerned, schemes for control, conservation, and utilization of water resources throughout the Country, for the purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Hydro Power Development.

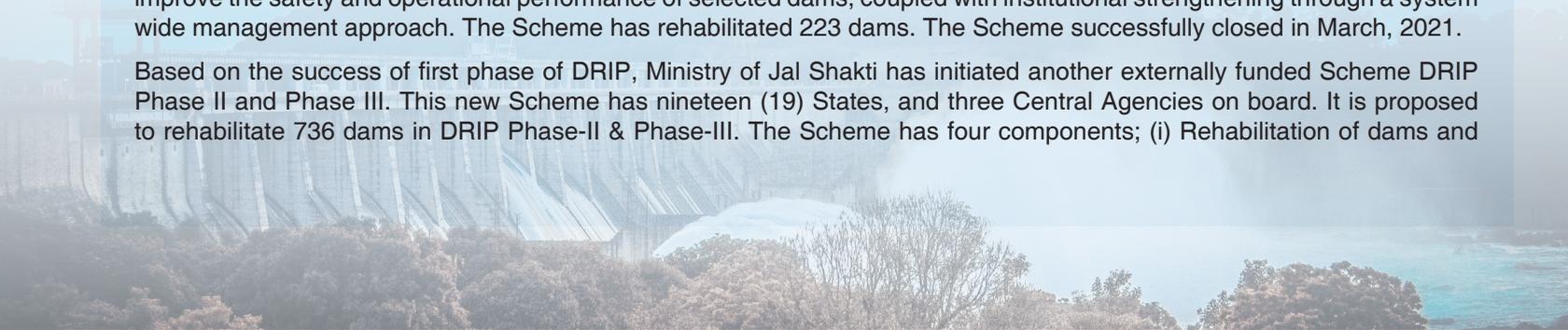
Central Board of Irrigation and Power, is a Premier Institution set up by the Government of India in the 1927. CBIP has been rendering dedicated services to the professional organization, engineers and individuals in the country related to Power, Water Resources and Renewable Energy Sectors for the last 93 years. CBIP has grown into an eminent organization of international importance while serving the nation equally with great distinction.

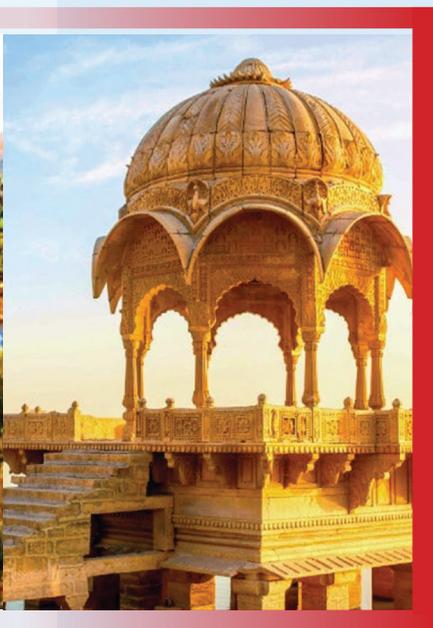
Organizing Partners: Reputed global organizations are being taken on board as Organizing Partners so that they can contribute to the efficient planning and management of the Technical Sessions and encourage participation from the world community, to facilitate addressing the dam safety concerns of global dam professionals adequately during the Conference.

DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP), PHASE-II AND PHASE-III

In April 2012, Ministry of Jal Shakti initiated World Bank assisted Dam Rehabilitation and Improvement Project (DRIP), to improve the safety and operational performance of selected dams, coupled with institutional strengthening through a system wide management approach. The Scheme has rehabilitated 223 dams. The Scheme successfully closed in March, 2021.

Based on the success of first phase of DRIP, Ministry of Jal Shakti has initiated another externally funded Scheme DRIP Phase II and Phase III. This new Scheme has nineteen (19) States, and three Central Agencies on board. It is proposed to rehabilitate 736 dams in DRIP Phase-II & Phase-III. The Scheme has four components; (i) Rehabilitation of dams and





associated appurtenances to improve the safety and operational performance of selected existing dams and associated appurtenances in a sustainable manner, and (ii) Dam safety Institutional Strengthening to strengthen the dam safety institutional setup in participating States as well as on a Central level, (iii) Incidental Revenue Generation for sustainable operation and maintenance of dams, and (iv) Project Management.

CALL FOR PAPERS

Technical Papers reflecting the developments in technology, materials, instrumentation, and methods including case histories of dam safety and management issues and solutions, relevant to the Session Themes and Topics are invited for presentation in the technical sessions. Full papers, including main body, figures, and tables, should not be more than 6 pages on the A4 format; Guidelines to Authors published on the website may be referred to for more details on formatting. All the papers received will be reviewed by a panel of experts for the quality of contents and their relevance to the themes of the Sessions and compliance with the Guidelines before acceptance. Authors of accepted papers will be requested to submit presentation slides. Authors of papers not included for oral presentation, may make a poster presentation of their papers.

Soft copies of all the accepted papers will be distributed to the participants during the Conference. In addition, select technical papers, after necessary editing, will be published as

a compendium following the Conference. CDSO and CWC reserve the right to publish the technical papers / compendium on their websites or in any other media; therefore, consent in this regard shall be given by the Principal Author while uploading the paper.

CONFERENCE SESSION THEMES, TOPICS AND PROPOSED ORGANIZING PARTNERS	
PLENARY SESSION	Emerging Challenges in Dam Safety Management Keynote speakers on Financial, Legal framework, Technical, Social, Cultural and/or Environmental challenges and how to overcome them.
TECHNICAL SESSION 1	Global Best Practices in Dam Safety Management and Governance Legislation and regulatory frameworks; Technical rules, guidelines and best practices; Portfolio management; Integrated flood risk management; New methods in selecting design floods and risk analysis, Risk Governance; Human resources and capacity building; Technological needs; Integration of policies, people and processes
TECHNICAL SESSION 2	Sustainable Dam and Reservoir Management Water resources management challenges; Dam safety management systems, Life-Cycle Management, Water quality and ecology; Role and benefit of dams; Optimization of reservoir operation and integrated reservoir management; Assessment and management of reservoir sedimentation; Social and environmental impact assessment and management; Trifecta: Water, energy, food; Innovative technologies, knowledge application and best practices;
INDUSTRY SESSION	Contemporary Developments in Technology, Construction Materials, Products, Instrumentation, and Services
TECHNICAL SESSION 3	Dam Health Monitoring, Data Acquisition and Processing Hydro-meteorological and seismic systems; Geotechnical, structural, hydro-mechanical and communication systems; Real-time performance monitoring and analysis of data; Automation of instrumentation, Instrumentation for earthquake hazard assessment; Surveillance and monitoring by latest technologies (Satellite, terrestrial radar, laser based technologies); Recent advances in dam health investigations: hydrologic safety, Acquisition, effective analysis and usability of monitoring data; Data processing: Design, construction and operation;
TECHNICAL SESSION 4	Operation, Maintenance and Emergency Management Operating Rules and operational activities; Maintenance procedures; Cost- benefit analysis of O&M; Resources and capacity building for O&M : Disaster and emergency management (prevention, preparedness, response and recovery); Cost-benefit analysis of Emergency Management; Resources and capacity building for Emergency Management; Integration of Operation, Maintenance and Emergency Management
TECHNICAL SESSION 5	Safety Reviews and Risk Assessment Comprehensive dam safety reviews; Dam safety standards; Uncertainty, complexity, and ambiguity; Risk-informed assessments – the system approach; Risk tolerability guidelines; Human-induced risk management; Incidents and accidents case histories; Disasters case histories
TECHNICAL SESSION 6	Major Rehabilitations and other Risk Reduction Investments Foundation treatments; Structural Rehabilitation design; Refurbishment of gates: Dam rehabilitation and construction management; Re-instrumentation, enhanced monitoring and overall surveillance; Other dam safety investments; Investments outside the dam: upstream and downstream planning; Risk communication
TECHNICAL SESSION 7	DRIP Rehabilitation Case Studies Dam Rehabilitation case studies of ongoing Dam Rehabilitation programs in Indonesia, Sri Lanka and India. It may include various aspects of rehabilitation i.e. pre-rehabilitation investigations, structural rehabilitation, technical regulations and current practices, financial planning institutional capacity building, project management contractual challenges, etc

CONFERENCE SCHEDULE

10 th October, 2022	IDSC-2022	Exhibition	Cultural Evening Welcome Dinner
11 th October, 2022			Concert Evening Banquet Dinner
12 th October, 2022			Concert Evening Farewell Dinner

CONFERENCE SESSION PLAN

10th October, 2022	
0830-0915	Registration
0915-1100	Inauguration
1100-1115	Tea
1115-1300	Plenary Session: Emerging Challenges in Dam Safety Management.
1300-1400	Lunch
1400-1530	Technical Session 1: Global Best Practices in Dam Safety Management and Governance
1530-1600	Tea
1600-1730	Technical Session 2: Sustainable Dam and Reservoir Management
11th October, 2022	
0930-1100	Technical Session 3: Dam Health Monitoring, Data Acquisition and Processing
1100-1130	Tea
1130-1300	Technical Session 4: Operation, Maintenance and Emergency Management
1300-1400	Lunch
1400-1530	Technical Session 5: Safety Reviews and Risk Assessment
1530-1600	Tea
1600-1730	Technical Session 6: Major Rehabilitations and other Risk Reduction Investments
12th October, 2022	
0930-1100	Technical Session 7: DRIP Rehabilitation Case Studies
1100-1130	Tea
1130-1300	Industry Session: Contemporary Developments in Technology, Construction Materials, Products, Instrumentation, and Services
1300-1400	Lunch
1400-1530	Visit to Exhibition and Poster Session
1530-1600	Tea
1600-1700	Valedictory Session

TIME LINES

The timeline for submission and acceptance of papers is as follows:

Full papers:	15 th August, 2022
Communication of accepted papers:	1 st September, 2022
Communication of papers selected for oral presentation:	15 th September, 2022
Submission of PowerPoint slides (limited to 12) for oral presentation:	25 th September, 2022

Exhibition 11-12th October, 2022

Space will be made available to selected exhibitors to showcase their technologies, instruments, construction materials, products, and services related to dam safety. Organizations interested to participate in the exhibition should submit the 'Request for Exhibition' indicating the nature of display and space required. Depending on the availability, space will be assigned; preference will be given to organizations sponsoring events or items for the Conference.

CONFERENCE VENUE

Jaipur, Rajasthan

Jaipur is the capital and the largest city of the Indian state of Rajasthan. As of 2011, the city had a population of 3.1 million, making it the tenth most populous city in the country. Jaipur is also known as the *Pink City*, due to the dominant colour scheme

MEDIA PARTNERS

Reputed media houses and other interested organizations are invited to be Media Partners for this Conference and the exhibition. In return, suitable publicity is provided for the media partners on the Conference website and during the event. Selected organizations may also participate in the exhibition and make a brief presentation of their activities and services during the Industry Session. This will be a mutually beneficial partnership where the brand and logo of the media partners will gain publicity amongst a large gathering of dam professionals, dam owning agencies and other national and international organizations involved in dam design, construction, operation, maintenance, and rehabilitation from across the world.

Conference Secretariat

Secretary General

Indian Committee on Large Dams (INCOLD)

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