



92<sup>nd</sup> ICOLD Annual Meeting & International Symposium on

# Dams for People, Water, Environment and Development

organized by





Supported by

Ministry of Jal Shakti &
Ministry of Power

in collaboration with





www.icold2024.org



### Invitation

R.K. Vishnoi
President, Indian National Committee on Large Dams (INCOLD)
Chairman & Managing Director, THDC, NEEPCO, NHPC Ltd.

Dear ICOLD Members, Colleagues, Ladies and Gentleman,

Greeting from the Indian National Committee on Large Dams (INCOLD)!

It is an honor for Indian National Committee on Large Dams (INCOLD), to extend a cordial invitation to you and your companion to attend the 92nd ICOLD Annual Meeting of the International Commission on Large Dams and take part in the Symposium on 'Dams for People, Water, Environment & Development, scheduled from 18th to 24th October, 2024 in India at New Delhi. As President INCOLD, I would also like to Invite all the Departmental Heads, Seniors Professionals & Young Engineers dealing with Dams related activities in India to this prestigious event.

India ranks 3<sup>rd</sup> globally in terms of number of dams in the World and has built around 5334 dams which include Sivasamudram, Bhakra, Tehri, Indra Sagar, Hirakud, and many more mega projects and around 411 dams which include Subansiri Lower, Vishugad Pipalkoti etc. are under construction stage. India has made commendable progress in building Dams in the past decades and is also helping neighboring Countries in building dams which include Arun-III HEP, West Seti in Nepal and many more other projects. India has also undertaken the world's largest dam rehabilitation and improvement project (DRIP) for its existing Dams.

The 92<sup>nd</sup> ICOLD Annual Meeting & Symposium will provide a forum where Policy makers, researchers, engineers, managers, stakeholders, and manufacturers, contractors, working in the field of Energy & Water Resources Management are going to exchange views and experiences to acquaint about the latest innovation, on various aspects of Integrated Reservoir Management, Climate Change adaptation, challenges in Dam Construction and their solution, etc. and other issues related to dam safety.

It will be a pleasure for us to meet and welcome all the delegates in New Delhi for the above important event.

Warm Regards

R.K. Vishnoi
President, Indian National Committee on Large Dams (INCOLD)

# **Symposium Theme**

Dams for People, Water, Environment and Development



### **Dams and People**

- Multiple uses of dams and reservoirs in consideration of water security, flood control and allied benefits
- Long term impacts of dams on water security and economy of communities
- Economic opportunities associated with dams, reservoirs and hydropower plants for local communities
- Tourism opportunities with dams and reservoirs

# Integrated Reservoir Management (Basin Approach)

- Synchronous operation of multiple dams in the same river basin - flood control, storage optimization, optimization of hydropower generation, etc.
- Data Acquisition, Data Sharing, monitoring and decision making for Integrated Reservoir Management.



# Dams and Climate Change Adaptation

- Adaption measures Revision in Design flood, Dam hydrology and spillways; Case Studies
- Optimizing reservoir operation in consideration of water security, protection of communities from flooding, river ecology and addressing conflicting interests of stake holders
- Global guidelines and national approaches
- Occurrences of extreme events and their causes

### Dams and Renewable Energy

- Economic contribution of dam based renewable energy
- Pumped storages hydropower
- Dam based renewable energy and sustainability



## Dam Engineering and Construction

- Advances in analysis and design
- Challenges in construction of dams and their solutions
- Advances in spillways and energy dissipation arrangements
- Addressing Challenges related to dam foundations
- Roller Compacted Dams
- Tailing Dams

### **Dam Safety Management and Engineering**

- Dams- perceptions and realities of risk
- Risk Informed Dam Safety Management The Systems Approach
- Whether there should be uniform criteria for design of new dams and safety assurance of existing dams - logical issues, benefits, limitations, consequences, etc.
- Dealing with hazard and risks in the context of developing societies
- Dam safety real time safety assessment, inspection and monitoring
- Resilient dams for safe communities





### Dam Rehabilitation and **Improvement**

- Diagnostic analysis and Rehabilitation of aging dams
- Residual life assessment of dams
- Underwater robotic inspection for health assessment of dams.
- Digital asset management by use of augmented and virtual reality platforms for safety of
- Advanced materials for rehabilitation and improvement of dams

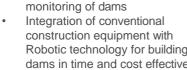
### **Environmental and Social Aspects**

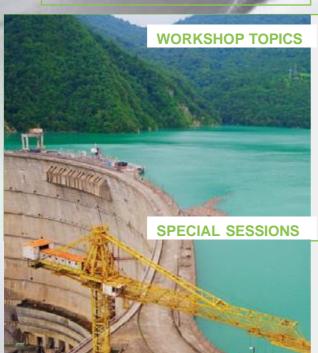
- Ecological considerations in planning, design, construction and operation of dam and hydropower projects
- Environmental enhancement during heightening and upgradation
- Stakeholder involvement in environment management of dam and hydropower projects
- Sustainable development through dams and hydropower



- construction of dams
- **Building Information Modelling** (BIM) and use of Drones for efficient construction progress monitoring of dams
- Integration of conventional construction equipment with Robotic technology for building dams in time and cost effective manner



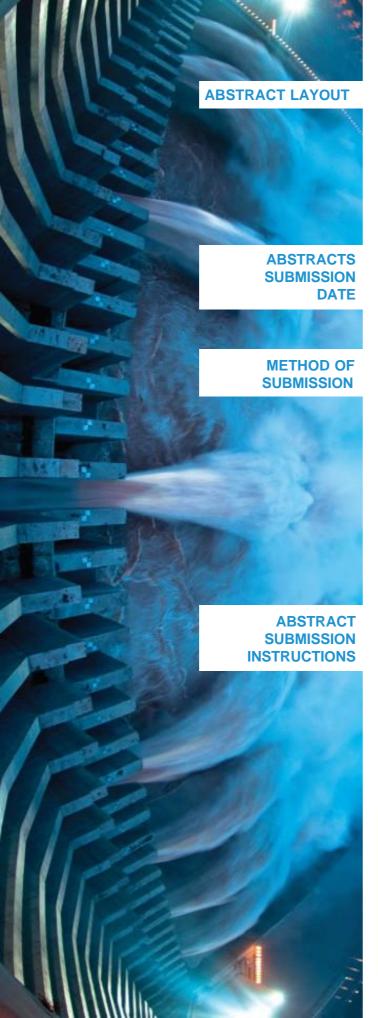




- Application of Geosynthetics in Dam Engineering
- Risk Informed Dam Safety Management
- Tailing Dam Safety
- Dam Repairs and Rehabilitation Deciding Design and Safety Criteria
- Numerical analysis of dams
- Sedimentation Management in Reservoirs for Sustainable Development
- Pumped hydropower Storage The need to support high penetration of renewable energy

Innovative Financing of Dam Projects





- Ecological considerations in planning, design, construction and operation of dam and hydropower projects
- Environmental enhancement during heightening and upgradation
- Stakeholder involvement in environment management of dam and hydropower projects
- Sustainable development through dams and hydropower

Authors are invited to submit abstracts on any of the above themes. All accepted papers will be published electronically in the Workshop, The deadline for submitting abstracts is 30th June 2023.

- All abstracts must be submitted only via the online form that is accessible after Login.
- Authors will be notified about the delivery of their abstract by e-mail immediately. In case you do not receive confirmation within 24 hours, please check your spam folder and in case of no confirmation, please contact at : abstractpapers@icold2024.org
- Authors will have access to their abstracts until the deadline and will have possibility to edit already submitted abstracts or submit another
- All correspondence concerning the abstract will be sent to abstract submitting author's e-mail address.
- Abstracts can be submitted on the topics listed above.
- Abstracts and papers have to be written in English.
- Submitted abstracts must be original. Abstracts previously published or presented at an international scientific meeting should not be submitted.
- Fill in the submitting author's name and e-mail address properly - these contact details will serve for further correspondence with the author(s).

### **IMPORTANT DATES**

- Abstract Submission Deadline
- 31st August 2023
- Notification of Abstract Acceptance 30<sup>th</sup> November 2023
- · Full paper submission opening
- 01st December 2023
- Deadline for final paper submissions 31st March 2024
- Deadline for Early-Bird Registration 31<sup>st</sup> March 2024
  - (10% Discount)
  - 31st May 2024
  - (5% Discount)
- Deadline for online registration
- 15th September 2024

### Incredible India

"India is the one land that all men desire to see, and having seen once by even a glimpse would not give up that glimpse for the shows of all the rest of the globe combined..."

### Mark Twain

The rich heritage of India, one of the world's oldest civilizations, is an all-embracing confluence of religions, traditions and customs. The plurality and multiplicity of the Indian Culture is evident to the whole world as India has one of the world's largest collections of songs, music, dance, theatre, folk traditions, performing arts, rites and rituals, languages, dialects, paintings and writings that are known, as the 'Intangible Cultural Heritage'.



# In the land of opulence, let loose and discover yourself



### Vibrant Delhi

Delhi has many attractions for the tourists as the house of magnificent monuments and is the symbol of the country's rich past and thriving present. As a capital city, it is fittingly a window to the country. So come and look out of the window and discover a whole new city of numerous stories and experiences. No visit to Delhi is complete without an experience of its famed specialties such as its delicious curries, barbecued tikkas and kebabs. It is also a shoppers' haven, whether you want to pick up some rich, woven silks, handicrafts, or ethnic cushions for your home. The city offers cuisines of different Indian states and an array of Indian art. New malls and entertainment centres jostle for space with a growing number of brand new hospitals, residential complexes, and sporting facilities. Delhi is also now a dream destination for those seeking expert medical attention. Delegates will begin their ICOLD 2024 experience with a city tour of New Delhi featuring a captivating past, an abundance of culture filled with historical buildings and world-class museums. Highlights of the city tour include visit to President House, Humanyun's Tomb, Qutb Minar, the newly redeveloped Old Delhi city, world famous temples, and various shopping centres.



Special programmes, including city tours and visit to traditional shopping centres, have been planned for the accompanying persons. They would enjoy cultural evenings with live performances of Indian folk music and dances followed by gala dinners.



The proposed venue for the ICOLD event is International Exhibition and Convention Center at Pragati Madan located in the heart of New Delhi in the close vicinity of the historic India Gate. This world class state-of-the art complex is spread in approximately 123.5 acres comprising of Convention Centre of 50,000 sq. mtrs, Exhibition Halls, Plenary Hall of 7000 seating capacity, and a large Amphitheatre for cultural performances, besides special areas for high level meetings. It has all the modern facilities to provide the highest degree of comfort to the delegates.

### **Registration Fee**

Registration Category		Registration Fees			
		Early	Bird rate	Normal rate	
		Until 31 <sup>st</sup> March 2024	From 1 <sup>st</sup> April to 31 <sup>st</sup> May 2024		
	ICOLD Member Countries	USD 1350	USD 1425	USD 1500	
Other Countries	ICOLD Non-Member Countries	USD 1530	USD 1615	USD 1700	
	Young Delegates & Research Student (age 25 & Younger)	USD 675	USD 715	USD 750	
Jer	Only Symposium	USD 675	USD 715	USD 750	
ठ	Only Workshop – 6 Nos.	USD 675	USD 715	USD 750	
	Accompanying Person	USD 500	USD 500	USD 500	
	SAARC Delegates	₹ 31,500	₹ 33,250	₹ 35,000	
SAARC Countries	Young Delegates & Research Student (age 25 & Younger)	₹ 15,750	₹ 16,650	₹ 17500	
	ICOLD Symposium	₹ 18,000	₹ 19,000	₹ 20,000	
	INCOLD Workshop- 6 Nos.	₹ 18,000	₹ 19,000	₹ 20,000	
	Educational Institutions – Symposium & Workshop	₹ 18,000	₹ 19,000	₹ 20,000	
Technical Visit (Optional): USD - 100 / INR - 8,000/- (Including travel by Luxury Coach					
and Night Stay)					

### **Payment & Correspondence**

All Registration & activity fees are subject to tax (\*GST @ 18 %)

The payments for the event including registration fee, sponsorship, space booking for exhibitor, etc. are to made to INCOLD 2024 by the following methods:

- Registration fees will be accepted in USD/INR by Credit card (VISA, Master Card or American Express) through website <u>www.icold2024.org</u> or
- By Bank Transfer as per details given below: -

Name of the Account: **INCOLD 2024** Account No. – **1736002100013853** Bank Name & Branch: **Punjab National Bank, Chanakyapuri, New Delhi** 

Dank Name & Dianon. Funjab National Bank, Chanakyapun, New D

IFSC Code: **PUNB0173600**, MICR Code: **110024100**, Swift Code:

Pan No. of INCOLD: - AABAT3238R, GST No. of INCOLD: - 07AABAT3238R2ZY

Note: No other method of payment is acceptable. Bank Charges if any shall be borne by Participants.

### **REGISTRATION CANCELLATION**

A refund of registration fees less a USD 100.00 (+ tax) administration charge will be processed for requests submitted in by email to the ICOLD 2024 Annual Meeting/ Symposium Secretariat no later than 18 September, 2024.

After 18th September, 2024, registration fees are non-refundable.

### **GENERAL INFORMATION**

### Venue

The event will take place in the International Trade Promotion Organization (ITPO), New Delhi, which is located in central part of National Capital Region of New Delhi. The ITPO is within easy access from the metro station & shopping malls.

This state-of-the-art, multi-functional venue with a rare combination of technology merged with world-class facilities & safety standards is situated for hosting international business-to-business exhibitions, conferences, congresses, products launches, promotional events and most predominantly act as a centralized contact point for conducting business.

### **Visa Letter Enquiry**

All participants who need a Visa Confirmation Letter are requested to fill out the needed information in the digital form. Please note that Visa application letter will be sent only after completed & fully paid registration.

### Official Language

The official language of the conference is English.

### **Hotels Accommodation & Travel**

Limited accommodation has been reserved by official travel partner in various hotel on special rates for release as per the requirement of participants.

For any assistance regarding hotel Accommodation, Travel & City Tour, pre and post tour participants may kindly contact the official travel partner. The details of Travel partner is available on website <a href="https://www.icold2024.org">www.icold2024.org</a>.

### **EXIBITION**

The central hub of ICOLD 2024 will be a multifunctional Exhibition where products & services of interest to the dam community will be on display. Delegates will visit the exhibition for refreshments, presentations, poster displays & networking.

### **Business Opportunity**

- Opportunities to showcase your products & services to a broad audience of attendees across all segment of the market.
- Qualified lead generation for new business results
- Branding opportunities to optimize exposure for your company, products & services.
- Cost-efficient networking platform to meet the key players, interact with existing customers & build critical new contacts to grow your business & expand your results.

### The Exhibition will feature:

- · All exhibitors in the same hall.
- All ICOLD 2024 activities in the same facility.
- · Plenary sessions on the same floor as the exhibit hall
- · Complimentary food & beverages for delegates in the same facility

### **Booth Package**

- Booth Package 9m<sup>2</sup> (3 m X 3 m)
- If you do not wish to build your stand, the booth Package is an excellent choice! We will then take care of the basic needs, such as wall panels, electricity & carpeting.

For 3 X 3	m Space
Exhibitor (Space only)	USD 5600
Exhibitor (with stand)	USD 6700
*GST extra @ 18%	

**Sponsors Opportunities:** Sponsors are assured of full visibility with printing of their names on main Banners/signage and other publicity materials related to the event. The sponsoring companies besides promoting their products/services to a focused audience, networking with experts during tea/coffee and lunch intervals and will have the privilege of sending delegates exempted from payment of registration fee for participation in the event. More details about the Sponsorship fee, benefits and payment of sponsorship fee etc. are given in the Table 1.

Opportunity to be the Co-organiser for ICOLD 2024: the organizations have the opportunity to be the co-organiser for the over all ICOLD 2024 event by contribution of INR 50 lac or equivalent USD. The co-organiser will have following privileges:

- · 3 Exhibition booths.
- 25 free passes for the over all event.
- · Free passes to CMD & Director for the over all event.
- TECHNICAL Visit 5 free passes
- Invites to ICOLD close group meeting
- Display of logo at all the prominent place & POP up banners during special social events.
- · Standees at various places at the venue.
- Opportunity for display of promotional film during symposium/ workshop
- · Key Speaking opportunity during special session like plenary session / India evening

# Sponsor Opportunities - Table 1

										Snonsorshin for	for	
Орр	Opportunity Available	Diamond	Platinum	Golden	Silver	Bronze	Supporter	Ķļ	Lunch	Dinner	Young Professionals Social Event	INCOLD Workshop
Inves	Investment	USD 37,000/ INR 30.00 lacs	USD 31,000/ INR 25.00 lacs	USD 25,000/ INR 20.00 lacs	USD 19,000/ INR 15.00 lacs	USD 13000/ INR 10.00 lacs	USD 6100/ INR 5.00 lacs	USD 6100/ INR 5.00 lacs	USD 6100/ INR 5.00 lacs	USD 6100/ INR 5.00 lacs	USD 3700/ INR 3.00 lacs	USD 2500/ INR 2.00 lacs
	Privileges	4 Delegates & 1 Double booth or 12 Delegates	2 Delegates & 1 Double booth or 10 Delegates	2 Delegates & 1 Single booth or 6 Delegates	1 Delegates & 1 Single booth or 4 Delegates	04 Delegates	03 Delegates	03 Delegates	03 Delegates	03 Delegates		
	Exclusive Event Sponsor with Space for pop-up banner	Welcome Reception or Cultural Evening or Farewell Banquet	ì	T	ı	ı	ı		ı	ı		ï
	Mobile App Sponsor	ā	Logo on welcome Screen	1	1	ī	1	1	D	li	a	b
	Logo on Home page ICOLD 2024 website	7	1	1	а	ī	а	1	ï	ì	ī	ï
	Speaking Opportunity	>	i	т	Д	B	Л	1	*	ï	ī	ij
səgəli	Event specific recognition Logo on promo materials	>	>	1		ï	,		ī	ì	>	,
Vi19	Slide at Opening Plenary	Logo	Logo	-		ï	-		ı	ï	ī	Ü
	Targeted email to registered delegates	2 times	1 time	1 time	u	10	ц	E.	(2)	ii)		100
	Use of ICOLD 2024 logo on promo materials	>	,	>	>	,	,	,	,	,		9
	Sponsor recognition sign at booth	^	١	>	>	>	>	>	>	>		N.
	Mobile App	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	ī	ï
	Inset in Delegate Bag	>	>	^	١	>	>	>	^	>	1.50	1
	Sponsor page of ICOLD 2024 website link to corp, website	Pogo	Logo	Pogo	Logo	Logo	Logo	Logo	овот	Logo	Гово	Logo
	On-site Signage	Logo	Logo	ово	Logo	Logo	Logo	Logo	ово	Logo	Logo	Logo
	Sponsor page of Final Bulletin	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo
	Sponsor Ribbon	7	>	7	>	7	>	>	>	>	>	7

# More than 1500 National and International Delegates, Together at one Platform

# Program at a glance

Date	Technical Programme	Accompanying person programme	Social Programme
Friday 18 October 2024	ICOLD Board Meeting		Dinner of ICOLD Board + INCOLD Representatives
Saturday 19 October 2024	<ul> <li>Registration</li> <li>ICOLD Board Meeting</li> <li>Meeting of ICOLD Board and Chairmen of Technical Committees</li> <li>ICOLD Board + Local Organizing Committee</li> <li>Congress Questions Panel meeting</li> </ul>	New Delhi City Tours	Dinner of Board + LOC and Technical Comm. Chairmen
Sunday 20 October 2024	<ul> <li>Registration</li> <li>Workshop on Pumped Storage Development</li> <li>Workshop on Tailing Dam Safety</li> <li>Technical Committees Workshops</li> <li>Young Engineers Forum Activity</li> <li>Meeting of Indian National Committee on Dam Safety, India</li> </ul>	City Tours	Welcome Reception
Monday 21 October 2024	<ul> <li>Technical Committees Meetings</li> <li>Technical Exhibition Opening Ceremony ICOLD Regional Clubs Meetings</li> <li>Young Engineers Forum Poster Session in Parallel</li> </ul>	City Tours	Dinner of ICOLD Board + INCOLD Representatives
Tuesday 22 October 2024	<ul> <li>Opening Ceremony-ICOLD Symposium on Dams for People, Water, Environment and Development</li> <li>Press Conference (Political, Board, INCOLD and Journalists</li> <li>ICOLD Symposium Contd.</li> </ul>	City Tours	Cultural Event
Wednesday 23 October 2024	<ul> <li>ICOLD Symposium</li> <li>Special Session on Innovative Financing of Dam Projects</li> <li>Technical cum excursion Tours/Visit to Tehri Dam, Rishikesh (Night Stay) / Technical Exhibition</li> </ul>	City Tours	Specific Private Receptions
Thursday 24 October 2024	<ul> <li>91<sup>st</sup> ICOLD General Assembly</li> <li>Workshops - 6 Nos.</li> </ul>	City Tours	Farewell Dinner

### **INCOLD Appeal**

Looking forward to the world Dam professionals and ICOLD family to join 92<sup>nd</sup> ICOLD Annual Meeting and Symposium in big way at New Delhi, India, to enjoy the Indian hospitality.



### **Secretariat Office**



Mr. A.K. Dinkar Secretary General, INCOLD and Secretary, CBIP



Mr. K.K. Singh Treasurer, INCOLD and Director (WR), CBIP

### ICOLD 2024 Annual Meeting/ Symposium Secretariat



Indian Committee on Large Dams (INCOLD)

Plot No. 4, Institutional Area, CBIP Building, Malcha Marg, Chanakyapuri, New Delhi, India - 110 021
Ph. 91-11-26115984/26116567 Fax: 91-11-26116347 E-mail: <a href="mailto:admin@icold2024.org">admin@icold2024.org</a>
For information, please contact:



