



**88<sup>th</sup> Annual Meeting**  
**INTERNATIONAL COMMISSION ON LARGE DAMS**  
**&**  
**Symposium on**  
**SUSTAINABLE DEVELOPMENT OF DAMS AND RIVER BASINS**

**28<sup>TH</sup> NOVEMBER – 3<sup>RD</sup> DECEMBER 2020, IEML, GREATER NOIDA, INDIA**

**Fourth Bulletin**



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**Department of Water Resources, River Development & Ganga Rejuvenation**

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## THE HOST

INCOLD is proud to host the 88<sup>th</sup> Annual Meeting of the International Commission on Large Dams in India's National Capital Region of New Delhi. INCOLD has a long tradition of collaboration with other National Committees of ICOLD and participation in the development of large Dams as well as leading in providing guidance for engineers and other professionals.

All the dam professionals contribute their expertise in developing large dams for irrigation and other multipurpose uses such as power generation with eco-friendly measures. India is 3<sup>rd</sup> in terms of number of large dams in the world after USA and China. In terms of irrigation, India ranks 2<sup>nd</sup> worldwide. The irrigated area in India is the largest, covering – 160 million ha of cultivated land out of which 39 million ha irrigated by ground water and 22 million ha by canals. About two third of cultivation in India is still dependent on monsoon. India is the 7<sup>th</sup> largest producer of hydroelectric power in the world. As on 31.03.2019, India's installed utility-scale hydroelectric capacity is 45,399 MW which is 13.10% of its total generation capacity. India's state-of-art technology being illustrated by constructing large dams like Bhakra, Tehri, Sardar Sarovar and many more mega projects. The participation in ICOLD 2020 shall encourage the Indian experts as well as global experts from Dam industry to share their experiences among dam community. This event will provide an excellent opportunity to know recent trends in Dam engineering.

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[www. ICOLD2020.org](http://www.ICOLD2020.org)

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## INVITATION FROM THE INCOLD PRESIDENT AND CHAIRMAN OF THE ORGANISING COMMITTEE



Dear ICOLD Members, Colleagues, Ladies and Gentleman,

Greetings from the Indian National Committee on Large Dams (INCOLD).

The global spread of COVID-19 coronavirus has infected millions of people around the world and is continuing at faster pace. At the moment, it's a challenge to contain the pathogen. This crisis is experienced directly by some and indirectly by all of us. It calls for greater cooperation across the borders to turn the tide. Together we shall defeat the pandemic, together we can, we will. ICOLD hopes that the Members of National Committees, their families and friends, personnel, and other people associated with them are all safe. We are also wishing the same for our international partners and other stakeholders. On behalf of ICOLD fraternity, we would like to offer our heartfelt

condolences to the families of the victims around the world. It is hoped that soon we will be able to overcome this deadly virus and stay out of danger through international cooperation.

On behalf of the INCOLD and on my personal behalf, I wish to express our solidarity with the ICOLD Family Members during the outbreak of COVID-19. Our prayers and thoughts are with the families currently dealing with COVID-19. INCOLD is closely following developments of the outbreak of coronavirus throughout the Globe. Most of the countries are affected with outbreak of COVID-19. In view of the above situation, based on the request of INCOLD, ICOLD Board has taken a decision to change the dates of ICOLD 2020 event to **28th November to 3rd December 2020** after ascertaining the availability of the same venue at New Delhi for the ICOLD event.

INCOLD also cordially invite you and your accompanying person to attend the 88th Annual Meeting of the International Commission on Large Dams and Symposium on Sustainable Development of Dams and River Basins being held in New Delhi. I would also like to invite all the Departmental Heads and professionals dealing with Dams in India to this event. India has built 5334 dams which includes dams like Bhakra, Tehri, and Sardar Sarovar and 411 dams are under construction. The Dam industry in India has contributed significantly towards meeting the growing water and power demand of the country, yet India is facing increasing pressure on water resources due to population growth, urbanization and creeping effect of climate change.

The 88th ICOLD Annual Meeting and Symposium will provide an excellent platform for researchers, scientists, engineers, policy makers and young professionals working in the field of energy and water resources management around the world. This meeting will definitely act as confluence of brilliant minds and provide an interactive platform to share path breaking ideas on the theme 'Sustainable Development of Dams and River Basins' besides Special Workshops including the workshops of the ICOLD Technical Committees.

The Indian National Committee on Large Dam (INCOLD) has prepared an excellent program in an exciting venue for the 88th Annual Meeting of ICOLD and Symposium. In view of our challenges to further develop dams and reservoirs worldwide and combating the effects of climate change, I invite you to the 88th Annual Meeting and Symposium to discuss and deliberate on emerging professional issues along with meeting the ICOLD family. Special programs have been planned for the accompanying persons. Delegates would enjoy social evening program. Besides visiting excellent technological examples of dams and hydropower projects, the delegates will also have opportunity to discover beautiful and impressive tourist sites in New Delhi and other parts of India get a taste of rich cultural heritage of the country during different tours being organized for the foreign guests to explore India.

I am looking forward to welcoming and meeting the ICOLD family, old members as well as newcomers in New Delhi.

Warm Regards

**Devendra Kumar Sharma**

*President*

Indian National Committee on Large Dams

and

*Vice President*

International Commission of Large Dams (ICOLD)



## INVITATION FROM ICOLD PRESIDENT



Dear ICOLD Members, Colleagues, Ladies and Gentlemen,

On behalf of the Directors and Central Office of International Commission of Large Dams (ICOLD), it is an honor for me to invite our 100 National Committees to send delegates and their accompanying persons to the 88<sup>th</sup> Annual Meeting of ICOLD. The meeting will be held from the 28<sup>th</sup> November - 3<sup>rd</sup> December 2020 in New Delhi, the modern and vibrant capital city of India.

The ICOLD, National Committee of India, has prepared an excellent program in an exciting location. India is a strong and important long-standing member of ICOLD. In a country with 5264 dams and 437 dams under construction, India is a top leader in the world in the development of critical water infrastructure, including important mega-projects such as Bhakhra and Tehri Dam projects and the World Bank supported Dam Rehabilitation Improvement Project. With the support of INCOLD, these modern water infrastructure projects have significantly contributed to the sustainable growth of the agriculture, water supply and power sectors in India to meet the increasing requirements of a strong nation.

I am looking forward to an exciting and memorable ICOLD 2020 Annual Meeting based on the successful past meetings organized by INCOLD, including Congresses in 1951 & 1979 and Annual Meeting in 1998. For ICOLD 2020, the ICOLD technical committees will have the opportunity to organize meetings and workshops to deliberate on recent advances and challenges being faced by dam industry. The delegates of 88<sup>th</sup> Annual Meeting will also have the chance to participate in the Symposium on “Sustainable Development of Dams and River Basins”, which will focus on important topics such as Dam Safety, River Basin Development, Flood Management and Extreme Events, Tailings Dams - Life Extension and Rehabilitation Strategies, Sedimentation Management, and Reservoir Seismicity. The expected outcomes of ICOLD 88<sup>th</sup> Annual Meeting and Symposium in India will certainly be indispensable for the global dam community.

In view of the many opportunities and challenges in our industry, I encourage you to come to the ICOLD 88<sup>th</sup> Annual Meeting in India, not only to discuss the emerging professional topics, but also to see friends in our ICOLD family. I am confident that INCOLD will arrange a high-quality technical content for the meeting along with attractive social and accompanying persons programme.

I'm looking forward to welcoming the ICOLD Family – old friends as well as new-comers in September 2020 in New Delhi, India.

Warmest regards,

A handwritten signature in black ink, appearing to read 'M. Rogers', written in a cursive style.

**MICHAEL F. ROGERS**

President of International Commission on Large Dams (ICOLD/CIGB)

The International Commission on Large Dams (ICOLD) is a non-governmental international organization which provides a forum for exchange of knowledge and experience in dam engineering. ICOLD is a leader in setting standards and guidelines to ensure that dams are built and operated safely, efficiently and economically, and are environmentally sustainable and socially equitable. Every year, ICOLD holds an Annual Meeting and Symposium in a selected country.

ICOLD membership consists of the National Committees of more than 101 countries. The Indian National Committee on Large Dams (INCOLD) is the National Committee representing India.

Technical Committees of ICOLD are the heart of the organization. Membership on each Committee is determined by the needs of the Committee and the countries that choose to be represented. An important part of the annual ICOLD event is the opportunity for all delegates to observe the meetings and workshops of the Technical Committees and interact with experts from other countries.



## ABOUT ICOLD

### MEMBER COUNTRIES

Afghanistan	Dominican Rep.	Lebanon	Serbia
Albania	Egypt	Lesotho	Slovakia
Algeria	Ethiopia	Libya	Slovenia
Angola	Finland	Luxemburg	South Africa
Argentina	Former Yug. Rep. of Macedonia	Madagascar	Spain
Armenia	France	Malaysia	Sri Lanka
Australia	Georgia	Mali	Sudan
Austria	Germany	Mexico	Sweden
Belgium	Ghana	Morocco	Switzerland
Bhutan	Greece	Mozambique	Syria
Bolivia	Guatemala	Myanmar	Tajikistan
Bosnia-Herzegovina	Guinea-Bissau	Nepal	Thailand
Brazil	Honduras	Netherlands	Tunisia
Bulgaria	Iceland	New Zealand	Turkey
Burkina Faso	India	Niger	Uganda
Cameroon	Indonesia	Nigeria	Ukraine
Canada	Iran	Norway	United Kingdom
Chile	Iraq	Pakistan	Uruguay
China	Ireland	Panama	USA
Colombia	Italy	Paraguay	Uzbekistan
Congo (Dem. Rep. of)	Ivory Coast	Peru	Venezuela
Costa Rica	Japan	Philippines	Vietnam
Croatia	Kenya	Poland	Zambia
Cyprus	Korea (Rep. of )	Portugal	Zimbabwe
Czech Republic	Latvia	Romania	
Denmark		Russia	

### ANNUAL MEETINGS AND CONGRESSES

(Congresses indicated in bold type)

1931 London	<b>1954 Paris</b>	<b>1970 Montreal</b>	1987 Beijing	2004 Seoul
1932 Paris	1955 Paris	1971 Dubrovnik	<b>1988 San Francisco</b>	2005 Tehran
<b>1933 Stockholm</b>	1956 Lisbon	1972 Canberra	1989 Copenhagen	<b>2006 Barcelona</b>
1934 London	1957 Istanbul	<b>1973 Madrid</b>	1990 Sydney	2007 St. Petersburg
1935 The Hague	<b>1958 New York</b>	1974 Athens	<b>1991 Vienna</b>	2008 Sofia
<b>1936 Washington</b>	1959 Helsinki	1975 Tehran	1992 Granada	<b>2009 Brasilia</b>
1937 Paris	1960 Tokyo	<b>1976 Mexico</b>	1993 Cairo	2010 Hanoi
1938 Vienna	<b>1961 Rome</b>	1977 Salzburg	<b>1994 Durban</b>	2011 Lucerne
1939 Zurich	1962 Moscow	1978 Cape Town	1995 Oslo	<b>2012 Kyoto</b>
1946 Paris	1963 Cairo	<b>1979 New Delhi</b>	1996 Santiago	2013 Seattle
1947 The Hague	1963 Paris	1980 Rome	<b>1997 Florence</b>	2014 Bali
<b>1948 Stockholm</b>	<b>1964 Edinburgh</b>	1981 Stockholm	1998 New Delhi	<b>2015 Stavanger</b>
1949 Brussels	1965 Lausanne	<b>1982 Rio de Janeiro</b>	1999 Antalya	2016 Johannesburg
1950 London	1966 Rio de Janeiro	1983 London	<b>2000 Beijing</b>	2017 Prague
<b>1951 New Delhi</b>	<b>1967 Istanbul</b>	1984 Tokyo	2001 Dresden	<b>2018 Vienna</b>
1952 Chicago	1968 Stavanger	<b>1985 Lausanne</b>	2002 Iguazu	2019 Ottawa
1953 Paris	1969 Warsaw	1986 Jakarta	<b>2003 Montreal</b>	2020 New Delhi



## ICOLD INFORMATION

The International Commission of Large Dams (ICOLD) is an international organization that provides a forum for exchange of knowledge and experience in dam engineering, construction and operation at the international level, ICOLD leads the profession in ensuring that dams are built safely, efficiently and without detrimental effects for the environment, ICOLD was founded in 1928 with HQ at Paris and includes 101 National Committees.

### President

Mr. M. ROGERS, ICOLD, USA (2018 - 2021)

### Secretary General

Mr. M. DE VIVO, France (2006 - Cont.)

### Vice Presidents

Mr. A. NOORZAD, Iran (2018-2021)

Mr. J.P. TOUNIER, America, Canada (2017-2020)

Mr. M. ABEBE, Africa, Ethiopia (2018-2021)

Mr. G. ZENZ, Europe, Austria (2017-2020)

Mr. Devendra Kumar Sharma, India (2019-2022)

Dr. Enrique Cifres, Spain (2019-2022)

## ICOLD TECHNICAL COMMITTEES

A Computational Aspects of Analysis and Design of Dams	J Sedimentation of Reservoirs	Q Dams Surveillance
B Seismic Aspects of Dam Design	K Integrated Operation of Hydropower Stations and Reservoirs	RE Resettlement Due to Reservoirs
C Hydraulics for Dams	L Tailings Dams and Waste Lagoons	S Flood Evaluation and Dam Safety
D Concrete Dams	LE Levees	T Prospective and New Challenges for Dams and Reservoirs in the 21 <sup>st</sup> Century
E Embankment Dams	M Operation, Maintenance and Rehabilitation of Dams	U Dams and River Basin Management
F Engineering Activities with the Planning Process for Water Resources Projects	N Public Awareness and Education	V Hydromechanical Equipment
G Environment	O World Register of Dams and Documentation	W Selection of Dam Type
H Dam Safety	P Cemented Material Dams	Y Climate Change
I Public Safety Around Dams		Z Capacity Building and Dams

## INTERNATIONAL ADVISORY COMMITTEE

Mr. Michael F. Rogers – President - ICOLD, USA

Mr. Michel de Vivo – Secretary General - ICOLD, France

Mr. Ali Noorzard – Vice President - ICOLD, Iran

Mr. G. Zenz – Vice President - ICOLD, Europe, Austria

Mr. E. Cifres – Vice President - ICOLD, Europe, Spain

Mr. J.P. Tournier – Vice President - ICOLD, America, Canada

Mr. Michael Abebe – Vice President - ICOLD, Africa, Ethiopia

Mr. Devendra Kumar Sharma – Vice President - ICOLD, India, President, INCOLD & Chairman BBMB

Mr. A. Schleiss – Hony. President - ICOLD, Switzerland

Mr. Luis Berga – Hony. President - ICOLD, Spain

Mr. C.B. Viotti – Hony. President - ICOLD, Brazil

Mr. C.V.J. Varma – Hony. President - ICOLD, India

Mr. Adama Nombre – Hony. President - ICOLD, Burkina Faso

Mr. Jia Jinsheng – Hony. President - ICOLD, China

Mr. Kaare Hoeg – Hony. President - ICOLD, Norway

Mr. J. Zhou – Hony. Vice President - ICOLD, China

Dr. Hari Suprayogi – President INACOLD, Indonesia

Eng. S. Mohanarajah – President SLNCOLD, Sri Lanka

Mr. Ujwol Koirala – President Nepal, ICOLD National Committee

Mr. U.P. Singh – Secretary, Ministry of Jal Shakti Department of Water Resources, River Development & Ganga Rejuvenation

Mr. R.K. Jain – Chairman, Central Water Commission

Mr. A.B. Pandya – Secretary General, ICID

Mr. Junaid Ahmad – Country Director, The World Bank

Mr. Hiroyasu – President JCOLD, Japan

Mr. Ignacio Escuder-Bueno – President SPANCOLD, Spain

Mr. Chhewang Rinzin – President Bhutan ICOLD National Committee

Dr. Martin Wieland – Chairman, ICOLD Committee on Seismic Aspects of Dam Design, Switzerland

Mr. S.N. Sahai – Secretary - Power

Mr. Kenichi Yokoyama – Country Director, Asian Development Bank



## ORGANIZING COMMITTEE

### Chairman

Mr. D.K. Sharma, President, INCOLD & Chairman, BBMB

### Co-Chairmen

Mr. A.K. Singh, Vice President, INCOLD & CMD, NHPC Ltd.

Mr. D.V. Singh, CMD, THDC Ltd.

Mr. N.L. Sharma, CMD, SJVNL Ltd.

### Organizing Secretary General

Mr. V.K. Kanjlia, Secretary General, INCOLD & Secretary, CBIP

## TECHNICAL COMMITTEE

**Chairman :** Mr. A.B. Pandya, Secretary General, ICID

### Co-Chairmen

Mr. Balraj Joshi, Former CMD, NHPC Ltd.

Dr. R.K. Gupta, Member (D&R), CWC

Mr. R.K. Vishnoi, Vice President, INCOLD and Director (Tech.), THDC Ltd.

**Convener :** Dr. G.P. Patel, Director-WR, CBIP

## ICOLD-2020 WORKING GROUP

<b>Chairman</b>	: Mr. D.K. Sharma, President, INCOLD
<b>Co-Chairmen</b>	: 1. Mr. Pramod Narayan, Project Director (DRIP), CWC 2. Dr. C. Rajagopal Singh, TTL (DRIP), World Bank 3. Mr. V.K. Kanjlia, Secretary General, INCOLD
<b>Members</b>	: 1. Dr. G.P. Patel, Director – WR, CBIP 2. Mr. Rajendra Kumar, FA & CAO, BBMB 3. Mr. Tarun Agarwal, Secretary, BBMB 4. Mr. Saurav Sharan, Deputy Director – DRIP, CWC 5. Mr. Gaurav Singhai, Deputy Director – DRIP, CWC 6. Mr. Yogesh N. Bhise, Deputy Director – DRIP, CWC 7. Officers from NHPC, THDC, SJVNL and NEEPCO
<b>Member Secretary</b>	: 1. Mr. Sunil Sharma, Chief Manager – Technical, INCOLD 2. Mr. M. Bhaskara Reddy, CPMU, DRIP

## Conference Hotels



Crowne Plaza  
Greater Noida



Radisson, Greater Noida



Le-Meridian, New Delhi



Jaypee, Greater Noida



## NEW DELHI – INDIA'S CAPITAL CITY

New Delhi is the vibrant capital of modern India. The city was designed by British architects, Sir Edwin Lutyens and Sir Herbert Baker and the new capital was inaugurated on 13 February 1931, by Viceroy and Governor-General of India H.E. Lord Irwin. The National Capital Region is a much larger entity comprising the entire NCT along with adjoining districts in neighbouring states.

For the ease of delegates and companions, ICOLD 2020 activities and accommodation will be centred in New Delhi and Greater Noida lively and safe. Easy access to entertainment, shopping centres and open-air markets, recreation and culture – Old Delhi,; Humayun's Tomb & Qutub Minar; Akshardham Temple; Yoga Session (Mind, body and Soul @ Peace); Buddh International Circuit, Flavours of India – Introduction to the real essence of authentic Indian cooking; Bringing Smile: Feel the vibes of friendship and happiness flow through your soul– create once-in-a- lifetime experiences for all those participating in ICOLD 2020.







## TECHNICAL PROGRAM

International delegates from around the world will share their expertise in dams and related equipment for hydropower, water resources and the mining industry.

### The technical program will include:

- ICOLD Symposium – Sustainable Development of Dams and River Basins
- APG Symposium on Water and Dams
- ICOLD Technical Committee Meetings – Special invites as observer
- ICOLD Technical Committee Workshops – Introducing new topics, and summarizing completed Bulletins
- Workshops 8 Nos. – Covering wide range of technical subjects in collaboration with ICOLD experts
- Special Sessions – Innovative Financing on Dam Projects, Tailing dams and Use of Geo-synthetics in Dam Engineering
- Technical and study tours

## SYMPOSIUM

### Theme : Sustainable Development of Dams and River Basins

The theme will be addressed through technical and poster presentations on the following topics :

#### (1) Innovation

Modern Technologies in Survey and Investigation for Sustainable Dam Development and Simulation Methodologies for Dam Analysis and Design

#### (2) Sustainable Development

River Basin Development and Management including Optimization of Reservoirs Operation and Innovative Construction Methodology and Contracting Practices

#### (3) Extreme Conditions

Impacts of Climate Change – Sustainable Dams and Hydropower Development including Pumped Storage and Engineering Challenges and Safety of Tailing Dams.

#### (4) Dam Safety, Risk Assessment and Management and Rehabilitation of Dams

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.

### Call for Abstract and Full text of paper for Symposium

The last date for submission of abstract and full text paper for the ICOLD Symposium to be uploaded on the Conference website ([www.icold2020.org](http://www.icold2020.org)) after signup is 31st August 2020.

## APG SYMPOSIUM ON WATER & DAMS

### Theme: Sustainability: Way Forward to Identification, Evaluation and Implementation of Policies and Practices in Water Industry

The 5th Asia-Pacific Group International Symposium earlier scheduled on 10-11 December 2019 at Tehran, Iran will now be held in parallel to ICOLD 2020 Symposium on 1st - 2nd December 2020 at New Delhi. This international symposium will also provide an excellent opportunity for dam professionals to present and exchange their experiences and the latest developments related to the design, performance, rehabilitation and environmental aspects of dams. 70 technical papers received from dam professionals from different Asian countries will be presented during the symposium

## ICOLD TECHNICAL COMMITTEES

### Committee Workshops (Sunday, 29<sup>th</sup> November, 2020)

In addition to the full day of meetings, some Technical Committees will present workshops on Sunday, 27<sup>th</sup> September, which are open to all interested delegates. Workshops are required for every committee that is starting a new mandate, so that the work will appropriately reflect international requirements and conditions. Similarly, when a committee has completed a draft Bulletin, they present their approaches and findings to obtain feedback from a broad representation of ICOLD delegates. The workshop program is available on the ICOLD 2020 website.

### Open Committee Meetings (Monday, 30<sup>th</sup> November, 2020)

As part of the program for the 88<sup>th</sup> Annual Meeting, all delegates are invited to attend the meetings of ICOLD Technical Committees as observers, to gain insight into the development of the ICOLD Technical Bulletins that are so influential on dam engineering and development practices around the world.



## WORKSHOPS

### Pumped Storage Hydropower for Meeting Energy Storage and Need to Support High Penetration of Renewable Energy in Indian Grid, Sunday, 29th November 2020

The renewable energy (RE) penetration in the grid in India is continuously increasing. India has promised in its Nationally Determined Contributions in Paris COP to reduce CO2 intensity of GDP by 33-35% and have a non-fossil fuel capacity of 35 – 40% by 2030, which is further being enhanced. Integration of such massive amounts of RE which are intermittent and distributed in the power system poses serious challenges to grid operations. The studies and analysis show that extra flexibility investments in the Indian grid are needed on fast track for managing the RE resources efficiently. Energy storage is going to play critical role in grid integration and management of RE as the share of RE in the grid increases. The Pumped Hydropower Storage (PHS) accounts for the vast majority of installed energy storage capacity worldwide. PHS provides large-scale energy storage; enabling balancing of variable renewable resources such as wind and solar photo volatics (PV) on time scales from seconds to seasons, and it can also provide a number of non-energy services to support reliable grid operation.

A Half day workshop on “PSH-for meeting energy storage need to support high penetration of RE in Indian Grid” on 29<sup>th</sup> November 2020 during the ICOLD 2020 event is proposed so that world community can deliberate and some doable action may be undertaken by all stakeholders.

#### Objectives

- The underlying drivers of PHS deployment i.e. technical, economic, market, and policy drivers have caused decision-makers to invest in the large scale energy storage provided by PHS in other countries and how such investment can be encouraged in India.
- Quantifying the value of unique range of possible flexibility capabilities provided by hydropower and how the cost is to be distributed between different stakeholders.
- As hydropower developments are multipurpose activity, value of hydropower and reservoir to society in terms of water management services should be evaluated and accounted for.

#### Topics to be Deliberated

- Global status of PSP Technology, installation and large scale RE integration – An overview
- Current trends and future challenges in pumped-storage hydropower plants
- Economic Evaluation and Financial viability of PSP Plants Case Studies – Global Experiences
- Sustainable Business Model for PSP
- Regulatory Challenges and Policies for PSP Growth

### Target Participants

Leading CEOs of hydropower and PHS generating companies, bilateral and multilateral financial institutions (World Bank, IFC, ADB, JICA etc.), regulators, consultants, PHS equipment manufacturers, dam owners, government policy makers.

### Tailings Dam Safety

**Sunday, 29<sup>th</sup> November – Tuesday 1<sup>st</sup> December , 2020**

The world is focussing on tailings dam safety in a genuine attempt to improve the performance of the important structures. ICOLD is taking a leading role in this effort, with development of technical guidelines and education of practitioners to help raise the level of understanding and skills of industry.

This ICOLD workshop brings together a number of eminent engineering professionals to share state of the art knowledge on investigation, design, construction, operation and closure of tailings dams. The workshop will introduce aspects of the new ICOLD Technical Guidelines for Tailings Dam Safety with detailed demonstration on its application. This workshop highlights the collaborative nature of the world dams industry and the willingness of ICOLD members to share knowledge for the benefit of the broader industry.

This workshop will help managers, designers and mine operational personnel involved in tailings management, to understand current international best practice and help them understand how to improve tailings dam safety.

The workshop will feature technical presentations from leading practitioners in the field of tailings dam design and operation, including:

- **Overview of Current Practice** – background to existing documents leading to the development of the Global Standard – the status of the ICOLD Technical Guidelines on Tailings Dam Safety
- **Understanding of Consequence Category** – Use of Dam Break simulation and flood mapping to highlight identification of consequences and selection of Consequence Category
- Latest developments in Site Investigations including deciding the scope and extent to limit unknowns
- Assessment of the potential for liquefaction, determining residual strength and designing for liquefaction
- **Stability Analysis** – Cases – Selection of Design Parameters– understanding Factors of Safety – need for and how to do Deformation modelling
- **Water Management** – Hydrology – flood selection - spillway systems during operation and closure
- **Risk Assessment** – Qualitative and Quantitative Risk Assessment – how to do it and how to use it



- **Operations** – Governance and Organisation Structure  
- Preparing Operation Maintenance and Surveillance (OMS) Manuals and Emergency Response Plans (ERPs)
- **Closure** - How should closure be tied into the life cycle? - What are today's requirements?

Workshop sessions will allow attendees opportunity for discussion of vital issues affecting our industry approach to tailings dam design operation and closure.

**Presenters/Panel** – Eminent practitioners from ICOLD member countries including ANCOLD, CDA and USSD.

## SPECIAL SESSIONS

### Innovative Financing in Dam Projects

Tuesday, 1<sup>st</sup> December 2020

During the ICOLD 2020 event a Special session on “**Innovative Financing of Dam Projects**” will be organized by ICOLD to have presentations from ICOLD, World Bank, Asian Development Bank, Africa Development Bank and Power Finance Corporation followed by panel discussions about the modalities and various aspects of financing the dam projects (new dams as well as rehabilitations). The broad topics likely to be covered up during the session are key elements in dam projects financing including leverage financing from private sector, Donor agencies and contractual options for project implementation.

### Use of Geo-synthetics in Dams Engineering

Wednesday, 2<sup>nd</sup> December 2020

Construction of new dams and repairs of existing dams require usage of newer materials in order to ensure desired performance level to be attained. Application of geo-synthetics has a huge scope in construction and repairs of dams. Projects executed worldwide have proven the performance of geo-synthetics. Cost effectiveness and longevity points of view geo-synthetics are better with ease of application in several problems. A detailed deliberation on Application of Geo-synthetics in Dam Engineering is going to be an added feature of the ICOLD 2020 as a special session.

### ICOLD Workshops – Thursday, 3<sup>rd</sup> December, 2020

The Indian Committee on Large Dams (INCOLD) is offering the following six workshops on 1st October 2020 during the ICOLD event with the help of ICOLD international experts to update the knowledge of young professionals working with Govt. as well as private agencies who are involved with the development of dam engineering. These workshops will provide an opportunity to the participants for dissemination of the international state of the art and good practices by interacting with world renowned experts who will be sharing their experiences while delivering lectures and presenting the Case studies.

#### 1. Numerical Analysis of Dams

- Numerical methods applied and interpreted for safe dam behaviour

- Current challenges for seismic numerical modeling of dams
- Advances in dynamic analysis of Gravity Dams
- Numerical modeling for health checking of existing dams

#### 2. Roller Compacted Concrete Dams

- Materials and mix design
- Pitfalls and difficulties associated with RCC dam design and construction
- Construction methodologies and quality control
- Performance of modern RCC dams and monitoring
- RCC dams on non-rock foundation
- Upgrading of old dams with RCC
- Technological innovations and new trends

#### 3. Reservoir Operation for Handling of Extreme Events

- Flood Evaluation, Hazard Determination and Risk Management
- Impact of climate change
- Optimal Operation of Cascade Hydropower Stations and Reservoirs
- Optimal operation technology, decision-making systems, optimal scheduling platforms, new technology applications in related fields, etc.

#### 4. Life Extension Technologies and Strategies for Aging Dams

- Aging of dams: Concrete deterioration, reduction in drain efficiencies, foundation erosion, cavitation etc.
- Estimation and control of Seepage through foundation and dam body
- Health checking of concrete gravity dams and refurbishment/treatment technologies.

#### 5. Sedimentation Management in Reservoirs for Sustainable Development

- Reservoir sedimentation and best practices of storage design
- Sediment flushing, Improving flushing efficiencies
- Sediment replenishment downstream, turbidity current and sediment bypass tunnels
- Climate change effects
- Sediment management in cascade reservoirs

#### 6. Seismic Analysis of Dam Design and Safety Evaluation of Existing Dams

- Seismic aspects in the design of embankment and rock fill dams with special emphasis on computational aspects
- State of the art nonlinear seismic analysis
- Seismic safety evaluation of concrete dams

#### Call for Abstract and Full text of paper

The last date for submission of abstract and full text paper for the workshop to be uploaded on the Conference website ([www.icold2020.org](http://www.icold2020.org)) after signup is 31st August 2020.



## YOUNG PROFESSIONALS (MONDAY 30<sup>th</sup> November)

ICOLD 2020 will offer a unique learning opportunity for individuals from around the world who are in the early stages of their careers. As well as specific events and initiatives targeted at these delegates, the ICOLD 2020 event integrates young professionals (age 35 and under) into all aspects of the program.

Young professionals are especially encouraged to attend ICOLD Technical Committee meetings and workshops, in addition to the Symposium and other events. Attendance will provide a unique opportunity to engage with technical subject matter experts from around the world and participate in the development of leading practices.



Companies and ICOLD National Committees will benefit by having young professionals attend this international event, where they can establish contacts with technical leaders and organizations at the forefront of dam engineering.

### The Young Professional program will include:

- ICOLD Young Engineers Forum
- Networking event for young professionals
- Young professional paper award
- Young professional poster award
- Sponsorship categories to support young professionals

- Mentorship opportunities
- Information booth in Exhibition Hall

### Co-ordinator :

**Mr. Tarun Agarwal**

Secretary, BBMB

Mobile No. +91 9417863728; +91 8178118104

E. mail: mahadev395@gmail.com; secy@bbmb.nic.in

## HOTELS

ICOLD 2020 has reserved room blocks and negotiated special conference rates for participants in a selection of hotels that are near to India Expo Centre & Mart, Greater Noida. Information about the hotels including descriptions and amenities is available on the ICOLD 2020 website.

Please note that delegates must make hotel reservations through the ICOLD 2020 PCO, after having completed their registration for the ICOLD event. Hotel will not take reservation other than the Conference PCO.

Sr. No.	Hotel	Category	Distance from IEML	Single INR / USD	Double INR / USD	Taxes
1	Jaypee, Greater Noida	5 Star	2 km	10000/143	10500/150	18%
2	Crowne Plaza, Greater Noida	5 Star	8 km	8500/122	8500/122	18%
3	Radisson, Greater Noida	5 Star	5 km	8000/114	8000/114	18%
4	Le-Meridian, New Delhi	5 Star	40 km	8000/114	8000/114	18%
5	Shangri-la, New Delhi	5 Star	40 km	7500/107	7500/107	18%
6	Royal Plaza, New Delhi	4 Star	40 km	7000/100	7000/100	Included
7	Sandal Suites by Lemon Tree, Greater Noida	4 Star	14 km	7000/100	7000/100	18%
8	Angel Residency, Greater Noida	2 Star	4 km	4750/68	5400/77	12%
9	Grand Heritage Resort, Gerater Noida	2 Star	6 km	3500/50	3800/54	12%

## Housing / Accommodation

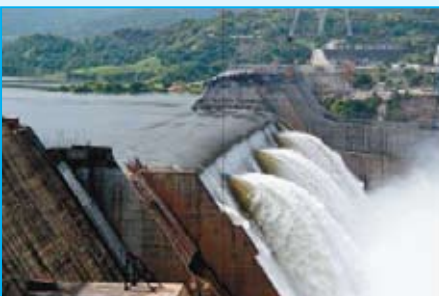
You must first register for ICOLD 2020 to access the PCO. By booking within the room block, you are supporting ICOLD 2020. A link will be followed for booking of hotel accomodation after you register.

**Housing Advisory** : ICE is the official PCO for ICOLD 2020, and the only organization authorized to liaise on behalf of ICOLD 2020 for hotel room reservations. Should you be contacted by a supplier by email and or telephone indicating that you must book your accommodations, DO NOT engage with them.



## ICOLD 2020 ANNUAL MEETING PROGRAMME

Date	Technical Programme	Accompanying Person Programme	Social Programme
<b>Saturday</b> 28 <sup>th</sup> November 2020	<ul style="list-style-type: none"> <li>Registration (09:00 - 17:00)</li> <li>ICOLD Board Meeting (09:00 - 18:00)</li> <li>Meeting of ICOLD Board + Local Organizing Committee (18:00 - 19:30)</li> <li>National Committee Meeting on Dam Safety – India (10:30 - 13:00)</li> </ul>	New Delhi City Tours (14:00 - 17:00 hrs)	Dinner of ICOLD Board + LOC and Technical Committee Chairmen (20:00 - 22:00)
<b>Sunday</b> 29 <sup>th</sup> November 2020	<ul style="list-style-type: none"> <li>Registration (09:00 - 17:00)</li> <li>Meeting of Technical Committee Chairmen with ICOLD Board (09:00 – 11:00 )</li> <li>Workshop on Pumped Storage Hydropower (11:00 - 17:00)</li> <li>Workshop on Tailing Dam Safety (11:00 - 18:00)</li> <li>ICOLD Technical Committee Workshops (11:00 - 18:00)</li> <li>Congress Questions Panel meeting (18:00 - 19:00)</li> </ul>	City Tours	Welcome Reception (20:00 - 22:00)
<b>Monday</b> 30 <sup>th</sup> November 2020	<ul style="list-style-type: none"> <li>Technical Committees Meetings (09:00 - 16:30)</li> <li><b>Technical Exhibition Opening Ceremony at 11:00</b></li> <li>ICOLD Regional Clubs Meetings (17:00 - 19:00)</li> <li>Young Engineers Forum Poster Session in Parallel (17:00 - 19:00)</li> <li>Young Engineers Forum (18:00 - 19:30)</li> </ul>	City Tours	Specific Private Receptions Free for Regional Clubs (20:00 - 22:00)
<b>Tuesday</b> 1 <sup>st</sup> December 2020	<ul style="list-style-type: none"> <li><b>Opening Ceremony - ICOLD Symposium on Sustainable Development of Dams and River Basins and APG Symposium on Water and Dams (09:30 - 11:00)</b></li> <li>Press Conference (Political, Board, INCOLD and Journalists (11:00 - 11:30)</li> <li>ICOLD Symposium Plenary Session (Continued.) (11:30 - 13:00)</li> <li><b>Special Session on Innovative Financing of Dam Projects (14:00 - 15:30)</b></li> <li>ICOLD Symposium and APG Symposium (Continued) 7 Parallel Sessions</li> <li>Technical Exhibition (11:00 - 18:00)</li> <li>Francophone Delegates Meeting (18:00 - 19:00)</li> </ul>	City Tours	Young Engineers Social evening (19:00 – 21:30 hrs)
<b>Wednesday</b> 2 <sup>nd</sup> December 2020	<ul style="list-style-type: none"> <li><b>ICOLD Symposium and APG Symposium (Continued)</b> (09:00 - 18:00) 7 Parallel Sessions</li> <li>Technical Tours (Virtual) at IEML/Visit to Agra (08:00 - 19:00)</li> <li>Technical Exhibition (11:00 - 18:00)</li> </ul>	City Tours	Cultural Event (19:30 – 22:00 hrs.)
<b>Thursday</b> 3 <sup>rd</sup> December 2020	<ul style="list-style-type: none"> <li>88th ICOLD General Assembly (09:00 - 18:00)</li> <li>Workshops - 6 Nos. (09:00 - 18:00)</li> </ul>	City Tours	Farewell Dinner (19:30 - 22:30)





## REGISTRATION FEE

SAARC Countries		Foreign Delegates	
Registration Category	Registration Fee*	Registration Category	Registration Fee*
SAARC Countries (Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka)	Rs. 35,000	ICOLD Member Countries	USD 1450
<b>Indian Delegates</b>			
Young Delegate	Rs. 17,500	ICOLD Non-Member Countries	USD 1650
ICOLD Symposium	Rs. 20,000	Young Engineer and Research Student (age 35 and younger)	USD 750
INCOLD Workshops - 6 Nos.	Rs. 20,000	Only Symposium	USD 750
Educational Institutions - Symposium and Workshop	Rs. 20,000	Only Workshops- 6 Nos.	USD 750
		Accompanying Person	USD 750
<b>Exhibitor</b>			
Exhibitor (Space only)		USD 5600 (3 x 3 m space)	
Exhibitor (With stand)		USD 6700 (3 x 3 m space)	

\*GST extra @ 18%.

### PAYMENT

- Registration fees will be paid in USD/INR by Credit Card (Visa, Master Card or American Express) through website [www.icold2020.org](http://www.icold2020.org)
- By bank transfer as per details given below :  
**Bank Details : Name of Account :** CBIP ICOLD 2020; **Account No.** 50100305465202; **Bank Name & Branch :** HDFC Bank Ltd, 209-214, Kailash Building, 26, Kasturba Gandhi Marg, New Delhi-110001; **IFSC Code :** HDFC0000003; **MICR Code :** 110240001; **SWIFT Code :** HDFCINBBDEL **PAN No. of CBIP :** AAAJC0237F **GST Number of CBIP :** 07AAAJC0237F1ZU
- All Registration and activity fees are subject to Tax (GST @18%)

### Full Delegate Registration

- Admission to committee meetings and workshops, ICOLD symposium, APG symposium and technical exhibition
- Delegate bag, name badge and conference materials
- Coffee breaks, lunches, Exhibitor Reception and social activities, Saturday, 29<sup>th</sup> November to Thursday, December 3, 2020
- Mobile app for IOS and Android smartphones and tablets

### Young Engineer and Research Student

Young Professionals are delegates aged 35 years and under, as of April 01, 2020. Proof of age will be required at on-site registration.

- All benefits of Full Delegate Registration
- Young Professional networking activity (Monday, 30<sup>th</sup> November, 2020)

### Accompanying Persons

- Coffee breaks, lunches and social activities, Saturday, 28<sup>th</sup> November to Thursday, 3<sup>rd</sup> December, 2020
- Mobile app for IOS and Android smartphones and tablets

### Symposium / Workshop only

- Delegate bag, name badge and conference materials
- Coffee breaks, lunches, Exhibitor Reception and social activities for Symposium Only from Tuesday, December

1 to Thursday, December 3, 2020 and for Workshop only on Thursday, December 3<sup>rd</sup> 2020.

- Mobile app for IOS and Android smartphones and tablets

### Exhibitor

- Coffee breaks, lunches Exhibitor Reception and social activities, Monday, 30<sup>th</sup> November to Wednesday, 2<sup>nd</sup> December, 2020
- Mobile app for IOS and Android smartphones and tablets

For Social Function following charges are applicable :

Welcome Reception	USD 75
Cultural Event	USD 100
Farewell Dinner	USD 100

### Registration Policies

Registration fees must be paid in US dollars and paid in full by credit card (VISA, MasterCard or American Express) at time of registration.

*All registration and activity fees are subject to 18% GST+ bank convenience charges*

### 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 2020 Annual Meeting/ Symposium Secretariat no later than 30 October, 2020.

*After 30<sup>th</sup> October, 2020, registration fees are non-refundable.*



## NEW DELHI CITY TOUR

Delegates will begin their ICOLD 2020 experience with a city tour of New Delhi featuring a captivating past, an abundance of culture and filled with historic buildings and world-class museums, the highlights of the city tour include President House, Humanyun's Tomb, Qutub Minar, Old Delhi City Tour, Temple Tour, Yoga Sessions & Shopping Tour.

**On 29<sup>th</sup> November 2020 New Delhi City Tours will be free of cost (FOC) for registered delegates for ICOLD 2020 event. India Gate, War Memorial, Rashtrapati Bhawan and Parliament House (14.00 - 17.00)**

Date & Time	Tours	Duration	Fee
29th November 2020 (09.00 - 12.00)	Visit to Old Delhi, Rickshaw Ride through the colourful Bazaars of Old Delhi	4 hrs	USD 57 + taxes per person
(14.00 - 18.00)	Temple Tour of Delhi	4 hrs	
30th November 2020 (09.00 - 14.00)	Visit to New Delhi including visit to Humanyun's Tomb & Qutub Minar	6 hrs	USD 74 + taxes per person
(15.00 - 18.00)	Shopping Tour	4 hrs	
1st December 2020 (10.00 - 12.00)	Bringing Smile: Feel the vibes of friendship and happiness flow through your soul	4 hrs	USD 74 + taxes per person
(14.00 - 18.00)	Akshardham Temple Tour	4 hrs	
3rd December 2020 (07.00 - 08.00)	Yoga Session (Mind, body and Soul @ Peace)	1 hr	USD 33 + taxes Per person
(10.30 - 12.30)	Flavours of India - Cooking Acitivity	2hr	

**Local City Tours are free for the registered Accompany Person.**

## ONE DAY EXCURSION TO AGRA - 2<sup>nd</sup> December 2020

*Monument of Love* : Taj Mahal - The greatest love story ever told - On the death of his beloved wife Mumtaz Mahal, in wild extravagance, Shah Jahan built her this memorial. This is one of the Seven Wonders of the World.

**Duration: 12 hrs.**

Agra Fort is a historical fort in the city of Agra in India. It was the main residence of the emperors of the Mughal Dynasty until 1638, when the capital was shifted from Agra to Delhi. Before capture by the British, the last Indian rulers to have occupied it were the Marathas. In 1983, the Agra fort was inscribed as a UNESCO World Heritage site. It is about 2.5 km northwest of its more famous sister monument, the Taj Mahal. The fort can be more accurately described as a walled city.

### TOUR COST

- USD 60 + Taxes Per Person
- USD 150 + Taxes Per Person for 02 Pax by Taxi

### Package Include

Cost mentioned above includes:

- Day Trip to Agra on Volvo Coach
- Lunch at Agra
- English Speaking Guide
- Entrance fee to Monuments i.e., Taj Mahal & Agra Fort.



Taj Mahal



Agra Fort



## POST-MEETING STUDY TOURS

Participants are encouraged to extend their stay in India as part of the post-conference study tours.

Post-conference study tours will take place in Goa, Bangalore, Hyderabad, Vadodara, Varanasi and Uttarakhand. During these trips, participants will have the opportunity to visit some of India's most interesting dams, hydroelectric projects and mining sites over a period of 3 to 4 days. Tour descriptions and costs available on the ICOLD 2020 website.

Technical Tours	Duration	Fee
Glimpse of India's Royal & Cultural Heritage (Golden Triangle Tour)	2 night & 3 days	USD 311 + Taxes per person Single Room Supplement USD 71 + taxes
Delhi-Goa-Kalinadi Hydroelectric Project-Goa-Delhi	3 Night & 4 Days	USD 745 + Taxes per person Single Room Supplement USD 208 + taxes
Delhi-Bangalore-Mysore-Brindavan Garden Krishnarajasagara Dam-Delhi	2 night & 3 days	USD 206 + Taxes per person Single Room Supplement USD 71 + taxes
Delhi Varanasi-Delhi	2 night & 3 days	USD 229 + Taxes per person Single Room Supplement USD 128 + taxes
Delhi-Vadodara-Sardar Sarovar-Vadodara-Delhi	2 night & 3 days	USD 286 + Taxes per person Single Room Supplement USD 64 + taxes
Delhi- Hyderabad- Nagarjuna Sagar- Hyderabad-Delhi	3 night & 4 days	USD 501 + Taxes per person Single Room Supplement USD 233 + taxes
Delhi – Haridwar – Rishikesh- Tehri Dam – Mussoorie – Dehradun –Delhi	2 night & 3 days	USD 505 + Taxes per person Single Room Supplement USD 174 + taxes
Delhi – Ramganga Dam- Corbett- Nainital- Tanakpur-Delhi	3 Night & 4 Days	USD 827 + Taxes per person Single Room Supplement USD 245 + taxes
Delhi - Sri Lanka - Moragahakanda Dam/ Victoria Dam-DELHI	4 Nights & 5 Days	Cost per person sharing Double : \$ 430.00 Single Supplement : \$ 160.00 Triple reduction : \$ 20.00
Delhi - Sri Lanka - Uma Oya Dam/ Samanalawewa Dam-Sri Lanka	4 Nights & 5 Days	Cost per person sharing Double : \$ 385.00 Single Supplement : \$ 140.00 Triple reduction : \$ 7.00
Delhi - Sri Lanka- Broadlands Dam/ Upper Kothmale Dam	2 Nights & 3 Days	Cost per person sharing Double : \$ 345.00 Single Supplement : \$ 100.00 Triple reduction : \$ 20.00

### Post-Meeting Study Tours will operate from 4<sup>th</sup> December, 2020 onwards

#### Package include

- Accommodation on twin sharing basis at all the hotels
- American buffet breakfast at all the hotels
- English Speaking assistance upon arrival / departure
- Transportation
- English Speaking Local Guide for the visits as per Itinerary for monument visit only

#### Package does not include

- Any other cost/item not mentioned in the package & Taxes
- GST Additional.
- Lunch or Dinner (Meals)





## SPONSOR OPPORTUNITIES

Opportunities Available	Diamond	Platinum	Golden	Silver	Bronze	Supporter	Kit Sponsor	Lunch Sponsor	Dinner Sponsor	Young Professionals Social Event	INCOLD Workshop
Opportunities Available	3	4	6	6	6	6	03 delegates	03 delegates	03 delegates	1	
Investment	USD 30000/ INR 25.00 lacs	USD 25000 / INR 20.00 lacs	USD 18,000/ INR 15.00 lacs	USD 11000/ INR 10.00 lacs	USD 7000/ INR 7.50 lacs	USD 5000/ INR 5.00 lacs	USD 5000/ INR 5.00 lacs	USD 5000/ INR 5.00 lacs	USD 5000/ INR 5.00 lacs	USD 4000/ INR 3.00 lacs	USD 3000/ INR 2.00 lacs
Benefits	4 delegates and 1 double booth or 12 delegates	2 delegates and 1 double booth or 10 delegates	2 delegate and 1 single booth or 06 delegates	1 delegate and 1 booth or 04 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										
Mobile App Sponsor		Logo on welcome screen									
Logo on home page ICOLD 2020 website	✓										
Speaking Opportunity	✓										
Event specific recognition <sup>3</sup> Logo on promo materials	✓	✓								✓	✓
Slide at Opening Plenary	Logo	Logo									
Targeted email to registered delegates	2 times	1 time	1 time	-	-	-	-	-	-		
Use of ICOLD 2020 logo on promo materials	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sponsor recognition sign at booth	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mobile App	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo		
Insert in Delegate Bag'	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sponsor page of ICOLD 2020 website link to corp. website	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo
On-site signage	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo
Sponsor page of Final Bulletin	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo	Logo
Sponsor Ribbon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

1. Double booth includes 2 exhibitor registrations
2. Includes 1 exhibitor registration
3. Does not include events with exclusive sponsors such as Young Professionals' Event, Technical Tours, etc.
4. Technical Tour Sponsors will receive one complimentary tour registration for the tour sponsored.
5. Workshop Sponsors will receive benefits specific to the workshop sponsored i.e. signage outside workshop room, verbal acknowledgement at the beginning of the workshop, one complimentary workshop registration for the workshop sponsored and the workshop sponsor can also provide a promotional item as a handout at the workshop.

## 2000 International Delegates Together in one Place



## EXHIBITION

The central hub of ICOLD 2020 will be a multi-functional Exhibition where products and services of interest to the dam community will be on display. Delegates will visit the exhibition for refreshments, presentations, poster displays and networking.

### Your business will benefit from:

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

### The Exhibition will feature:

- All exhibitors in the same room
- All ICOLD 2020 activities in the same facility while the Exhibit Hall is open
- Plenary sessions on the same floor as the Exhibit Hall
- Complimentary food & beverage for delegates in the Exhibit Hall
- Special “Exhibitor Reception” in the Exhibit Hall with no competing events, and no additional cost to delegates or exhibitors

### Booth Package

Booth Package 9m<sup>2</sup> (3 m x 3 m)

If you do not wish to build your own stand, the Booth Package is an excellent choice! We will then take care of the basic needs, such as wall panels, electricity and carpeting. Booth Packages are available from 9 m<sup>2</sup> (3 m x 3 m).

For 3 x 3 m space	
Exhibitor (Space only)	USD 5600
Exhibitor (With stand)	USD 6700
*GST extra @18%	

### Included services for Booth with Stand:

- White-walled panels
- One spotlight
- One electrical outlet
- A fascia with name board, including regular lettering in black, in a standard style on the open sides of the booth
- Carpet (4 choices of colours)
- Booth cleaning
- Furniture: 1 counter, 2 high chair or stools, 1 green plant, wastebasket, 1 brochure rack
- 1 congress fee incl. congress catering and all social Events

### Included services for Booth with Space Only:

- The Space Only option offers you a unique chance to create and build your own stand.
- Please note when booking this service just one 6' table and two chairs are included.
- All other services can be booked separately; this information will be provided upon request. The purchase of at least one exhibitor badge is obligatory.
- The number of exhibit spaces is limited



## GENERAL INFORMATION

### VENUE

The event will take place in the India Expo Centre, most suitable Venue for ICOLD 2020 Event. The venue is located in the National Capital Region of New Delhi i.e., Greater Noida. The Expo Centre is within easy access from the metro station and shopping malls. The India Expo Centre is at a distance of 45 minutes drive from the Indira Gandhi International Airport, Delhi



This state-of-the-art, multi-functional venue with a rare combination of technology merged with world-class facilities and safety standards is suitable for hosting international business-to-business exhibitions, conferences, congresses, product launches, promotional events and most predominantly act as a centralized contact point for overseas buyers and the cottage based manufacturer exporters for conducting business.

### Registration and Hotel Bookings

- Information on registration and hotels can be found at [www.icold2020.org](http://www.icold2020.org)
- Registration has started
- A Letter of invitation for obtaining travel Visas will be available on the ICOLD 2020 website

### Passport and Visa

- Check with Indian High Commission, Embassy, Consulate or travel agent to find out what documents are required
- To enter India which may be obtained from [www.indianvisaonline.gov.in](http://www.indianvisaonline.gov.in).
- MEA and MHA clearances are available under item "General Information" on Conference Website Homepage.

### Language

- Hindi and English are most spoken languages in India.

### Weather

- The weather in November/December can range from a low of 9 degrees Celsius, to a high of 28 degrees Celsius.

### Currency

- Indian Rupees (INR)

### Electricity

- India's electrical supply and outlets (sockets, wall plugs) of 220 Volts and 50 Hertz (cycles per second).

### Distance from Airport

- The New Delhi International airport is 40-50 minute drive from ICOLD 2020 venue.

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## FOR INFORMATION, PLEASE CONTACT

### ICOLD 2020 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 : [admin@icold2020.org](mailto:admin@icold2020.org)

### SPONSORS AND EXHIBITION MANAGEMENT

**Mr. Sunil Sharma**  
*Chief Manager, (Technical) CBIP*  
Ph. 91-11-26116567/26115984,  
Fax : 91-11-26116347  
E-mail : [sunil@cbip.org](mailto:sunil@cbip.org) M : 91-9811299136

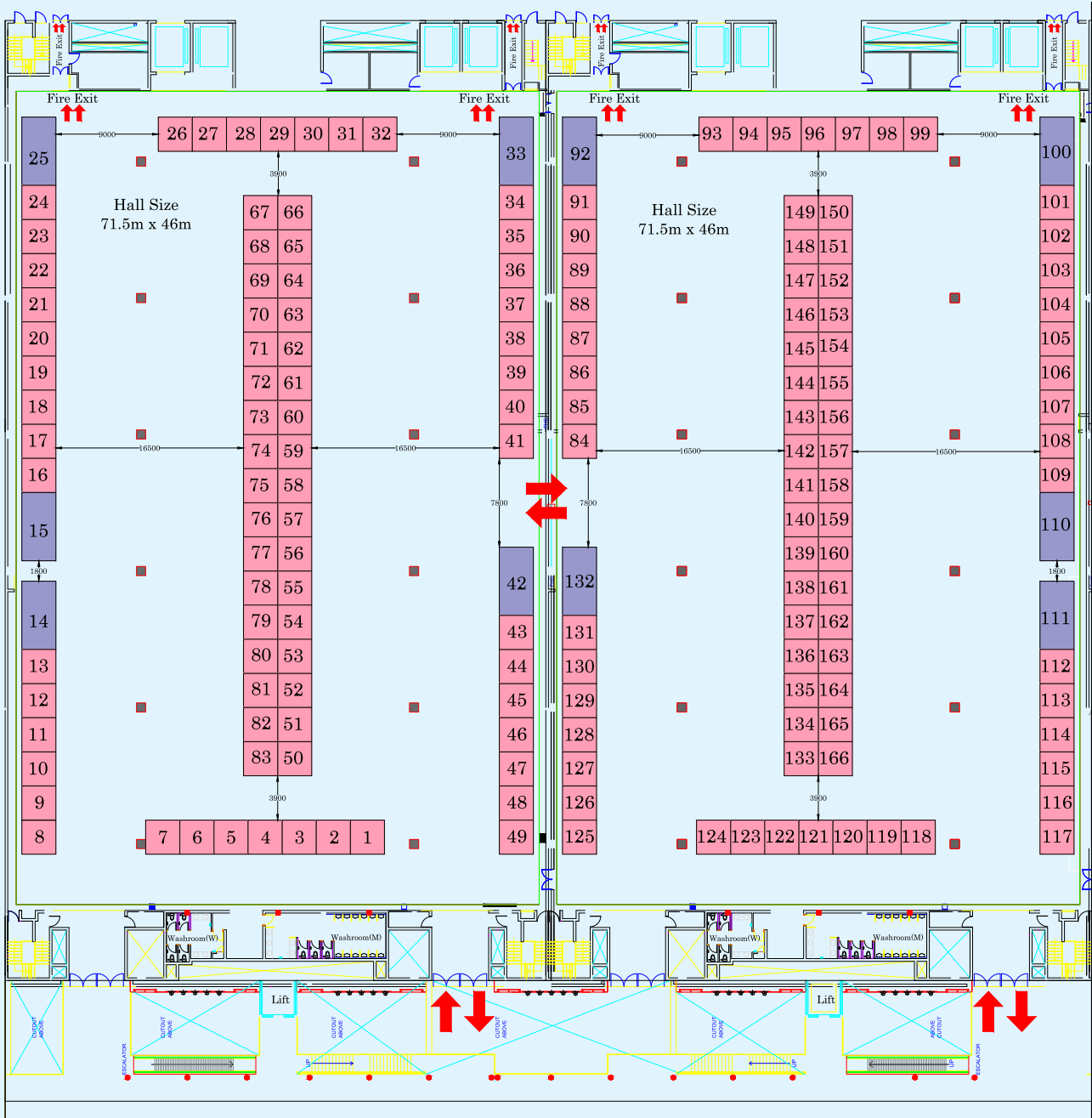
### PCO

**Mr. Bharat Soundar Rajan, Assistant Vice President**  
Integrated Conference & Event Management, B -128, Sector - 5,  
Noida 201301, National Capital Region – Delhi (India) T : +91 120 3823803  
F : +91 120 3823501 M : +91 9650017933  
E : [bharat@iceindia.in](mailto:bharat@iceindia.in) | W : [www.iceindia.in](http://www.iceindia.in)

### For booking of tours, please contact :

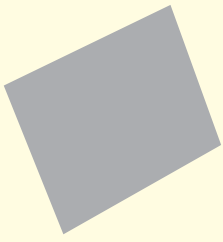
**Ms. Priya Tiwari**  
Email : [tours.icold2020@iceindia.in](mailto:tours.icold2020@iceindia.in)

# EXHIBITION FLOOR PLAN




- 3m x 6m =10 Stalls
- 3m x 3m =156 Stalls
- Total =166 Stalls

Tariff for bigger stall (3 m x 6 m) is 50% extra



**Exhibitor (Space only)**(3 m x 3 m) USD 5600



**Octonom Style Booth** (3 m x 3 m) USD 6700

For more details refer : **Web : [www.icold2020.org](http://www.icold2020.org)**