

ICOLD 2026 Call for Abstracts

Guadalajara, Mexico | 2026

Symposium Theme | Water, Energy, and Society: The Evolving Role of Dams in a Changing World

The International Commission on Large Dams (ICOLD) invites dam, levee, hydraulic structures, and water infrastructure professionals, engineers, planning, researchers, policymakers, and industry experts to submit abstracts for its 2026 International Symposium in Guadalajara, Mexico. The International Symposium is scheduled to be held on May 26 and May 27, 2026, as part of the ICOLD Annual Meeting. We anticipate 1,000–1,500 attendees from 70–80 countries, offering an unparalleled opportunity to exchange ideas, showcase innovations, and advance the safe and sustainable future of dams.

Symposium Focus Areas

The 2026 symposium will feature technical sessions spanning challenges and opportunities in dam safety and water infrastructure. The main topics (**bold text**) reflect a wide range of concerns across the dam lifecycle. The subtopics are included as suggestions or guidance in abstract preparation.

1. **Water Planning, Water Management, and Climate Resilience**

- Impacts of urbanization and climatic change on existing dams and reservoirs and remedies; case studies and costs.
- Impacts of climatic change on needs and designs of dams, reservoirs and levees (water storage, floods mitigation, ocean rising...).
- Resiliency and sustainability for dam operations and related infrastructure
- Flexible reservoir operation for flood and drought mitigation
- Environmental flows: New approaches to sustaining ecosystems
- Dams as adaptive infrastructure in water-stressed regions
- *Integrated reservoir planning for urban, agricultural, and industrial supply*
- *Climate change impacts water demand and availability*
- *Inter-basin transfer systems and regional water networks*
- *Multi-purpose reservoirs: balancing supply, flood control, energy, and environment*
- *Resilience strategies for water-scarce and drought-prone regions*
- *Financing models for large-scale water supply infrastructure*
- *Groundwater recharge and conjunctive use with surface reservoirs*
- *Public-private partnerships and institutional coordination*
- *Innovations in dam intake and conveyance design*

2. **Dam Safety Policy and Governance**

- Recent lessons from incidents and accidents concerning dams during the life cycle, including during construction.
- Evaluation of precipitation and flood flows, estimation and quantification of the consequences, including social, economic and environmental aspects, in case of failure or incidents
- Emergency planning: regulation, organization, information of the population and examples of implementation.

- Dam Safety Governance: definition of responsibilities, periodic reviews, emergency action planning, failure modes and risk assessments, long-term maintenance, and implementation of actions around lessons learned.
- *Prioritization frameworks for rehabilitation investments*
- *Funding models and international case studies in dam rehabilitation*

3. Dam Construction and Rehabilitation: Innovation and Lifecycle Extension

- *Advances in dam design and materials for sustainability*
- *Remote sensing and AI for monitoring during construction*
- *Rehabilitation of aging dams: Techniques and case studies*
- *Seismic retrofitting and hazard preparedness*
- *Innovative construction techniques for dams*
- *Use of advanced materials: high-performance concrete, geosynthetics, composites*
- *Construction in extreme environments (mountainous terrain, remote areas, arid zones)*
- *Integration of BIM and digital construction management tools*
- *Managing logistics and workforce challenges in large-scale construction projects*
- *Quality assurance and control in dam construction*
- *Seepage control, grouting, and core reconstruction*
- *Upgrading hydromechanical and electromechanical components*

4. Dam Performance Monitoring

- *Case studies and lessons learned in performance monitoring programs*
- Long-term performance of existing and planned surveillance systems including reliability and accuracy
- Importance of visual inspections
- New technologies in dam and foundation instrumentation and monitoring
- Data acquisition and processing to predict and identify potential incidents
- Understanding and handling of large quantities of data, including artificial intelligence approach.
- *Remote monitoring via drones, satellite imagery, and ground-based radar*
- *Distributed sensing techniques, applications, and case studies*
- *ADAS systems and real-time decision support tools*
- *Emergency preparedness through instrumentation-informed risk management*
- *Remote sensing and AI for dam safety monitoring*
- *Structural health assessments of aging dams*

5. Flood Resiliency in Developed and Developing Countries

- *Dam operation for downstream flood attenuation*
- *Real-time flood forecasting and reservoir routing*
- *Adaptive design standards for increased hydrologic variability*
- *Integration of dams with levees, wetlands, and green infrastructure*
- *Flood early warning systems linked to dam operations*
- *Community-based flood risk management around dam-regulated rivers and unregulated tributaries*
- *Planning and design of emergency spillways*
- *Urban flood resilience strategies with upstream detention*
- *Lessons learned from recent extreme flood events globally*
- *Risk communication and public education in flood-prone zones*

6. Sedimentation Management and Reservoir Longevity

- *Sediment yield estimation and watershed erosion control*
- *Sediment bypass, flushing, and sluicing techniques*
- *Reservoir sedimentation modeling and monitoring*

- *Adaptive sediment management policies for long-lived reservoirs*
- *Impacts of sedimentation on storage, hydropower, and flood control*
- *Managing sediment inflows during extreme flood events*
- *Case studies of successful desiltation, dredging, or capacity restoration*
- *Designing dams and intakes to minimize sediment accumulation*
- *Upstream and downstream sediment balance and channel morphology*
- *Socio-environmental effects of reservoir sedimentation*
- *Sediment management under changing rainfall regimes*

7. Fish Passage, Biodiversity and Environmental Integration

- *Design and performance evaluation of fish ladders and lifts*
- *Maintaining environmental flows to support aquatic ecosystems*
- *Habitat connectivity and restoration downstream of dams*
- *Integrating ecological concerns into dam design and operation*
- *Multi-objective optimization: hydropower versus biodiversity*
- *Nature-based solutions and ecohydraulic modeling*
- *Migratory fish behavior studies and adaptive passage designs*
- *Reservoir habitat enhancement strategies*
- *Biodiversity offsetting and conservation planning*
- *Policy frameworks and compliance (e.g., EU WFD, US ESA, CBD)*

8. Community Engagement in Dam Development

- *Culturally sensitive engagement strategies in dam development*
- *Case studies in indigenous-led water and dam governance*
- *Social impact assessments and benefit-sharing mechanisms*
- *Post-resettlement livelihood restoration strategies*
- *Protecting cultural and spiritual values tied to rivers*
- *Participatory monitoring and co-management models*
- *Building local capacity for long-term stewardship*
- *Conflict resolution in dam-affected communities*
- *Legal frameworks for indigenous rights and compensation*

9. Tailings Dam Safety

- *Advances in monitoring technologies for tailings facilities*
- *Risk-based design approaches and consequence classification*
- *Seepage control and dam stability analysis*
- *Emergency preparedness for downstream communities*
- *Regulatory compliance with international standards (e.g., GISTM)*
- *Case studies of failures and lessons learned*
- *Sustainable alternatives to tailings storage (e.g., filtered tailings)*
- *Closure planning and post-closure risk mitigation*
- *Seismic resilience and liquefaction risk*
- *Stakeholder engagement and transparency in mining regions*

10. Dam Decommissioning and Removal

- *Extending operational life versus decommissioning: Decision-making tools*
- *Planning for partial versus full dam removal*
- *Sediment management during decommissioning*
- *Ecological restoration and river recovery post-removal*
- *Social and legal challenges in dam removal decisions*
- *Engineering and construction of safe removals*
- *Environmental impact assessments and mitigation*

- *Cultural heritage documentation and preservation*
- *Cost-benefit analysis of decommissioning versus rehabilitation*
- *Stakeholder engagement and communication strategies*

Abstract Submission Guidelines

Requirement	Details
Abstract Length	≤ 300 words
Languages	Abstracts shall be submitted both in English and Spanish
Format	Include title, 3–5 keywords, author(s) with affiliations, and 1–2 sentences on thematic relevance
Eligibility	Secure approvals from the employer, dam owners, appropriate authorities and/or responsible parties for publication. Secure copyright approval for figures, photos, drawings and images.
Review Criteria	Relevance to theme, originality, and global applicability
Submission Deadline	October 10, 2025
Notification Date for Abstract Acceptance	November 14, 2025
Draft Presentation and Optional Paper Due Date	February 27, 2026
Final Presentation and Optional Papers Due Date	April 24, 2026

 Additional details about presentation (oral/poster) and optional paper will be shared upon Abstract acceptance. All authors selected for publication and presentation as part of the International Symposium will be required to sign and accept an author acceptance agreement, including the requirement to register for and attend the ICOLD 2026 Symposium.

Submission Instructions

1. Abstract Title

- Provide abstract in English and Spanish.
- Make it concise and clearly reflect the subject matter.

- Follow the provided abstract template

2. Author Information

- Include full names (given and family names). Clearly indicate the main author/contact person
- Country of ICOLD Membership or current country of residence for non-ICOLD members.
- Preferred contact email address
- Preferred contact phone number
- Employer and title
- Selected topic

3. Submission

- Abstracts shall be submitted in Microsoft Word or PDF formats

4. Inquiries

- Contact: simposio.icoldmexico@gmail.com
- Include ICOLD Mexico 2026 in the subject line

Join the Global Dam Safety Community

This is a unique opportunity to showcase your contributions and engage with the world's leading experts in dam engineering, policy, and safety. Help shape the future of resilient, sustainable dam infrastructure.

Submit your abstract today!
