



National Conference On **INTEGRATED RIVER, RESERVOIR & DAM SYSTEMS**



Resilience | Safety | Innovation | Sustainable Management

Connecting Rivers, Reservoirs & Dams for a Resilient Water Future

Date: 19-20 November 2026

Venue: CWPRS, Pune

- Keynote Lectures
- Panel Discussions
- Exhibition
- CWPRS Technical Visit

FIRST INFORMATION BULLETIN



Organized by
Central Water and Power Research Station, Pune

In Association with
The Indian Society for Hydraulics (ISH), Pune

INTRODUCTION

Rivers, reservoirs and dams constitute an interconnected system that underpins water security, irrigation, hydropower generation, flood moderation, drinking water supply and economic development. Their planning, assessment, operation and management therefore need to be viewed as an integrated continuum. Changing hydrology, extreme events, reservoir sedimentation, ageing infrastructure, evolving dam safety requirements, competing water demands and rapid technological advances are creating new challenges for water infrastructure worldwide.

The National Conference on Integrated River, Reservoir & Dam Systems will bring together eminent national experts, government agencies, dam safety organisations, utilities, research institutions, academia, industry and technology providers to deliberate on these interconnected challenges and emerging solutions. The Conference will span the continuum from river basin processes and reservoir systems to hydraulic structures, dam health and safety, sediment management, climate resilience and technology-enabled monitoring and decision support.

Particular emphasis will be placed on emerging technologies including LiDAR, advanced bathymetric and hydrographic surveys, drone/UAV-based surveys, remote sensing, GIS, artificial intelligence, machine learning, digital twins, advanced instrumentation and real-time monitoring systems. A dedicated focus on Integrated Reservoir Sediment Management (IRSM) will address reservoir sedimentation through assessment, monitoring, modelling, management interventions and technology-enabled decision support.

ABOUT CWPRS

Established in 1916, the Central Water & Power Research Station (CWPRS), Pune, is a premier national institution under the Ministry of Jal Shakti, Government of India, providing specialised research, consultancy and technical services in hydraulic and water resources engineering. With expertise spanning river engineering, hydraulic structures, dam and spillway hydraulics, reservoir studies, sediment transport, flood management, hydropower, coastal engineering, environmental studies and physical and mathematical modelling, CWPRS has contributed to the planning, design, assessment and management of major water resources and infrastructure projects. With its extensive experimental facilities, specialised laboratories and multidisciplinary expertise, CWPRS continues to support the nation in addressing emerging challenges in water security, resilient infrastructure, dam safety and sustainable water resources management.

ABOUT ISH

The Indian Society for Hydraulics (ISH), Pune, established in 1992, is a national technical organisation providing a professional platform for engineers, scientists and technical professionals engaged in hydraulics, water resources, river and coastal engineering. ISH promotes professional interaction and knowledge exchange through conferences, seminars, symposia and technical publications and encourages collaboration with national organisations in related fields.

DATE AND VENUE

The Conference will be hosted during November 19-20, 2026 at CWPRS, Khadakwasla, Pune - 411024 (Maharashtra), INDIA.

The details of the conference will be made available on ISH/CWPRS

website(www.ish.net.in/ www.cwprs.gov.in)

CONFERENCE AT A GLANCE

National Conference on
Integrated River, Reservoir & Dam Systems
19-20 November 2026 | CWPRS, Pune

The Conference will feature

- **Keynote & Expert Lectures**
Eminent national experts addressing strategic and emerging issues.
- **Technical Discussions**
Focused deliberations on engineering challenges, field experience and emerging solutions.
- **Panel Discussions**
Multi-disciplinary perspectives from government, dam safety organisations, utilities, academia, research and industry.
- **Technology & Innovation Exhibition**
Concurrent exhibition showcasing technologies, products, equipment, software and services.
- **CWPRS Technical Visit**
Visit to selected physical models, laboratories and specialised research facilities.

CONFERENCE THEMES

01 | INTEGRATED RIVER BASIN & RESERVOIR SYSTEMS

- | | |
|---|--|
| ▪ Integrated river basin planning and management | ▪ Flood and drought management |
| ▪ River-reservoir interactions | ▪ Adaptive reservoir operation and rule curves |
| ▪ Sustainable water allocation and water security | ▪ Inter-basin water transfer |
| ▪ Multi-objective reservoir operation | ▪ Basin-scale decision-support systems |
| | ▪ Climate-resilient water resources planning |

02 | CLIMATE RESILIENCE & EXTREME HYDROLOGICAL EVENTS

- | | |
|---|--|
| ▪ Changing hydrology and non-stationarity | ▪ Drought assessment and mitigation |
| ▪ Climate change impacts on river and reservoir systems | ▪ Flood forecasting and early warning |
| ▪ Extreme flood assessment and design floods | ▪ Emergency preparedness and reservoir operation |
| ▪ Probable Maximum Flood and extreme event analysis | ▪ Risk-informed infrastructure planning |
| | ▪ Climate adaptation and resilience |

CONFERENCE OBJECTIVES

The Conference aims to:

- Foster an integrated approach to river, reservoir and dam systems for sustainable water security.
- Deliberate on climate resilience, extreme events, dam safety and infrastructure sustainability.
- Share advances in dam health assessment, surveillance, rehabilitation and risk-informed asset management.
- Promote Integrated Reservoir Sediment Management (IRSM) and sustainable approaches to extending reservoir life.
- Showcase emerging technologies for surveying, monitoring, modelling and digital assessment of water infrastructure.
- Facilitate knowledge exchange among government, dam safety organisations, utilities, research institutions, academia and industry.
- Identify innovative and practical approaches for safe, resilient and sustainable water infrastructure.

03 | DAM HEALTH, SAFETY & RESILIENT INFRASTRUCTURE

- From dam safety to dam resilience
- Dam health assessment and performance evaluation
- Structural and hydraulic safety
- Dam surveillance, instrumentation and monitoring
- Seepage and deformation assessment
- Rehabilitation and safety improvement
- Ageing dams and emerging risks
- Spillway and energy dissipation performance
- Risk assessment and risk-informed decision making
- Emergency preparedness and management
- Advances in dam safety practices and institutional frameworks
- Technology-enabled dam surveillance

04 | INTEGRATED RESERVOIR SEDIMENT MANAGEMENT

- From sedimentation assessment to sustainable reservoir management
- Reservoir sedimentation assessment and monitoring
- Sediment yield, budgeting and transport
- Advanced bathymetric assessment of reservoir storage
- Sediment deposition, routing and flushing
- Drawdown flushing and sluicing
- Sediment bypass and sustainable sediment release
- Catchment and source-area sediment management
- Downstream sediment management
- Reservoir storage recovery and life extension
- Basin-scale and integrated sediment management
- Modelling and decision-support systems for sediment management

05 | ADVANCED SURVEY, MONITORING & DIGITAL TECHNOLOGIES

- From survey to insight, from data to decision
- LiDAR and advanced topographic surveys
- Bathymetric, hydrographic and multibeam surveys
- Drone/UAV-based surveys and inspection
- Photogrammetry and 3D reconstruction
- Remote sensing and GIS
- Artificial intelligence and machine learning
- Digital twins
- Smart sensors and instrumentation
- IoT, telemetry and real-time monitoring
- Automated data acquisition
- Predictive analytics
- Digital decision-support systems

06 | HYDRAULIC STRUCTURES, SPILLWAYS & RESERVOIR OPERATION

- Spillway hydraulics and performance
- Energy dissipation and downstream safety
- Hydraulic modelling of dams and appurtenant structures
- Gates, outlets and intake structures
- Sediment passage through hydraulic structures
- Reservoir operation under extreme conditions
- Hydropower integration
- Physical and numerical modelling
- Hydraulic performance assessment
- Rehabilitation and modernisation of hydraulic structures
- Safe and efficient reservoir releases

CONFERENCE FORMAT

The Conference will adopt an expert-led and interaction-oriented format, featuring:

- Keynote & Expert Lectures by eminent experts in the relevant fields.
- Technical Discussions on emerging technologies, field experience and contemporary engineering challenges.
- Panel Discussions bringing together experts from government, dam safety organisations, utilities, academia, research and industry.
- CWPRS Technical Visit to selected physical models, laboratories and specialised research facilities.
- Technology & Innovation Exhibition running concurrently with the Conference.

TECHNOLOGY & INNOVATION EXHIBITION

SHOWCASE TECHNOLOGIES | DEMONSTRATE SOLUTIONS | CONNECT WITH THE SECTOR

A parallel Technology & Innovation Exhibition will provide organisations an opportunity to showcase technologies, products, equipment, software and services before a specialised audience from government, dam safety, hydropower, research, infrastructure and industry.

The Exhibition offers exhibitors an opportunity to:

- Demonstrate technologies and field applications to a technically specialised audience.
- Reach key decision makers and technology users from government, dam safety organisations, utilities, research institutions and industry.
- Generate business, professional and collaboration opportunities.
- Launch and promote new products, technologies and services.
- Build institutional and brand visibility through participation in a premier CWPRS-led National conference.
- Facilitate technology-user interaction and understand emerging requirements in the water infrastructure sector.

EXHIBITION PARTICIPATION

Exhibitors desirous to take Bare Space will make payment for minimum 15 sqm. Under the shell scheme, minimum space will be 9 sqm (3m x 3m) and multiples of 3m. The layout of exhibition plan will be uploaded on the CWPRS website. Free hosting of exhibitors, profiles and company website links on the event web portal.

Exhibition Participation Fee:

Bare Space INR 10000 per sqm

Shell Space INR 15000 per sqm

Detailed stall configuration and exhibition layout will be communicated separately.

WHO SHOULD ATTEND

The Conference is intended for engineers, scientists, researchers, policymakers and professionals from Central and State Government departments, dam safety organisations, water resources and irrigation departments, hydropower utilities, public sector undertakings, infrastructure organisations, consulting and construction agencies, universities and research institutions, environmental and disaster management organisations, and technology and equipment providers engaged in river engineering,

reservoir planning and operation, dam safety and health assessment, hydraulic structures, sediment management, climate resilience, water resources management, advanced surveying and monitoring, remote sensing, GIS, artificial intelligence, digital technologies and allied fields. It will also provide a valuable platform for academicians, research scholars, industry professionals and technology innovators to exchange knowledge, share field experience and explore collaborations for sustainable and resilient water infrastructure.

REGISTRATION FEE

Delegates (ISH Members)	: Rs.4,000/-
Delegates (Non-ISH Members)	: Rs.5,000/-
Delegates (Central Government / State Govt. / Academic Institutes)	: Rs.6,000/-
Delegates from Public Enterprises / Private Limited	:Rs.7,000/-

Prospective participants desirous of attending the conference are requested to submit the registration form electronically along with registration fee before 15th October 2026. The registration fee includes the Conference proceedings, Registration Kit, working lunch, tea/coffee during the conference. Registration Fee should be sent through online payment, through QR code and NEFT. The details can be accessed by visiting the website <https://cwprs.gov.in>.

Payment Details

Bank: CANARA BANK

Account Name: THE INDIAN SOCIETY FOR HYDRAULICS

A/c No.: 120041660048

Branch: KHADAKWASLA, PUNE

Swift Code: CNRBINBBPFD

IFSC Code: CNRB0002580 (used for RTGS, IMPS and NEFT/UPI transactions)

MICR Code: 411015022

LOCATION & ACCOMMODATION

CWPRS is located on the south-western side of the Pune city on Pune-Sinhgad Road near Khadakwasla village. It is about 13 Km from Swargate Bus Stand, 19 Km from Pune Station and 27 Km from Pune Airport. a few accommodations will be provided by the organizers on first-come-first-served basis in Government guest house.

SPONSORSHIP

PARTNER WITH IRRDS 2026

The Conference provides national organisations, government agencies, public sector undertakings, infrastructure organisations, technology companies, equipment manufacturers, consultants and service providers an opportunity to showcase their capabilities before a specialised audience of professionals and decision makers from the water resources, dam safety, hydropower and infrastructure sectors. Interested organizations may please contact the Organizing Secretary.

PLATINUM SPONSOR (INR 5,00,000)

- Complimentary registration for 5 delegates
- One exhibition stall
- 10-minute technical / technology presentation
- Standee at prominent locations
- Organisation logo on selected Conference publicity material
- Logo display on digital and event displays

GOLDEN SPONSOR (INR 3,00,000)

- Complimentary registration for 3 delegates
- One exhibition stall
- 5-minute technical / technology presentation
- Standee at prominent location
- Organisation logo on selected Conference publicity material

SILVER SPONSOR (INR 1,00,000)

- Complimentary registration for 2 delegates
- Standee at prominent location
- Organisation logo on selected Conference publicity material

Detailed sponsorship benefits and exhibition specifications will be communicated separately.

CHIEF PATRON

: **Smt. Archana Varma, IAS**
Secretary
Department of Water Resources, RD & GR,
Ministry of Jal Shakti
Government of India

PATRON

: **Dr. M. Selva Balan**
Director
Central Water & Power Research Station, Pune

ORGANIZING COMMITTEE

CHAIRPERSON

Dr. J. Sinha, Additional Director, CWPRS

CO-CHAIRMEN

Shri S. G. Manjunath, Scientist 'E'

Shri M. K. Verma, Scientist 'E'

ORGANISING SECRETARIES

Shri P. S. Kunjeer, Scientist 'E'

Dr. A. K. Singh, Scientist 'C' & Secretary, ISH

JOINT ORGANISING SECRETARIES

Shri G. V. Ramana Rao, Scientist 'E'

Shri Arun Kumar, Scientist 'D'

Dr. K. Kumar, Scientist 'E'

Shri V. S. Ramarao, Scientist 'D'

Shri M. S. Hanumanthappa, Scientist 'E'

Dr. S. Sampath, Scientist 'D'

Shri M. M. Vaidya, Scientist 'E'

Shri V. K. Shukla, Scientist 'D' & Treasurer, ISH

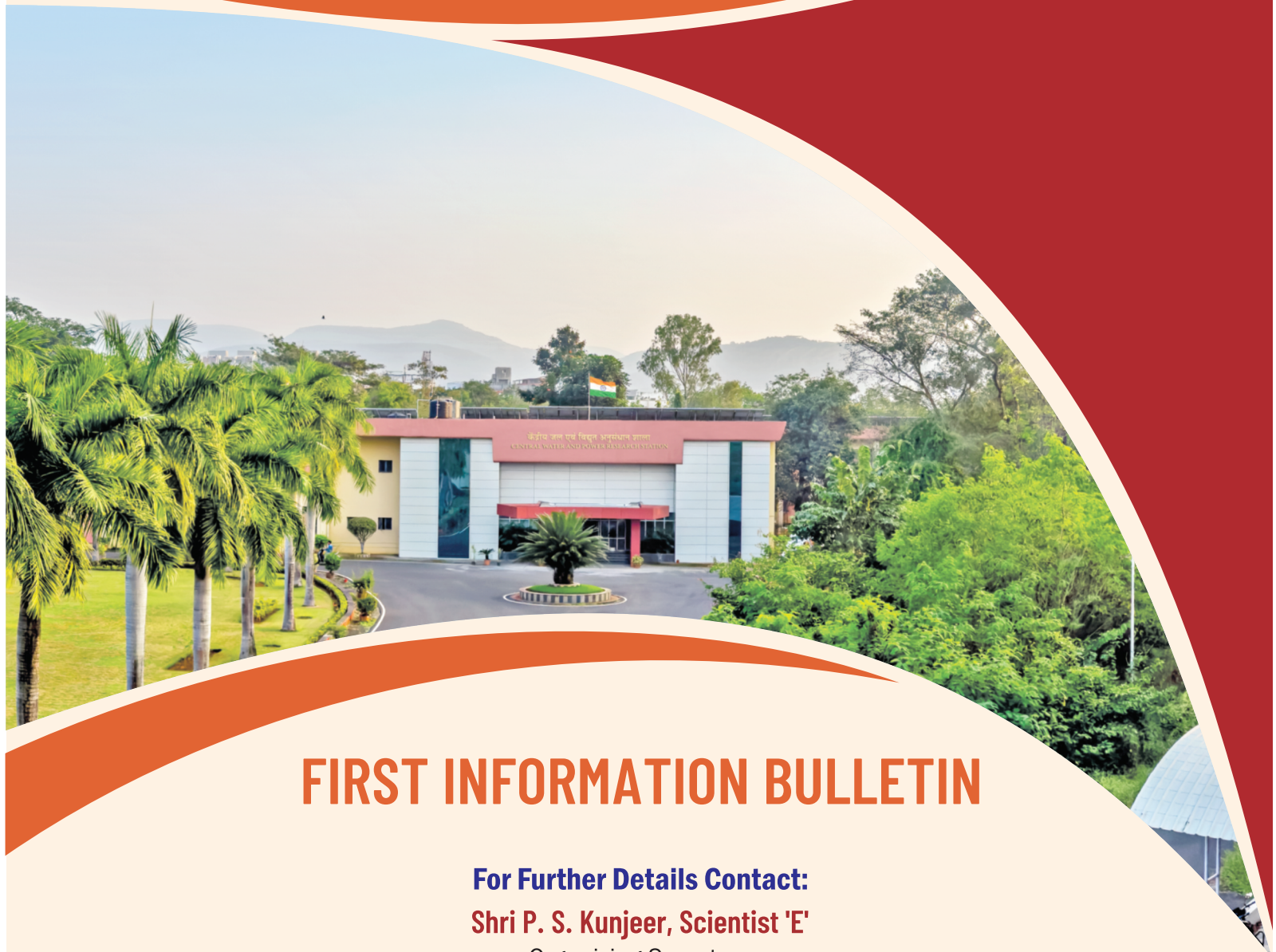
Shri B. Suresh Kumar, Scientist 'D'

Shri G. A. Rajkumar, Scientist 'C'

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For Further Details Contact:

Shri P. S. Kunjeer, Scientist 'E'

Organizing Secretary

IRRDS – 2026 - National Conference

Central Water and Power Research Station

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