

# 10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025

Groundwater Vision 2047: Towards Water Security under Changing Climate

March 05-07, 2025 | NIH Roorkee, India

# **CONFERENCE PROGRAM**

# organized by National Institute of Hydrology, Roorkee, India

# in association with















# **CONTENTS**

| Title                       | Page No. |
|-----------------------------|----------|
| Welcome                     | 3        |
| About IGWC Series           | 5        |
| Organizing Committee        | 7        |
| Advisory Committee          | 11       |
| Conference Information      | 12       |
| Conference Program Overview | 15       |
| Instructions for Presenters | 18       |
| Conference Program          | 19       |
| Social Program              | 56       |
| Useful Information          | 57       |
| Technical Committee         | 58       |
| Local Organizing Committee  | 59       |
| Sponsors & Exhibitors       | 62       |

# WELCOME TO IGWC 2025

We warmly welcome all the distinguished dignitaries, foreign and Indian keynote speakers, delegates, young researchers and, sponsors and exhibitors to the "International Groundwater Conference 2025 (IGWC-2025)" focusing on "Groundwater Vision 2047: Towards Water Security under Changing Climate", scheduled from March 05-07, 2025 at the National Institute of Hydrology (NIH), Roorkee. The conference is organized by the National Institute of Hydrology, Roorkee (under Ministry of Jal Shakti, Dept. of Water Resources, River Development & Ganga Rejuvenation, Government of India) in association with the Central Groundwater Board, New Delhi, India; Association of Global Groundwater Scientists (AGGS), Coimbatore, India; National Mission for Clean Ganga (NMCG), New Delhi, India; National River Conservation Directorate (NRCD), New Delhi, India; British Geological Survey (BGS), United Kingdom; Hochschule für Technik und Wirtschaft (HTWD) Dresden, Germany; and KTH-Royal Institute of Technology, Stockholm, Sweden.

Groundwater is a vital natural resource with significant economic, strategic and environmental value. However, it is under stress in many regions worldwide due to increasing urbanization, industrialization, changing climatic, increased demands and other human-driven activities. The depletion of groundwater levels and the deterioration of water quality are particularly concerning issues in numerous areas. To address these challenges, effective groundwater resource management strategies must be developed to reverse the decline in water quality and depleting water levels, ensuring the sustainability of this precious yet limited resource. Currently, India stands as the world's largest and fastest-growing consumer of groundwater. Groundwater is a crucial resource, integral to life and indispensable for comprehensive growth and development of the country in achieving its holistic vision of a developed nation by 2047, the 100<sup>th</sup> year of its independence.

The International Groundwater Conference 2025, is centered around the main theme "Groundwater Vision 2047: Towards Water Security under Changing Climate". The conference will cover a wide range of topics including groundwater assessment, management and modelling under varied climatic and geological settings; agriculture water management; climate change; environmental flows and river rejuvenation; mountain hydrology and spring-shed management; coastal water resources management; and advanced techniques in groundwater monitoring, management and exploration, etc. The issues are of significant concern to India and are critical for policy makers, water managers and researchers in the country. The overarching theme aligns with India's vision for sustainable and inclusive growth through a multipronged strategy aimed at eradicating poverty by increasing livelihood opportunities, providing social safety net and developing infrastructure for growth, for which sustainable groundwater management is essential.

Researchers from both developed and developing nations are working on various facets of groundwater, such as advancing tools and techniques for monitoring resources, sub-surface characterization, aquifer mapping and modeling, and crafting effective management policies. The IGWC 2025 aims to unite scientists, researchers, planners, policymakers, engineers, water resource managers, students, NGOs, and other stakeholders in the groundwater and environmental sectors. Focusing on the latest research and technological advancements from around the world, IGWC 2025 aims to deliver meaningful outcomes and offer a vision for 2047 to safeguard groundwater resources, not only in India but globally.

This conference includes 41 abstracts from keynote speakers and 311 abstracts from delegates and experts, both from India and abroad. The event will provide a platform for exchanging ideas, knowledge, experiences, techniques, and expertise, offering an opportunity to present research findings, discuss challenges, and explore scientific advancements in water resources development and management under the influence of climate change. The focus is on ensuring a water-secure future and promoting sustainable development, with special emphasis on groundwater. We hope that the conference deliberations will lead to practical recommendations for developing a framework to implement various programs and initiatives by both government and non-government organizations working in the water sector in general and groundwater in particular.

Besides the keynote, plenary and technical sessions on all the three days of the conference, two Pre-Conference Workshops on Advanced Groundwater Modelling are being organized for young researchers on March 3-4, 2025. The first workshop on "Solute Transport Modeling" is jointly organized by NIH, Roorkee and S.S. Papadopulos & Associates Rockville, Maryland, USA. The second workshop on "Groundwater flow and mass transport with FEFLOW" is jointly organized NIH and DHI group. An important add-on activity is the Annual General Body Meeting of AGGS scheduled on Day 2 of the conference in the evening.

The conference has another attractive activity "Business to Business Exhibition" to showcase hardware and software solutions, technology solutions & demonstration, instruments & products exhibit, etc. A number of exhibitors are going to take part in the exhibition for showcasing their products and technologies. The exhibition will run on all the three days.

Our sincere and heartfelt gratitude to the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India, for providing administrative and financial support in the successful organization of IGWC 2025. The Conference Organizing Committee is also thankful to all the delegates, sponsors, exhibitors, reviewers, publishers and printers and all those who have directly or indirectly contributed to the organization of the conference. The Organizing Committee also extends sincere thanks to the NIH Roorkee administration and the various Conference Management Committees for giving their valuable time and extending full hearted support and cooperation.

We have made every effort to provide a platform for initiating dialogue, exchanging views, sharing experiences, and promoting innovative technologies, with the goal of addressing emerging challenges related to groundwater. The success of the conference relies on our collective active participation and thoughtful deliberation on various scientific, technical, and governance issues throughout the three-day program.

We wish you all a very pleasant stay in Roorkee. Hope you will enjoy the social activities and the post-conference field trip!!

Organizing Committee

**IGWC 2025** 

# **About the IGWC Series**

Groundwater has emerged as a major resource in safeguarding agriculture and drinking water security in many parts of the globe. However, groundwater depletion, contamination, and governance challenges continue to persist despite decades of groundwater research. Searching solutions for the conservation and sustainable management of groundwater is likely to play a crucial role in meeting the water demands of the population in future, under a changing climate and to ensure food and water security for both the developed and developing nations. Keeping in view the significance of groundwater in the economic growth and development of a country, a series of International Conferences on Groundwater are being organized regularly by the AGGS in collaboration with other academic and research organizations, to deliberate on various issues related to groundwater including the recent advances in groundwater research. A total of 09 such conferences have been organized so far including the recent ones in 2012, 2015, 2017, 2019 and 2022. The present conference (IGWC 2025) is the 10<sup>th</sup> such conference in this series, which is being organized at the NIH, Roorkee, during 5<sup>th</sup> to 7<sup>th</sup> March, 2025.

The key issues and challenges expected in groundwater management are needed to be clearly identified and framework for systematic and scientific research needs to be determined from time to time with formulation of specific and pinpointed recommendations for future work. The international conferences in IGWC series have served as the meeting points for groundwater experts and professionals, for this purpose. Therefore, the aim of IGWC 2025 also is to provide a common platform for researchers, academicians, policy makers, water managers, technocrats, industrialists and NGO's, to discuss and deliberate on the current groundwater issues as well as Groundwater Vision 2047, in the face of growing challenges of the needs of rising population and confronting climate uncertainties in water resources planning and management.

During the conference the implications of this perspective on data collection, scientific investigations, governance, and management are also expected to be discussed at length, with a motivation to highlight a wider, complex, interdisciplinary, and systems approach to groundwater assessment and management. It is intended and hoped that a suite of new (or existing but underutilized) concepts and interdisciplinary and transdisciplinary methodologies would emerge out of the deliberations, to aid and promote transformations towards sustainability and resilience of the groundwater systems.

Looking at the aforementioned aspects, the themes of the conference have been identified as:

- T1: Vision 2047: Impact of Climate Change on Groundwater & Adaptation Measures
- T2: Vision 2047: Environmental Flow & Rejuvenation of River Ganga
- T3: Vision 2047: Mountain Hydrology & Springshed Management
- T4: Water Resources in Arid and Semi-Arid Regions
- T5: Groundwater Contamination and Remediation
- T6: Groundwater Modeling and Management
- T7: Advanced Techniques for Groundwater Exploration & Assessment
- T8: Augmentation of Groundwater Resources
- **T9: Coastal Water Resources Management**
- T10: Policy, Regulation Governance & Community Participation for Groundwater Management
- T11: Application of AI, ML, IoT, Cloud Computing and other Advanced Techniques in Groundwater
- T12: Vadose Zone Hydrology and Agriculture Water Management
- T13: Protection of Groundwater Dependent Ecosystems Rivers, Wetlands, Lakes and Springs
- T14: Isotopic Techniques in Groundwater Investigations & Management



# **Organizing Committee**

PATRON



Mrs. Debashree Mukherjee Secretary, DoWR, RD & GR, Ministry of Jal Shakti, Govt. of India

### **CONFERENCE CHAIRS**



Dr. M.K. Goel Director, NIH



**Dr. S.K Ambast** *Chairman, CGWB* 



Dr. C. Mayilswami President, AGGS



### **CONFERENCE CONVENER**



**Dr. Anupma Sharma** Scientist G & Head, Groundwater Hydrology Division, NIH, Roorkee

### **CONFERENCE CO-CONVENER**



**Dr. Suhas D. Khobragade** Scientist G & Head, Hydrological Investigations Division, NIH



Dr. M. Someshwar Rao Scientist G, NIH

# **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**

### **ORGANIZING SECRETARIES**



Dr. Gopal Krishan Scientist E, NIH



Dr. Sumant Kumar Scientist E, NIH



**Dr. Ranjan Ray** Scientist E, CGWB

### JOINT ORGANIZING SECRETARIES



Dr. Santosh Murlidhar Pingale Scientist D, NIH



Dr. Nitesh Patidar Scientist C, NIH



Dr. Gajanan Ramteke Scientist C, CGWB

# **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**

### **CORE COMMITTEE MEMBERS**



Ms. Anu Chetal Scientist B, NMCG



Sh. Peeyush Gupta Real Time Information Specialist, NMCG



Dr. Sabita Madhvi Singh Scientist D, NRCD



Sh. Phylliewbor N. Rymbai Scientist B, NRCD

# 10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025

# **Advisory Committee**

| Sh. Rakesh Kumar Verma   | Additional Secretary, Ministry of Jal Shakti, Dept. of WR, RD, & GR, Government of India   |   |  |
|--|--|---|--|
| Smt. Archana Varma   | Additional Secretary and Mission Director, National Water Mission, Ministry of Jal Shakti, Dept. of WR, RD, & GR, Government     |   |  |
|  | of India   |   |  |
| Sh. Rajeev Kumar Mital   | Additional Secretary and Mission Director, National Mission on Clean Ganga   |   |  |
| Sh. Subodh Yadav   | Additional Secretary, Ministry of Jal Shakti, Dept. of WR, RD, & GR, Government of India   |   |  |
| Smt. Richa Mishra  | Joint Secretary & Financial Advisor, Ministry of Jal Shakti, Dept. of WR, RD, & GR, Government of India                          |   |  |
| Sh. Anand Mohan  | Joint Secretary (RD&PP), Ministry of Jal Shakti, Dept. of WR, RD, & GR, Government of India                                      |   |  |
| Sh. Nitin Khade  | Joint Secretary, Dept. of Land Records, Ministry of Rural Development, Govt. of India  |   |  |
| Sh. Yugal Kishore Joshi  | Adviser, Communication, Natural Resources & Environment & Island Development, Sustainable Development Goals, Water &             |   |  |
| Sii. Tugai Kishore Joshi   | Land Resources, NITI Aayog   |   |  |
| Dr. S.K. Chaudhari   | Deputy Director General (NRM), ICAR, New Delhi   |   |  |
| Sh. Bhopal Singh   | h. Bhopal Singh Member (D&R), Central Water Commission, Ministry of Jal Shakti, Department of WR, RD and GR, Government of India |   |  |
| Prof. Kamal Kishore Pant Director, Indian Institute of Technology Roorkee, India |  |   |  |
| Sh. Asit Saha Director General, Geological Survey of India, Government of India  |  |   |  |
| Dr. Mrutyunjay Mohapatra   | Director General, India Meteorological Department, Government of India   |   |  |
| Dr. Jay Nigam  | Deputy General Manager, Risk Management Dept., National Bank for Agriculture & Rural Development, Mumbai                         |   |  |
| Dr. Alok Sikka   | Country Representative of International Water Management Institute in India  |   |  |
| Dr. Prakash Chauhan  | Director, National Remote Sensing Centre, Indian Space Research Organisation   |   |  |
| Ms. Madhu Mishra   | Senior Advisor Economics, Climate & Development, British High Commission, Chandigarh   |   |  |
| Dr. Shiv Prasad Kimothi  | Member, ASRB, ICAR, New Delhi  |   |  |
| Sqn. Ldr. Sanjey Vashisht  | Adani Group, Ahmedabad   | 1 |  |

# **Conference Information**

#### Duration

The conference will commence on 05<sup>th</sup> March 2025 and shall conclude on 07<sup>th</sup> March 2025.

#### **Pre-conference workshops**

Two Pre-Conference Workshops on Advanced Groundwater Modelling: (i) Groundwater flow and mass transport with FEFLOW, and (ii) Solute transport modeling will be organized during March 03-04, 2025. Only registered delegates of the conference can participate in these workshops with prior registration for these workshops.

#### Venue

The Conference will be held at the National Institute of Hydrology (NIH), Roorkee, Uttarakhand (India). The Event Venue Map shows the various conference venues along with the activities to be organized.

#### Accommodation

The participating delegates have to make their own arrangements for accommodation.

#### Transportation

Efforts will be made to arrange pick-up and drop from/to hotels to/from Conference Venue during 05-07 March 2025 for the delegates staying in identified hotels located towards Haridwar road. Individual/off-route pickup/drop shall not be arranged.

#### **Conference Desk**

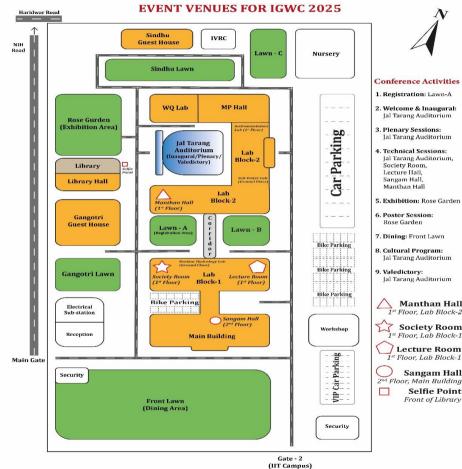
The Conference Desk (Registration and Help desk) is located at the Lawn-A. Delegates are requested to register at the registration desk. Registration hours will be from 09:00 AM – 04:00 PM on 05<sup>th</sup> and 6<sup>th</sup> March, 2025 and 09:00 AM – 12:00 noon on 07<sup>th</sup> March, 2025.

#### **Delegate Badges**

A personalized badge is part of the conference registration package. Participants are requested to kindly wear the delegate badge during the entire conference duration, including the social events and the post-conference tour. Entry to the dining area shall be strictly based on the delegate badge.

The conference organizers as well as the conference personnel will wear badges with a distinctive mark. Should you have any questions related to the conference, not sorted at the help desk, please look for these persons to get help.

# **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**





Jal Tarang Auditorium

Jal Tarang Auditorium

**Manthan Hall** 1st Floor, Lab Block-2

Society Room 1st Floor, Lab Block-1

Lecture Room 1st Floor, Lab Block-1

Sangam Hall Selfie Point

#### **Certificate of Participation**

A Certificate of Participation will be provided to registered participant during the technical session.

#### **Certificate of Best Paper Award**

A Certificate of best paper award will be provided during the technical session to the selected participant.

#### **Tea-Coffee Break / Lunch / Dinner**

During the conference, morning and afternoon tea/coffee, lunch and dinner will be served. The costs of the Tea/coffee & lunch (from Wednesday 05<sup>th</sup> March to Friday 07<sup>th</sup> March, 2025) and dinner (on Wednesday 05<sup>th</sup> and Thursday 6<sup>th</sup> March) are included in the registration fee. Two high-teas, after inaugural on Wednesday 5<sup>th</sup> March and after valedictory on Friday 7<sup>th</sup> March are also included.

#### **Group Photo of the Conference**

A group photo of all the present delegates will be taken on 07th March, 2025 and made available on the website.



# **Conference Program Overview**

| DATE       | TIME                | SESSION/ACTIVITY  | VENUE                 |
|------------|---------------------|---|-----------------------|
|            | 09:00 AM - 10:15 AM | REGISTRATION  | Lawn-A                |
|            | 10:15 AM - 10:30 AM | INAUGURATION OF EXHIBITION                                    | Rose Garden           |
|            | 10:30 AM - 11:00 AM | WELCOME FUNCTION  | Jal Tarang Auditorium |
|            | 11:00 AM - 11:30 AM | TEA   | Front Lawn            |
| 05-03-2025 | 11:30 AM - 01:30 PM | PLENARY SESSION 1: PARTICIPATORY GROUNDWATER<br>MANAGEMENT    | Jal Tarang Auditorium |
|            | 01: 30 PM- 2:30 PM  | LUNCH   | Front Lawn            |
| (Day-1)    | 02:30 PM - 04:00 PM | PLENARY SESSION 2: INTEGRATED URBAN GROUNDWATER<br>MANAGEMENT | Jal Tarang Auditorium |
|            | 04:30 PM - 05:30 PM | INAUGURAL FUNCTION  | Jal Tarang Auditorium |
|            | 05:30 PM - 06:00 PM | HIGH-TEA  | Front Lawn            |
|            | 07:30 PM - 08:30 PM | CULTURAL PROGRAM  | Jal Tarang Auditorium |
|            | 08:30 PM - 10:00 PM | WELCOME DINNER  | Front Lawn            |
|            |                     | T1 (S1)   | Jal Tarang Auditorium |
|            |                     | T2 (S1)   | Sangam Hall           |
|            | 09:00 - 11:00 AM    | T3 (S1)   | Society Room          |
|            |                     | T4 (S1)   | Manthan Hall          |
|            |                     | T5 (S1)   | Lecture Room          |
|            | 11:00 AM - 11:30 AM | TEA   | Front Lawn            |
|            |                     | T1 (S2)   | Manthan Hall          |
| 06 02 2025 |                     | T3 (S2)   | Jal Tarang Auditorium |
| 06-03-2025 | 11:30 AM - 01:30 PM | T4 (S2)   | Lecture Room          |
| (Day-2)    |                     | T5 (S2)   | Society Room          |
| ()         |                     | T6 (S1)   | Sangam Hall           |
|            | 01:30 PM - 02:30 PM | LUNCH   | Front Lawn            |
|            |                     | T3 (S3)   | Lecture Room          |
|            |                     | T4 (S3)   | Society Room          |
|            | 02:30 PM- 04:15 PM  | T5 (S3)   | Jal Tarang Auditorium |
|            | 02.301 M- 04.131 M  | T6 (S2)   | Sangam Hall           |
|            |                     | T13 (S1)  | Manthan Hall          |
|            |                     | POSTER Session  | Rose Garden           |

# 10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025

|            | 04:15 PM- 04:45 PM  | TEA                                 | Front Lawn            |
|------------|---------------------|-------------------------------------|-----------------------|
|            |                     | T5 (S4)                             | Society Room          |
|            |                     | T6 (S3)                             | Manthan Hall          |
|            | 04:45 PM - 06:30 PM | T7 (S1)                             | Sangam Hall           |
|            |                     | T8 (S1)                             | Lecture Room          |
|            |                     | T11 (S1)                            | Jal Tarang Auditorium |
|            | 06:30 PM - 07:00 PM | Annual General Body Meeting of AGGS | Sangam Hall           |
|            | 07:30 PM - 10:00 PM | GALA DINNER                         | Hotel Golden Leaf     |
|            |                     | T5 (S5)                             | Jal Tarang Auditorium |
|            |                     | T7 (S2)                             | Society Room          |
|            | 09:00 AM - 11:00 AM | T8 (S2)                             | Sangam Hall           |
|            |                     | T9 (S1)                             | Lecture Room          |
|            |                     | T10 (S1)                            | Manthan Hall          |
| 07-03-2025 | 11:00 AM - 11:30 AM | TEA                                 | Front Lawn            |
|            |                     | T5 (S6)                             | Jal Tarang Auditorium |
|            |                     | T7 (S3)                             | Lecture Room          |
|            | 11:30 AM - 01:30 PM | T8 (S3)                             | Manthan Hall          |
| (Day-3)    |                     | T11 (S2)                            | Sangam Hall           |
| (24) 0)    |                     | T12 (S1)                            | Society Room          |
|            | 01:30 PM- 02:30 PM  | LUNCH                               | Front Lawn            |
|            |                     | T11 (S3)                            | Society Room          |
|            |                     | T12 (S2)                            | Jal Tarang Auditorium |
|            | 02:30 PM - 04:15 PM | T13 (S2)                            | Sangam Hall           |
|            |                     | T14 (S1)                            | Lecture Room          |
|            |                     | T14 (S2)                            | Manthan Hall          |
|            | 04:30 PM - 05:30 PM | VALEDICTORY                         | Jal Tarang Auditorium |

T' stands for Theme and 'S' stands for Session.

# **Experts for Plenary Sessions**

#### Session-1 - Participatory Groundwater Management

**Mrs. Archana Varma** Additional Secretary & Mission Director, National Water Mission, Ministry of Jal Shakti, Govt. of India

#### Sh. Subodh Yadav

Project Coordinator & Additional Secretary (Admin, IC & GW), Atal Bhujal Yojana, Ministry of Jal Shakti, Govt. of India

**Prof. G L Asawa** Ex. Professor & Head of Civil Engineering, IIT Roorkee, Roorkee

Dr. Daniel D. Snow Professor, Nebraska Water Center, University of Nebraska–Lincoln, USA

**Dr. Sharmila Oswal** Director, Centre for Excellence: Smart Agriculture & Millets, Pahlé India Foundation, New Delhi

**Dr. Eshwer Kale** Watershed Organisation Trust (WOTR), Pune, Maharashtra

**Mr. Kumar Ranjan Parhi** Centre for Micro-Finance, Jaipur, Rajasthan

Moderator Dr. A K Sikka Country Representative & Principal Researcher, International Water Management Institute, New Delhi

#### Session-2 - Integrated Urban Groundwater Management

**Sh. Rajeev Kumar Mittal** Director General, National Mission for Clean Ganga, Ministry of Jal Shakti, Govt. of India

**Dr. Sunil Kumar Ambast** Chairman, Central Ground Water Board, Ministry of Jal Shakti, Govt. of India

**Eng. Noa Amsalem** Embassy of Israel, New Delhi

Mr. Casper Thorin Mayland Embassy of Denmark, New Delhi

**Prof. Alan MacDonald** Head, British Geological Survey, Edinburgh, United Kingdom

**Dr. Victor R. Shinde** National Institute of Urban Affairs, New Delhi

**Moderator Dr. P. Nandakumaran** Ex-Chairman, Central Ground Water Board, New Delhi

# **Instructions for Presenters**

#### **Oral presentations**

All presenting authors are requested to transfer their presentation to the conference laptop directly in the breaks before their session in their respective halls. Delegates will not be allowed to use their own personal laptops to present their work.

The duration of each Keynote talk is about 15 minutes.

The duration of each oral presentation is about 10 minutes including discussion. However, Chairs of the session may change presentation duration depending upon the number of presenters present during the session. Presenters should be present in the session hall 10 minutes before the session.

#### **Poster presentations**

The poster session will be conducted on 06th March, 2025 during 02:30 PM– 04:15 PM at the Rose Garden. Presenters of posters should arrange their posters before the session starts and supervise their poster during the whole poster session. The format for poster is landscape with size A1.

#### **Best paper Award**

Best paper will be awarded for each individual technical session to young researchers. The best paper of the session shall be selected by the Chairs of the session based on the quality of content, presentation, time management, etc. Award will be presented in the session itself.

#### Best poster award

Three best posters will be awarded in the poster session. The best poster of the session shall be selected by the Chairs of the session based on the quality of content and presentation. Award will be presented in the session itself.



### 06th March 2025 (Day 2), Time: 09:00 - 11:00 AM Technical Session: T1 (S1)

### Hall Name: Jal Tarang Auditorium

# THEME: IMPACT OF CLIMATE CHANGE ON GROUNDWATER AND ADAPTATION MEASURES

# Session Chairs: Sharad K. Jain & Alan MacDonald

| Sr. No. | Abstract-ID | Author                   | Title  |
|---------|-------------|--------------------------|--|
|         | Keynote     | Alan MacDonald           | Using groundwater to adapt to climate change and increase water security   |
| 1.      | IGWC- 50    | Suman Kumar              | Impact of Climate Change on Groundwater Resources of Harohar Basin, Lower Ganga Plain, India   |
| 2.      | IGWC-75     | Ashutosh Chamoli         | Insight into Groundwater Variability in North India using GRACE Observations: Role of Climatic and Socioeconomic Factors                                     |
| 3.      | IGWC-132    | Sivakumar Muthu          | Groundwater Modelling to Understand the Impacts of Climate Change in the Chennai Basin, South<br>India   |
| 4.      | IGWC-142    | Donald John              | Assessing the impact of the 2023 floods in Himachal Pradesh & Punjab on groundwater recharge   |
| 5.      | IGWC-147    | Nare Saraswathi<br>Naidu | Identify the Optimum Rainfall Pattern and Distribution of Ground Water Scenario at Different<br>Levels and Fluctuations of Water Levels over North Karnataka |
| 6.      | IGWC-162    | Vikas Singh              | Analyzing the Impacts of Recent Climate Changes on the Hydrology of Surface Water and Groundwater Using an Integrated Hydrological Model                     |
| 7.      | IGWC-193    | Ashfaque M. Gojree       | Numerical study of the hillslope drainage problem for a heterogenous soil with a changing topography   |
| 8.      | IGWC-198    | Nilesh S. Mankar         | Addressing the climate change impacts in Nagpur District of Maharashtra, India: A Success Story of the Green Project   |
| 9.      | IGWC-166    | N. Sudarsan              | Climatic Impacts on Groundwater Recharge Estimates for Indian Ganga Basin (IGB)  |
| 10.     | IGWC-502    | Kapil Kesarwani          | Influence of Climate Change on Milam Glacier Dynamics (Gori Ganga River Basin, Central Himalaya, India   |



# 06th March 2025 (Day 2), Time: 09:00 - 11:00 AM Technical Session: T2 (S1) Hall Name: Sangam Hall

# THEME: ENVIRONMENTAL FLOW AND REJUVENATION OF RIVER GANGA

# Session Chairs: A.A. Kazmi & Anup Kumar Srivastava

| Sr.<br>No. | Abstract-ID | Author                | Title  |
|------------|-------------|-----------------------|--|
| ]          | Keynote     | A.A. Kazmi            | Role of advanced on-site and decentralized sewage treatment system for the rejuvenation of river Ganga                       |
| 1.         | IGWC-269    | Nitin Kaushal         | Rejuvenating Kali River in Uttar Pradesh – A case study of river flows enhancement through agriculture water management      |
| 2.         | IGWC-314    | Shakti Suryavanshi    | Assessment of the ecosystem services of a semi-arid region of India  |
| 3.         | IGWC-315    | Aman Raj              | Stream Dynamics Analysis of Stretch of Ganga River Using Geospatial Techniques   |
| 4.         | IGWC-431    | Shailendra Kumar      | Integrated Environmental Flow Assessment for the Subarnarekha River: A Holistic Approach to Sustainable Ecosystem Management |
| 5.         | IGWC-443    | Pallavi Gahlot        | Fostering Solubilization and Biodegradation of OMPS Using Thermal Hydrolysis Pretreatment.                                   |
| 6.         | IGWC-149    | Pavan Kumar<br>Harode | Assessing River Discharge Patterns for Ecosystem Sustainability: A Case Study of the Wainganga River                         |
| 7.         | IGWC-504    | Pradeep Kumar         | Environmental Flow Assessment for Yamuna River from Hathnikund Barrage to Okhla Barrage                                      |
| 8.         | IGWC-505    | M.K. Sharma           | System Characteristics of Himalayan Tributaries of Upper Ganga Basin, India  |
| 9.         | IGWC-261    | R. Rajamanickam       | Restoration of polluted river stretches in Tamil Nadu: A status and strategic framework                                      |



### 06th March 2025 (Day 2), Time: 09:00 - 11:00 AM Technical Session: T3 (S1) Hall Name: Society Room THEME: MOUNTAIN HYDROLOGY AND SPRINGSHED MANAGEMENT

### Session Chairs: R.D. Deshpande & Soban Singh Rawat

| Sr. No. | Abstract-ID | Author                             | Title   |
|---------|-------------|------------------------------------|---|
| К       | eynote      | R.D. Deshpande                     | Roadmap of Hydrology Research for Developed India: Vision 2047  |
| 1.      | IGWC-38     | Gunanidhi Pokhrel                  | Spring Outflows in Diverse Lithological and Geomorphological Settings of Mid-Hill Region of Western Nepal                               |
| 2.      | IGWC-59     | Nirajan Ojha                       | Distribution of Springs Along the Phalebas Thrust in Middle Hill Region of Western Nepal  |
| 3.      | IGWC-62     | Ankit                              | Stage-discharge rating curve and Particle-size distribution of sediment of Ranikhola river, Sikkim, India                               |
| 4.      | IGWC-83     | Shikha Rawal                       | Spatio-Temporal Distribution of Natural Water Resource in Kangra Block, Himachal<br>Himalaya: A Hydrochemical and Hydrological Analysis |
| 5.      | IGWC-90     | Poulomee Coomar                    | Tracing Solute Sources and Derivation Pathways in Trans–Himalayan Groundwaters of the<br>Indus River Basin in Ladakh, India             |
| 6.      | IGWC-110    | Venkata Ramamohan<br>Ramachandrula | Gravity-Based Pressurized Pipe Irrigation Networks (GPPINS) Using Springs in Hilly Areas:<br>Opportunities and Challenges               |
| 7.      | IGWC-119    | Neeraj Pant                        | Integrating Science and Community Action for Sustainable Spring Management in the Indian Himalayas                                      |
| 8.      | IGWC-503    | Gaurav Singh                       | Community Led Springshed Management in Meghalaya, India   |



### 06th March 2025 (Day 2), Time: 09:00 - 11:00 AM Technical Session: T4 (S1) Hall Name: Manthan Hall THEME: WATER RESOURCES IN ARID AND SEMI-ARID REGIONS

### Session Chairs: B. Venkateswrarao & A. Asokan

| Sr. No | Abstract-ID | Author               | Title  |
|--------|-------------|----------------------|--|
| K      | eynote      | B. Venkateswrarao    | Urban Ground Water Problems and Prospects - A Case Study of Upper Musi Basin<br>Hyderabad, India   |
| 1.     | IGWC-78     | Daksh H. Soni        | Assessing Groundwater Vulnerability with Upgraded DRASTIC-LU Model in Semi-Arid Banaskantha District, Gujarat, India                                 |
| 2.     | IGWC-88     | Priyanka Parmar      | Assessment of Groundwater Quality and Its Impact on Human Health in South Western Haryana  |
| 3.     | IGWC-93     | Damodar Sharma       | Empirical Evaluation of Water-Saving in Irrigation Canals in the Semi-Arid Zone of India   |
| 4.     | IGWC-94     | Rupsa Mitra          | An Approach for Water Resource Management in the Semi-Arid Region: A Case Study of Kalahandi District, Odisha, India.                                |
| 5.     | IGWC-104    | Avinash R            | Long-Term Trend Analysis of Groundwater Withdrawals in A Semi-Arid Basin of South<br>India   |
| 6.     | IGWC-242    | Isha Swati           | Quantitative Assessment of Canal Water Allocation for Groundwater Recharge in North-West India   |
| 7.     | IGWC-244    | Shashi Poonam Indwar | Trend Analysis of Selected Hydro-Meteorological Variables for the Kolar Basin In Madhya Pradesh, India   |
| 8.     | IGWC-153    | K.B.V.N. Phanindra   | Evaluation of GRACE data by developing an integrated hydrological model to simulate terrestrial water storage in a large scale semi arid river basin |



# 06th March 2025 (Day 2), Time: 09:00 - 11:00 AM Technical Session: T5 (S1) Hall Name: Lecture Room THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

# Session Chairs: Prosun Bhatacharya & Prashant Rai

| Sr. No. | Abstract-ID | Author             | Title   |
|---------|-------------|--------------------|---|
| Keynote |             | Prosun Bhatacharya | Scaling Water Safety in South Asia: A Model for Policy Interventions, Groundwater<br>Monitoring, Driller Engagement and Digital Interventions for Sustainable Arsenic Mitigation<br>in Bangladesh |
|         |             | Bentje Brauns      | Emerging Contaminants and Microbial Indicators in Surface Waters and Groundwaters in Bengaluru City, Karnataka, India   |
| 1.      | IGWC-10     | Mamta Bisht        | Chitosan and Chitosan-Graphene Oxide Nano-Bioadsorbents for Efficient Fluoride Removal from Water: Process Optimization and Adsorption Mechanisms   |
| 2.      | IGWC-24     | Manju Kajla        | Strategic Anchoring of Ceria on Graphite Surface for Optimal Groundwater Arsenic Removal  |
| 3.      | IGWC-417    | Tripti Muguli      | Inventory of Radon Abundance in Groundwater of the Yamuna River Basin, India  |
| 4.      | IGWC-36     | Smitakshi Medhi    | Arsenic Contamination in Groundwater and Health Risk Assessment in Parts of the Brahmaputra Floodplains in Assam, India   |
| 5.      | IGWC-45     | Jayashri Dutta     | Heavy Metal Contamination in Groundwater of the Guwahati City, Assam, India   |
| 6.      | IGWC-427    | Dr. M. Uma Shankar | Examining the Characteristics of Groundwater Quality in Fluoride-Enriched Hard Rock Region in Vellore District Tamil Nadu, India using Hydrogeochemical and Multivariate Statistical Techniques   |
| 7.      | IGWC-68     | Rashmi Bala        | Fluoride Toxicity and Its Impacts on Human Health in Wazirganj Block, District Gaya, Bihar, India   |
| 8.      | IGWC-120    | Anjali Kushwaha    | Trends in Groundwater Quality and Heavy Metal Pollution in Haridwar District, Uttarakhand: A Call for Sustainable Management  |



# 06th March 2025 (Day 2), Time: 11:30 - 01:30 PM Technical Session: T1 (S2)

# Hall Name: Manthan Hall

### THEME: IMPACT OF CLIMATE CHANGE ON GROUNDWATER AND ADAPTATION MEASURES

# Session Chairs: L. Elango & Surjeet Singh

| Sr. No. | Abstract-ID | Author                  | Title   |
|---------|-------------|-------------------------|---|
| H       | Keynote     | L. Elango               | Impact of climate change on coastal groundwater resources   |
| 1.      | IGWC-240    | Priya P. Pillai         | Climate Change and Groundwater Resilience in Tamil Nadu: Regional Impacts and Adaptive Strategies                                 |
| 2.      | IGWC-241    | Prajakta Avinash Shinde | Future-Proofing Groundwater: Modelling Impacts of Climate, Land Use, and Drought Vulnerability                                    |
| 3.      | IGWC-329    | Maushami                | Impact of Urban Heat Island on Groundwater Recharge: A Bibliometric Analysis  |
| 4.      | IGWC-257    | Ashish Pathania         | Insights into the August 2023 Punjab Floods: Hydrological and Operational Perspectives  |
| 5.      | IGWC-208    | N.C. Mondal             | Rainfall-driven groundwater reserves in the Koyna basin, India: Assessing seasonal recharge and environmental interactions        |
| 6.      | IGWC-335    | Suchithra Sundaram      | Variability of the Spring Arctic Sea Ice and Its Impact on Indian Summer Monsoon: A<br>Hydrological Perspective                   |
| 7.      | IGWC-349    | Devlal Soma Bhilavekar  | Land Use Changes and Their Impact on Groundwater Sustainability in Narkhed-Pandhurna,<br>Critical Zone Observatory, Central India |
| 8.      | IGWC-389    | Kuldeep Sharma          | High-Resolution Climate Projections for Groundwater Sustainability in The Himalayas Using WRF-Based Dynamical Downscaling         |
| 9.      | IGWC-433    | T. Thomas               | Climate Change Impact Assessment on Groundwater Recharge in Narsinghpur District of Madhya Pradesh                                |
| 10.     | IGWC-440    | Vijeta Singh            | Hydrological Modelling Under Climate Change Scenarios: Sensitivity Analysis of Runoff<br>Estimates in Ballia District             |



# 06th March 2025 (Day 2), Time: 11:30 - 01:30 PM Technical Session: T3 (S2) Hall Name: Jal Tarang Auditorium THEME: MOUNTAIN HYDROLOGY AND SPRINGSHED MANAGEMENT

# Session Chairs: Sanjeev Bhuchar & Sumit Sen

| Sr. No. | Abstract-ID | Author               | Title  |
|---------|-------------|----------------------|--|
| I.      |             | Sanjeev Bhuchar      | Understanding key enablers for scaling springshed management as nature-based solution  |
| ĸ       | eynote      | Sudhir Kumar         | Challenges of mountain hydrology and its impact on Springshed management   |
| 1.      | IGWC-137    | Tanishtha Nandy      | Apprisal of Hydro-Chemical Regime for Water Resource Characterization in Southern Part of Gaula Micro-Watershed, Uttarakhand, India        |
| 2.      | IGWC-154    | Faisal Abass Padder  | Hydrological Vulnerability and Distribution of Springs in the Lidder Watershed, Kashmir Himalaya, India                                    |
| 3.      | IGWC-164    | Nikitasha Chatterjee | Investigation of Groundwater Recharge Zones in the Upper Ganga Basin, India  |
| 4       | IGWC-197    | Praveen Kumar        | Springshed Management in the Lesser Himalayas Using a Geohydrological, Geospatial, and Geophysical Technique                               |
| 5.      | IGWC-207    | Bhupendra Joshi      | Evaluating Multiple Datasets for Modelling Snow-Glacier Melt Runoff Dynamics in Bhilangana Basin, India                                    |
| 6.      | IGWC-237    | Abhijit Sen          | Mapping and Managing of Springshed for Water Conservation Using Geospatial Technology in Kalimpong District of Darjeeling Himalaya, India. |
| 7.      | IGWC-342    | Lavkush Patel        | Modelling Streamflow Dynamics and Climate Sensitivity in the Gangotri Glacier Watershed  |
| 8.      | IGWC-369    | Pravin Rangrao Patil | Land Surface Temperature Dynamics in A Lesser Himalayan Catchment  |



# 06th March 2025 (Day 2), Time: 11:30 - 01:30 PM Technical Session: T4 (S2) Hall Name: Lecture Room THEME: WATER RESOURCES IN ARID AND SEMI-ARID REGIONS

### Session Chairs: Vijay Kumar and Sanjay Kumar

| Sr. No | Abstract-ID | Author                     | Title   |
|--------|-------------|----------------------------|---|
| Ke     | ynote       | Vijay Kumar                | Submarine Groundwater Discharge : Indian Perspective  |
| 1.     | IGWC-265    | Birendra Pratap            | An Integrated Approach of GIS and AHP for Groundwater Potential Zone Mapping in Parts of Mirzapur District, Uttar Pradesh, India                        |
| 2.     | IGWC-280    | Darshan Malviya            | Hydrochemical Evolution of Groundwater in the Arid Regions of North-West India  |
| 3.     | IGWC-288    | Sudhir G. Jain             | Study of Groundwater Discharge in Selected Area of Tapi Basin-District Jalgaon (Maharashtra)  |
| 4.     | IGWC-295    | Pavan Sai Kiran Koppukonda | Diversity of Perception on Groundwater Risk Factors and Conservation Practises: A<br>Multi-Group Analysis From Tamil Nadu                               |
| 5.     | IGWC-249    | Poonam                     | Water Quality Assessment and Health Impacts of Fluoride in Rajasthan's Chauka Systems   |
| 6.     | IGWC-172    | Bhagyashri C. Maggirwar    | Assessing Drinking Water Scarcity in Semi-Arid Hard Rock Basaltic Aquifers Using<br>Geomorphological Signatures in Karha River Basin from Western India |
| 7.     | IGWC-219    | J. Sivaramakrishnan        | Assessment of trends and decadal changes in groundwater resources in Tamil Nadu   |
| 8.     | IGWC-457    | Jugdambe Sharma            | Forecasting of rainfall using deep learning algorithms for the Seonath river basin  |



# 06th March 2025 (Day 2), Time: 11:30 - 01:30 PM Technical Session: T5 (S2) Hall Name: Society Room THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

# Session Chairs: Stefan Krause & P.K. Tripathi

| Sr. No. | Abstract-ID | Author              | Title   |
|---------|-------------|---------------------|---|
|         | Keynote     | Stefan Krause       | The impact of hydrometeorological extremes on contaminant fate and transport across urban terrestrial-aquatic interfaces  |
| 1.      | IGWC-60     | Vinay Arya          | Use of Hydro-chemical Indices for Mineral Dissolution and Pollutant Identification in the Middle Ganga Basin  |
| 2.      | IGWC-397    | Spandan Naskar      | Fate, Transport, And Geochemical Interactions of Organo-Arsenic Compounds with Natural Minerals and Soils: Insights from Roxarsone Studies  |
| 3.      | IGWC-454    | Suraj Kumar         | Integrated Assessment of Groundwater Quality Using EWQI and Variance Decomposition Method to Evaluate Fluoride-Induced Health Risks   |
| 4.      | IGWC-140    | Rinku Rani Das      | Role of Geology and Geomorphology in Arsenic Distribution in Groundwater of the Cacher Fold Belt, Barak Valley Assam, India.  |
| 5.      | IGWC-141    | Adiva Khan          | Hydrochemical Characterization of Groundwater and Assessment of Water Quality for Drinking and Agricultural Use in and Around Uranium-Contaminated Areas of Gwalior, Central India. |
| 6.      | IGWC-412    | Bijoylakshmi Boruah | Synthesis of Bamboo Derived Activated Carbon for Groundwater Treatment: Turbidity and Hardness Reduction  |
| 7.      | IGWC-428    | Vinod Kumar         | Hydro-Geochemical Investigations and Suitability of Groundwater for Drinking Purposes in<br>Indore District, Madhya Pradesh   |
| 8.      | IGWC-117    | Subhashree Biswal   | A Hydrogeochemical Approach to Evaluate the Groundwater Quality in the Coastal Aquifers of North Eastern Part of Odisha, India.   |
| 9.      | IGWC-65     | Rima Manik          | Co-Transport of Engineered Nanoparticles and Bacteria in Water Saturated Porous Media   |



# 06th March 2025 (Day 2), Time: 11:30 - 01:30 PM Technical Session: T6 (S1) Hall Name: Sangam Hall THEME: GROUNDWATER MODELING AND MANAGEMENT

# Session Chairs: R.C Jain & P.K. Sharma

| Sr. No. | Abstract-ID | Author            | Title   |
|---------|-------------|-------------------|---|
|         |             | R. C. Jain        | Scarcity of water or scarcity of management in India  |
| K       | eynote      | S. Pazhanivelan   | Geospatial tools in Water resource monitoring and management  |
| 1.      | IGWC-17     | Ritaja Roy        | Groundwater Pumping Induced Streamflow Decline  |
| 2.      | IGWC-66     | Abhishek Kurmi    | Analytical Solution to Model Flow Behavior in Unconfined Dual Permeability Aquifers   |
| 3.      | IGWC-81     | Naved Hasan       | Assessment and Prediction of Ciprofloxacin Antibiotic in Groundwater Due to Pharmaceutical Waste Disposal in Musi River, Hyderabad. |
| 4.      | IGWC-89     | Arindam Roy       | Numerical Modelling on the Transport of Benzene Under Variable-Density Flow   |
| 5.      | IGWC-203    | B Venkatesh       | Evaluating Status of Groundwater Dynamics Using Geo-Spatial Water Level Fluctuation Mapping for Dindi Watershed                     |
| 6.      | IGWC-204    | Abdul Razzaq Khan | Effects of Water Extraction on Maximum Longitudinal Plume Length: A Numerical Investigation for Contaminant Site Remediation        |
| 7.      | IGWC-209    | Stuti Srivastava  | 3-D Groundwater Flow Modelling in Yamuna Micro Watershed Using FEFLOW   |
| 8.      | IGWC-229    | G.M. Kartick      | Effective Groundwater Monitoring Network for Modelling and Management at Micro-Watershed Scale                                      |



### 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM Technical Session: T3 (S3) Hall Name: Lecture Room THEME: MOUNTAIN HYDROLOGY AND SPRINGSHED MANAGEMENT

# Session Chairs: Sanjay K Jain & A.S. Maurya

| Sr. No. | Abstract-ID | Author                     | Title   |
|---------|-------------|----------------------------|---|
| Kevnote |             | Moti Lal Rijal             | Status of Groundwater Resources in Nepal: Is it Sustainable to Fulfil Sustainable Development Goals?  |
|         | eynote      | S.K.M. Guite               | Policies for Implementation of Springshed Management Programs in Mountainous<br>Regions of India: An Initiative of Ministry of Rural Development, Government of India |
| 1.      | IGWC-400    | Soban Singh Rawat          | Past, Present and Future of Springshed Management in India  |
| 2.      | IGWC-407    | Ashwini Ranade             | Dynamics and Climatic Changes in Large-Scale Extremes in the Northwest Himalaya:<br>Implications for Regional Hydrology and Disaster Risk                             |
| 3.      | IGWC-435    | Dharm Singh Meena          | Hydrochemical Assessment of Water Resources of the River Henwal Catchment, Tehri Garhwal, Uttarakhand   |
| 4.      | IGWC-441    | Deepak Singh Bisht         | ISHVAR – Information System of Himalayan Springs for Vulnerability Assessment and Rejuvenation  |
| 5.      | IGWC-446    | Sumit Rana                 | Hydrogeochemical characterization of hot springs in the Bhagirathi valley, Uttarakhand, India:<br>Insights into geothermal resources and recharge mechanisms          |
| 6.      | IGWC-379    | Tanvi Umakant<br>Khandekar | Morphometric Analysis for Prioritizating Sub-Watershed of Karli River Basin Using Geospatial Techniques   |
| 7.      | IGWC-384    | Somarendro Singh           | Development of Springs in Hilly Terrains – A Case Study in West Siang District, Arunachal Pradesh, India  |
| 8.      | IGWC-376    | Tarun Pant                 | Spring Rejuvenation for Water Security in Himalaya: A Holistic Approach   |



# 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM Technical Session: T4 (S3) Hall Name: Society Room THEME: WATER RESOURCES IN ARID AND SEMI-ARID REGIONS

### Session Chairs: Bellie Sivakumar & R.P. Pandey

| Sr. No. | Abstract-ID Author               |                      | Title  |
|---------|----------------------------------|----------------------|--|
|         | Keynote                          | Bellie Sivakumar     | Complexity and Connectivity in Groundwater Systems: Role of Chaos Theory and Complex Network Theory                              |
| 1.      | IGWC-312                         | Faisal Imam Umrani   | On the Relationship Between Geomorphic Connectivity and Peizometric Surface in A<br>Semi-Arid Region, Lower Chambal Basin, India |
| 2.      | IGWC-327                         | Siddhi Sandip Mandre | Impact of Seasonal Reservoir Discharges on Groundwater Levels in Semi-Arid Regions:<br>A Coupled Modelling Approach              |
| 3.      | IGWC-366                         | Sourabh Nema         | Rising Groundwater Levels in Jodhpur, India: Trends, Causes, and Sustainable Management Strategies                               |
| 4.      | IGWC-394                         | Lagudu Surinaidu     | In-Depth Analysis of the Hydro-ecological Systems in the Water-Scarce Luni River Basin in North-Western India                    |
| 5.      | IGWC-411                         | Namrata Sankhla      | Spatio-Temporal Analysis of Rainfall and Groundwater: A Case Study of Semi-Arid Region of Rajasthan, India                       |
| 6.      | IGWC-337 Sudesh Singh Choudhary  |                      | Efficient stormwater collection for sustainable water resource management in Sikar district, Rajasthan                           |
| 7.      | IGWC-365 Akshay Vyankat Dahiwale |                      | Analysis of changing rainfall patterns in the Luni basin and it's impact on groundwater table dynamics                           |



# 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM Technical Session: T5 (S3) Hall Name: Jal Tarang Auditorium THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

# Session Chairs: C. Sandhu & C. Mayilswami

| Sr. No. | Abstract-<br>ID | Author         | Title   |
|---------|-----------------|----------------|---|
| К       | eynote          | C. Sandhu      | Riverbank Filtration for Irrigation at a Wastewater-Impacted River in An Arid Region  |
| 1.      | IGWC-57         | Abhilash R     | Geospatial Analytics for Analysing Fluoride Concentrations on Groundwater Quality Status in Parts of Nalgonda, Telangana  |
| 2.      | IGWC-160        | Gargi Singh    | Impact of Land-Use and Land -Cover Change on Groundwater Quality in Northern Part of Odisha, India: A<br>Hydrogeochemical and GIS Approach  |
| 3.      | IGWC-161        | Divya A S      | Evaluation of Groundwater Suitability for Drinking and Irrigation Purposes in Pullamapatti Watershed<br>Using CCME-WQI with Special Emphasis on Health Risk in Fluoride and Nitrate Contamination   |
| 4.      | IGWC-169        | Ancy P. Regi   | Removal of Inorganic Contaminants from Groundwater Using Laterite Soil in Middle Western Ghats  |
| 5.      | IGWC-177        | Sourabh Dixit  | Effect of Microplastics on the Dynamics of Emerging Contaminants in Groundwater   |
| 6.      | IGWC-179        | Kaptan Singh   | Emerging Pollutants in Water, Sources, Health Impacts and Management  |
| 7.      | IGWC-383        | Madhukar Singh | The Principal Component Analysis and Modified Ground Water Quality Index - A Powerful, Actionable<br>Tool for Ground Water Quality Assessment and Policy Intervention: A Case Study in Part of the Gangetic<br>River Basin of Gorakhpur District, India |
| 8.      | IGWC-97         | Puja Chowdhury | A Case Study on the Comparative Assessment of Groundwater Quality, Contamination - Health Risk Factor<br>in the Hard Rock and Alluvial Terrains of Eastern India  |
| 9.      | IGWC-338        | Amitava Roy    | Hydro-Fracturing the Unconventional Hydrocarbon Reservoir Rocks Like Shale and its Impact on Ground Water   |



# 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM Technical Session: T6 (S2) Hall Name: Sangam Hall THEME: GROUNDWATER MODELING AND MANAGEMENT

### Session Chairs: Carlos Andres & Vishal Singh

| Sr. No. | Abstract-ID | Author                               | Title  |
|---------|-------------|--------------------------------------|--|
| Keynote |             | Carlos Andres Rivera<br>Villarreyes  | Towards the Future of Groundwater Modelling: From Conceptualization to   |
|         |             | Villarieyes                          | Uncertainty Quantification   |
| 1.      | IGWC-129    | Dwarampudi Sai<br>Kalyan Bulli Reddy | GIS-based Groundwater Potential Analysis for Sustainable Extraction and Recharge Planning: A<br>Case Study from North Chennai, Tamil Nadu, India |
| 2.      | IGWC-135    | Ranveer Kumar                        | River Aquifer Exchange Dynamics in Varuna River Through Differential Flow Gauging and Numerical Groundwater Modelling                            |
| 3.      | IGWC-163    | Deepak Kumar                         | Assessment and Prioritization of Groundwater Quality Parameters Using MCDM Techniques  |
| 4.      | IGWC-182    | Rajyashree Nandy                     | Groundwater Characterization Through Modelling Exercise in the Upper Part of Ajoy-Damodar<br>Interfluve of West Bengal                           |
| 5.      | IGWC-186    | Vikas Singh                          | Groundwater Management Using Coupled Meshless Numerical Models and Machine Learning Techniques   |
| 6.      | IGWC-233    | Shivam Chaubey                       | Assessment and Forecasting of Groundwater Trends in the Bundelkhand Region: Implications for<br>Water Scarcity and Resource Management           |
| 7.      | IGWC-328    | Jalaj Limaye                         | Simulating Groundwater Levels and Pollution in Pune  |
| 8.      | IGWC-20     | K.B.V.N. Phanindra                   | Transient Hydraulic Tomography Inversion Using Sequential Gaussian Mixture Model   |



# 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM

### **Technical Session: T13 (S1)**

### Hall Name: Manthan Hall

### THEME: PROTECTION OF GROUNDWATER DEPENDENT ECOSYSTEMS - RIVERS, WETLANDS, LAKES

#### **AND SPRINGS**

### Session Chairs: A.K. Lohani & Omkar Singh

| Sr. No. | Abstract-Id | Author                    | Title  |
|---------|-------------|---------------------------|--|
| Keynote |             | Basant Maheshwari         | Participatory Approach for Sustaining Groundwater and Improving Livelihood:<br>Lessons from the MARVI Project in Rural India   |
| 1.      | IGWC-150    | Thallam Prashanth         | A Holistic Approach for Identifying Artificial Groundwater Recharge Zones to Rejuvenate<br>Ungauged Lakes Affected by Groundwater Drought  |
| 2.      | IGWC-464    | Maria Isabel Chambi Tapia | Sediment-Water Interaction and Its Impact on Hydrogeochemistry in the Sajama National<br>Park, Volcanic Zone of the Central Bolivian Altiplano   |
| 3.      | IGWC-194    | Sanjayan M S              | Terrain Modelling of Mananthavady River Basin, Wayanad District, Kerala, India   |
| 4.      | IGWC-215    | Robert William Raj. A     | Permanent Solution for Flood and Drought Conditions – A New Scientific and Nature<br>Based Water Networking Protocol to Neutralize the Global Threats and Ensure Water<br>Security for the Future Generations by Focusing on Groundwater |
| 5.      | IGWC-259    | Abhishek Gupta            | Quantification of Flood Mitigation Services by Groundwater-Dependent Water Resources<br>Using Invest Model for the Wainganga Basin, India  |
| 6.      | IGWC-230    | Shivani A Mehta           | System Dynamics and Modelling of Micro-Watersheds  |
| 7.      | IGWC-444    | Anshumali                 | Water Quality and Geochemical Assessment of Terracotta Dug wells: An Implication in Restoration and Conservation of Ancient Civilization   |
| 8.      | IGWC-190    | Sanjay Satpute            | Assessment Of Reservoir Sedimentation Using Geospatial Technique: A Case Study of Saleran Reservoir in Shivalik Foot-Hills of North-West India   |



# 06th March 2025 (Day 2), Time: 02:30 - 04:15 PM

# **POSTER SESSION**

| Sr. No. | Abstract-Id | Author             | Title  |
|---------|-------------|--------------------|--|
| 1.      | IGWC-324    | Rajat Kumar        | Prioritizing Groundwater Potential and Soil Erosion-Prone Zones Using Morphometric,<br>Hypsometric, and Compound Factor Approaches in the Beas Basin, Himachal Pradesh |
| 2.      | IGWC-178    | Megha S B          | Identification of Morphometrical Parameters Using Geospatial Techniques of Tropical River Basin,<br>Kerala, India  |
| 3.      | IGWC-238    | Neha Rarh          | Hydrological Investigations of Chamasari Springs Using Stable Isotopes as Natural Tracers  |
| 4.      | IGWC-279    | Dinesh Rai         | Groundwater Dating in Two Northwest Indian States  |
| 5.      | IGWC-381    | Pankaj Patidar     | Water Quality Analysis of Nainital Lake by Integrating Satellite Data and Laboratory Experiments   |
| 6.      | IGWC-152    | Mahima Choudhary   | Constructed Wetlands for Removing Pesticides and Antibiotics from Contaminated Water   |
| 7.      | IGWC-448    | Dinesh Kumar Singh | Digital Twin of Sustainable Water Management for Village   |
| 8.      | IGWC-232    | Mohd Faraz Khan    | Microplastic Contamination in the Unconfined Groundwater Aquifer of Haridwar, India.   |
| 9.      | IGWC-303    | Ishadaya Ghodeswar | A Study of Pre- and Post-Monsoon Water level and Water level Fluctuation of Northern Part of WRJ-2 Watershed, Nagpur District, Maharashtra State.                      |
| 10.     | IGWC-74     | Lisha Borgohain    | Assessment of Groundwater and Surface Water Quality in the Southern Brahmaputra Floodplains,<br>Assam: Insights from Hydrochemical Analysis and Isotope Study          |
| 11.     | IGWC-98     | Nibedita Jena      | Geochemical Assessment of Groundwater Contamination with Special Emphasis on Flouride<br>Concentration in Sono River Basin, Balasore District, Odisha, India           |
| 12.     | IGWC-86     | Suhani Srujanika   | Assessment of hydrochemistry and source identification of groundwater contamination along the coastline of Odisha, India using geospatial and statistical tools        |
| 13.     | IGWC-151    | Mayank Bahuguna    | Application of Rice Husk Modified Biochar for Groundwater Remediation  |
| 14.     | IGWC-395    | Raju Rai           | Hydrogeochemical Investigation of Groundwater and Surface Water Quality in the Mining-<br>Impacted Regions of Northern Coal Field Singrauli, Central India             |

| 15. | IGWC-338 | Amitava Roy          | Hydro-Fracturing the Unconventional Hydrocarbon Reservoir Rocks Like Shale and its Impact on Ground Water  |
|-----|----------|----------------------|--|
| 16. | IGWC-368 | Sury Kant Singh      | Evaluation of Impact of Mining on Groundwater Quality in and Around Singrauli Coalfield, India   |
| 17. | IGWC-23  | Shaista Parvez Khan  | Assessing Groundwater Quality: Variability and Distribution of Major and Trace Ions in Chhattisgarh,<br>India  |
| 18. | IGWC-325 | Abhijit Dharashivkar | Rainfall and its Variation in and Around Bhanegao and Singori Open Cast Coal Mining Area, District Nagpur  |
| 19. | IGWC-292 | Mayurakshi Gogoi     | Investigating the Geochemical Characteristics of Springs and Groundwater Potential in Assam Hills for<br>Sustainable Springshed Management                           |
| 20. | IGWC-341 | Siddharth Rana       | Natural Springs Water Quality Evaluation Using Water Quality Index and Geospatial Techniques in<br>Bhilangana Block of Tehri Garhwal District, Uttarakhand, India    |
| 21. | IGWC-354 | Puthiyottil Nijesh   | Environmental Isotopes for Management of Springshed in the Khulgad Watershed of Kosi River Basin,<br>Kumaun Lesser Himalaya, India                                   |
| 22. | IGWC-398 | Ayush Kukreti        | Hydrochemical Analysis of Springs Water in Pratapnagar Block, Tehri Garhwal of Uttarakhand   |
| 23. | IGWC-101 | Himadri Sekhar Roy   | Analysis of the Quality, and Identification of the Sources of Ions in the Groundwater- A Case Study in Silguri and Matigara Blocks, Darjeeling District, West Bengal |
| 24. | IGWC-32  | Samapika Das         | Groundwater Quality Assessment in Semi-Arid Region of North-Western Part of Odisha, India  |
| 25. | IGWC-92  | Nirban Laskar        | Seasonal Assessment of Groundwater Quality and Practice of Water Use Management in Champhai and Mamit District of Mizoram, India                                     |
| 26. | IGWC-270 | Rajat Kumar          | Estimating Soil Erosion using RUSLE Model Technique in Amba River Basin, Maharashtra   |
| 27. | IGWC-187 | Jyoti Gautam         | Revolutionizing Smart Water Safety: A Fast, Low-Cost Paper Strip Dip Test for On-Site Bacterial<br>Contamination Detection   |



# 06th March 2025 (Day 2), Time: 04:45 - 06:30 PM Technical Session: T5 (S4) Hall Name: Society Room THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

# Session Chairs: Daniel Lapworth & Rajesh Singh

| Sr. No. | Abstract-ID | Author                  | Title   |
|---------|-------------|-------------------------|---|
| Keynote |             | Daniel Lapworth         | From salinity to emerging contaminants – groundwater quality challenges and the need to redouble efforts to improve groundwater quality assessments   |
| 1.      | IGWC-188    | Mohd Faraz Khan         | Drip Irrigation Promoted Migration of Microplastic Particles Across Vertical Soil Columns   |
| 2.      | IGWC-196    | Prasanta Kumar<br>Sahoo | Design and Fabrication of Ag-Modified Porous Three-Dimensional Reduced Graphene Oxide-Based<br>Electrochemical Sensor for the Sensitive and Selective Detection of Mercury Ions in Water and Soil<br>Samples. |
| 3.      | IGWC-218    | Vishwatma Biswas        | Exploring Electrochemical Oxidation for the Removal of Bisphenol-A from Contaminated Groundwater  |
| 4.      | IGWC-221    | Vijayakumar G           | Occurrence and Extent of Elevated Uranium Contamination in the Ground Water Sources,<br>Krishnagiri District, Tamil Nadu  |
| 5.      | IGWC-239    | Anuja Joseph            | Fluorescence-Based Detection of Microplastics: Advancing Rapid and Reliable Water Quality Monitoring  |
| 6.      | IGWC-138    | Suja Subramanian        | Evaluation of Hydro Chemical Characteristics and Heavy Metal Concentration of Groundwater at<br>Kalpakian Coastal Site, Tamil Nadu  |
| 7.      | IGWC-336    | Catherine Louis         | Comprehensive Groundwater Quality Analysis in Punjab State, India   |
| 8.      | IGWC-462    | Lizangela Huallpara     | Spatial Distribution of Arsenic, Boron and Lithium as Key Determinants of Groundwater Quality<br>Index in the Lauca River Basin, Bolivian Altiplano   |



## 06th March 2025 (Day 2), Time: 04:45 - 06:30 PM Technical Session: T6 (S3) Hall Name: Manthan Hall THEME: GROUNDWATER MODELING AND MANAGEMENT

## Session Chairs: T.I. Eldho & B. Venkatesh

| Sr. No. | Abstract-ID | Author                       | Title   |
|---------|-------------|------------------------------|---|
| Ka      | ynote       | T.I. Eldho                   | Developments in Meshless Numerical Methods and Its Applications in Groundwater Management   |
| Ke      | ynote       | Vivek Bedekar                | Use of Regional Scale Models for Water Resources Assessment, Planning, and Management   |
| 1.      | IGWC-276    | Rohan Vishwasrao<br>Pawar    | Participatory Groundwater Management Towards Sustainable Development of an Aquifer – A Case<br>Study Aquifer from Satara District, Maharashtra, India |
| 2.      | IGWC-285    | Shruti Jain                  | A Finite Volume Method-Based Numerical Model for Coupled Subsurface Flow and Contaminant<br>Transport Dynamics  |
| 3.      | IGWC-372    | Ashfaque Majeed<br>Gojree    | Mathematical Modelling of Groundwater Flow in Heterogeneous Soil Using the Finite Difference Method.  |
| 4.      | IGWC-419    | Udit Saxena                  | Temporal Analysis and Predictive Modelling of Groundwater Dynamics in Sambhal District, Uttar Pradesh   |
| 5.      | IGWC-320    | Palugulla Subashini<br>Reddy | Flow Model for Groundwater Recharge Potential   |
| 6.      | IGWC-439    | Mohit Kansal                 | Quantitative Insights and Groundwater Flow Modeling in Open-pit Mines   |
| 7.      | IGWC-316    | Lolali Nanda                 | Unveiling the Hidden Waters: Integrating SWAT-MODFLOW For Mahanadi River Basin's Water Dynamics   |
| 8.      | IGWC-423    | Prajakta Jadhav              | Fluoride contamination and associate health risk across the state of Maharashtra, India   |



## 06th March 2025 (Day 2), Time: 04:45 - 06:30 PM Technical Session: T7 (S1)

## Hall Name: Sangam Hall

## THEME: ADVANCED TECHNIQUES FOR GROUNDWATER EXPLORATION AND ASSESSMENT

| Sr. No. | Abstract-ID | Author                        | Title  |
|---------|-------------|-------------------------------|--|
| К       | Ceynote     | Subhash Chandra               | AEM signature of paleochannels: Implications towards groundwater security under changing climate   |
| 1.      | IGWC-82     | Govind Singh<br>Bhardwaj      | Interpretation and Interpolation of Electrical Resistivity Data Using Inverse Plot Method: Case Study of Ground Water Exploration in Hard Rock Areas of Rajasthan.                                     |
| 2.      | IGWC-84     | Maya Raghunath<br>Suryawanshi | Grace Satellite Data and Observed Well Levels Reveal the Relation Between Specific Yield and Groundwater Depth   |
| 3.      | IGWC-108    | Akshay Rajendra<br>Kharve     | Deducing Groundwater Potential Zones in the Wainganga Basin, Central India Using Ahp and Geospatial Techniques   |
| 4.      | IGWC-114    | Ayush Kesharwani              | Field Experiment for Sustainable Groundwater Management: Evaluating Discharge<br>Measurement Methods and Aquifer Characteristics in An Alluvial Aquifers of North-Western<br>India                     |
| 5.      | IGWC-124    | Anupama Patil                 | Development of Groundwater Sustainability Using Advanced Geophysical Techniques in<br>Drought Prone Area: A Case Study of Rajapur Village Located Yeola Tehsil, District Nashik,<br>Maharashtra, India |
| 6.      | IGWC-128    | Pavithra S L                  | Groundwater Potential Zones Using AHP Technique for Thiruvananthapuram District, Kerala  |
| 7.      | IGWC-139    | Sujatro Ray<br>Chowdhuri      | Assessment of Dynamic and Static Ground Water Resources Through Aquifer Mapping in Siddhartnagar District, Uttar Pradesh, India  |
| 8.      | IGWC-63     | Bijoy Krishna Chetia          | Lithological Modelling of Jorhat and Majuli District, Assam, India Using Well Log Data and Delineation of Groundwater Potential Zone for Groundwater Resource Management                               |
| 9.      | IGWC-296    | Harikrishnan G                | Assessment of Hydrological Characteristics of Kameng River Basin Based on Morphometric<br>Parameters Using Geospatial Technology   |

## Session Chairs: Subhash Chandra & S.P. Rai



## 06th March 2025 (Day 2), Time: 04:45 - 06:30 PM Technical Session: T8 (S1) Hall Name: Lecture Room THEME: AUGMENTATION OF GROUNDWATER RESOURCES

## Session Chairs: Sudhir Kumar & Anitha Shyam

| Sr. No. | Abstract-Id | Author                       | Title  |
|---------|-------------|------------------------------|--|
| К       | eynote      | Sushil Gupta                 | Groundwater Management Strategies towards Sustainable Water Supplies to Chandigarh   |
| 1.      | IGWC-127    | N.V. Sharma                  | Augmentation of Groundwater Resources Through Technical Surveys and Community<br>Involvement the Buldhana District, Maharashtra, India.                                |
| 2.      | IGWC-165    | Yaggesh Kumar<br>Sharma      | Evaluating Pond Recharge Potential in the Ramganga Basin with Data-Driven Modelling Approaches   |
| 3.      | IGWC-252    | Mahesh Chand Singh           | Groundwater Recharge Zoning and Artificial Recharge Site Identification in Chohal and Damsal<br>Command Areas, Hoshiarpur, Punjab Using Geospatial Techniques          |
| 4.      | IGWC-278T   | Shivaji Tulshiram<br>Padmane | Artificial Recharge to Groundwater Level Declining Area Using Canal Water of Bhandara District,<br>Maharashtra, India.   |
| 5.      | IGWC-134    | K. A. Jadhav                 | Sustaining Groundwater Resource Through Socio-Hydrogeological Approach: A Comprehensive Study in A Cluster of Overexploited Villages in Amravati District, Maharashtra |
| 6.      | IGWC-308    | Nitin Saini                  | Quantifying Rainwater Harvesting Potential Across Various Topographies: A Ten-Site Study for Five States in India  |
| 7.      | IGWC-343    | Sandeep Sagar                | Assessment of Groundwater Vulnerability in Jharkhand Region of India Using Drastic Model   |
| 8.      | IGWC-466    | Nagraj S. Patil              | A Multi-Faceted Approach for Assessing Groundwater Recharge Potential in The Beguru Sub-<br>Watershed, Karnataka, India  |



## 06th March 2025 (Day 2), Time: 04:45 - 06:30 PM

## Technical Session: T11 (S1)

#### Hall Name: Jal Tarang Auditorium

# THEME: APPLICATION OF AI, ML, IOT, CLOUD COMPUTING AND OTHER ADVANCED TECHNIQUES IN GROUNDWATER

## Session Chairs: A.K. Keshari & Archana Sarkar

| Sr. No. | Abstract-Id | Author                   | Title   |
|---------|-------------|--------------------------|---|
| К       | eynote      | A.K. Keshari             | Harnessing machine learning and design science for climate change adaptation in groundwater   |
| 1.      | IGWC-273    | Bibhukalyan<br>Mohapatra | Prioritization of Sub-watershed of Phalgu River Basin (PRB), Middle Ganga Plain Using Integrated PCA and Machine Learning Approach  |
| 2.      | IGWC-80     | Mayank Bajpai            | Advancing Groundwater Level Prediction Using Physics-Informed Neural Networks and Machine<br>Learning for Transient Head Variation  |
| 3.      | IGWC-95     | Prajakta Jadhav          | Groundwater Potential Zones Mapping Using Artificial Intelligence Techniques for Surat District,<br>India   |
| 4.      | IGWC-181    | Dolon Banerjee           | Integrating Remote Sensing, GIS, and Machine Learning for Groundwater Logging Detection and Forecasting in Agriculture-Dominated Regions  |
| 5.      | IGWC-201    | Vaishnavi Pariha         | Data-Driven Groundwater Management in Water Stress Area of Central India: A Machine Learning<br>Algorithm Based Analysis of Aquifer Dynamics and Over-Extraction Risks Using High Frequency<br>Data |
| 6.      | IGWC-211    | Suresh Thonte            | Development of User Interface for Sustainable Groundwater Management by Integrating the AI, ML, IoT, Cloud Computing and Other Advanced Techniques  |
| 7.      | IGWC-226    | Ashish Gupta             | Real-Time Groundwater Prediction Models Using RNN and LSTM Techniques   |



## 07th March 2025 (Day 3), Time: 09:00 - 11:00 AM Technical Session: T5 (S5) Hall Name: Jal Tarang Auditorium THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

## Session Chairs: M.K. Sharma & J.P. Patra

| Sr. No. | Abstract-ID | Author                     | Title   |
|---------|-------------|----------------------------|---|
|         | •           | Indumathi Nambi            | Groundwater contamination in landfill sites   |
|         | Keynote     | N.C. Mondal                | Arsenic Contamination and Groundwater Hydrodynamics: Geoscientific Insights from the Ganga Basin, Northern India  |
| 1.      | IGWC-277    | Rohan Vishwas Rao<br>Pawar | Geochemical and Hydrochemical Evaluation of Groundwater in Semi-Arid Phaltan Area, Satara<br>District, Maharashtra: Implications for Potable Water and Agricultural Use                   |
| 2.      | IGWC-345    | Ashish Daydar              | Freshwater Resources Under Microplastics Siege: A Glance at Asia  |
| 3.      | IGWC-281    | Gourav Sharma              | Polycyclic Aromatic Hydrocarbons in Surface and Groundwater: Distribution, Health Risk, and Management  |
| 4.      | IGWC-293    | Ritu Thakur                | Comparative Hydrogeochemical Assessment of Shallow Tubewell in Parts of North and South Bank Plain of Brahmaputra   |
| 5.      | IGWC-298    | Sumita Sarkar              | Hydrogeochemical Appraisal of Groundwater in Bolograph Block of Khurda District, Odisha.  |
| 6.      | IGWC-64     | Rajeev Gandhi              | Assessing Groundwater Contamination in Madhya Pradesh: Sources, Impacts, and Regulatory Responses in a Rapidly Industrializing Landscape  |
| 7.      | IGWC-506    | Ajit Kumar                 | Potassium Retention and Transport in Agricultural Soils Under Treated Wastewater Irrigation:<br>Mechanisms and Environmental Implications   |
| 8.      | IGWC-183    | Akash Tiwari               | An integrated GIS and machine learning based approach for groundwater quality assessment, its hydrochemical characterization, and assessment of the non-carcinogenic health risk in India |



## 07th March 2025 (Day 3), Time: 09:00 - 11:00 AM **Technical Session: T7 (S2)**

## Hall Name: Society Room

## THEME: ADVANCED TECHNIQUES FOR GROUNDWATER EXPLORATION AND ASSESSMENT

## Session Chairs: M.L. Kansal & Pradeep Kumar

| Sr. No. | Abstract-ID | Author             | Title  |
|---------|-------------|--------------------|--|
| Keynote |             | M.L. Kansal        | Vanishing Groundwater - Seeking Pathways for Water Security in the NCT of Delhi  |
| 1.      | IGWC-145    | Sukant Jain        | Monitoring Groundwater Fluctuations in Agroclimatic Zones of India Using GRACE Satellite Data and Precipitation Correlation Analysis           |
| 2.      | IGWC-146    | Irshad Shaikh      | Role of Electrical Resistivity Method for Groundwater Exploration  |
| 3.      | IGWC-251    | N. Narsimha Naidu  | Demarcation And Assessment of Inland Salinity/Groundwater Quality in Parts of Western Dharwad Carton from Transient Electromagnetic Soundings. |
| 4.      | IGWC-243    | Jatin Chaudhary    | Identifying Groundwater Potential Zones in Delhi NCR Using Integrated Remote Sensing, GIS, and AHP Approaches                                  |
| 5.      | IGWC-284    | Ashish Dobhal      | Integrating Remote Sensing, GIS and Machine Learning Techniques for Assessing Groundwater Availability   |
| 6.      | IGWC-291    | Rachna Bhatti      | A Pan India Initiative -To Know Your Aquifer & Manage Your Aquifer Under National Aquifer Mapping and Management (NAQUIM) Program              |
| 7.      | IGWC-318    | Bhawna Siwach      | Geospatial Analysis for Groundwater Resource Assessment: A Case Study of Kirti Nagar Block,<br>Tehri Garhwal, Uttarakhand                      |
| 8.      | IGWC-300    | Ravi Shankar Dubey | Integrated Geohydrological, Geospatial, and Geophysical Approaches for Sustainable Groundwater Management in the Bundelkhand Cratonic Region   |
| 9.      | IGWC-508    | RV Kale            | Development of Web-based Baseflow Separation Analysis Tool   |



## 07th March 2025 (Day 3), Time: 09:00 - 11:00 AM Technical Session: T8 (S2) Hall Name: Sangam Hall THEME: AUGMENTATION OF GROUNDWATER RESOURCES

## Session Chairs: D.S. Arya & Prabhash Mishra

| Sr. No. | Abstract-Id | Author                  | Title   |
|---------|-------------|-------------------------|---|
| ]       | Keynote     | Dr Donald J MacAllister | Unravelling Long-term contributions to recharge in the Indus Basin  |
| 1.      | IGWC-309    | Nitin Saini             | Delineating Groundwater Level Impact from Rainwater Harvesting Recharge Wells Across<br>Diverse Indian Geographies: Implications for Sustainable Management                       |
| 2.      | IGWC-415    | Cornelius Sandhu        | Potential and Challenges of Riverbank Filtration in North and Northeast India   |
| 3.      | IGWC-422    | C.P. Priju              | Identification of Feasible Sites for the Construction of Subsurface Dykes (SSD) in the Drought<br>Prone Areas of Palakkad District, Kerala: Application of Geophysical Techniques |
| 4.      | IGWC-375    | Pallavi Sharma          | Assessment of Rainwater Harvesting System to Combat Water Scarcity and Recharge of Aquifers in Guwahati City, Assam, India  |
| 5.      | IGWC-250    | Ashwin Adhip Acharya    | Groundwater Potential Zonation Mapping Using Topsis, Vikor, Fuzzy Ahp and Edas: A Case<br>Study of the Sharavati River Basin, Karnataka, India                                    |
| 6.      | IGWC-467    | Praveen Kalura          | Geospatial and Hydrogeological Perspective on Groundwater Depletion Trends and Recharge<br>Strategies in an Agriculture Dominated Watershed for Future Water Security             |
| 7.      | IGWC-361    | M.S. Jatav              | Spatial Analysis of Groundwater Potential Zones in Dhasan Basin of Bundelkhand Region,<br>Madhya Pradesh  |
| 8.      | IGWC-96     | Shubham Goswami         | Assessing Groundwater Recharge and Sustainable Extraction Rates for Water Resource Management   |



## 07th March 2025 (Day 3), Time: 09:00 - 11:00 AM Technical Session: T9 (S1) Hall Name: Lecture Room THEME: COASTAL WATER RESOURCES MANAGEMENT

## Session Chairs: P. Nandkumaran & Brijesh K. Yadav

| Sr. No. | Abstract-Id | Author               | Title  |
|---------|-------------|----------------------|--|
| к       | Keynote     | Brijesh K. Yadav     | Emerging Approaches to Protect and Manage Coastal Groundwater Resources  |
| 1.      | IGWC-112    | Ananya Muduli        | Investigating the Strong Correlation Between Salinity and Submarine Groundwater Discharge with Groundwater Potential Along a Tropical Coastline  |
| 2.      | IGWC-173    | Sneha Das            | Application of Multi-Spectral Analysis for Management of Coastal Aquifers in Parts of Southern West Bengal, India  |
| 3.      | IGWC-180    | Rina Kumari          | Seawater Intrusion in the Coastal Aquifers of Gujarat, India, An Integrated Approach   |
| 4.      | IGWC-206    | Soumya Ranjan Sahoo  | Contribution of Groundwater Discharge in Low Flow Sustenance of the Baitarani River Basin  |
| 5.      | IGWC-222    | Saravanan Subbarayan | Comparative Assessment of Groundwater Vulnerability Models in Coastal Andhra Pradesh:<br>Drastic, Sintacs, and God Approaches  |
| 6.      | IGWC-287    | Apurva Mehta         | Sea Water Intrusion Assessment for A Costal Aquifer Using Mesless Local Petrov-Galerkin (MLPG) Method  |
| 7.      | IGWC-378    | Ajit Kumar Behera    | Saltwater intrusion modeling and groundwater dynamics in the coastal aquifer system of the Mahanadi delta, Odisha: A cyclone-prone region of India   |
| 8.      | IGWC-386    | Sumanta Bhattacharya | Application of Advance Scientific Innovations and Policy Regulations for Sustainable Coastal<br>Governance and Resource Management for Coastal Industrialization to Aim Towards Viksit<br>Bharat @2047 |
| 9.      | IGWC-442    | Ranjan Sinha         | Delineation of Aquifer Geometry and Fresh Saline Interface in Coastal Parts of Kasai -<br>Suvarnarekha Basin, Eastern India  |



## 07th March 2025 (Day 3), Time: 09:00 - 11:00 AM

## **Technical Session: T10 (S1)**

### Hall Name: Manthan Hall

### THEME: POLICY, REGULATION GOVERNANCE AND COMMUNITY PARTICIPATION FOR GROUNDWATER

#### **MANAGEMENT**

## Session Chairs: T.B.N. Singh & V.C. Goyal

| Sr. No. | Abstract-Id | Author                  | Title   |
|---------|-------------|-------------------------|---|
| ]       | Keynote     | Giriraj Amarnath        | Water Security in the Age of Extremes: Groundwater Solutions for Climate-Resilient Growth   |
| 1.      | IGWC-362    | Sumanta<br>Bhattacharya | Regulatory Framework and Policy Implications for Sustainable Groundwater Management<br>Through Advanced Scientific Innovation for Viksit Bharat@ 2047 |
| 2.      | IGWC-416    | Archana Sarkar          | Interstate Water Disputes in India and the Role of Groundwater  |
| 3.      | IGWC-307    | Sneha Pradhan           | Addressing groundwater depletion in Kolkata: Sustainable strategies for urban groundwater management  |
| 4.      | IGWC-453    | Papori Baruah           | Ground Water Vision 2047: Ensuring Water Security in a changing climate through Sustainable Management Practice for India.                            |
| 5.      | IGWC-289    | Arjit Mishra            | Multi-Stakeholder Led Initiative on River-Wetland Co-Management in the Aril River Basin, Uttar Pradesh  |
| 6.      | IGWC-136    | Sankha Subhra Nath      | Community Based Resuscitation of Minor Waterways in Upper GBM Delta: Case of Buri Ganga,<br>West Bengal   |



## 07th March 2025 (Day 3), Time: 11:30 - 01:30 PM Technical Session: T5 (S6) Hall Name: Jal Tarang Auditorium THEME: GROUNDWATER CONTAMINATION AND REMEDIATION

## Session Chairs: Y.R.S. Rao and Ashwini Ranade

| Sr. No | Abstract-ID | Author                  | Title   |
|--------|-------------|-------------------------|---|
| K      | Keynote     | D.C. Singhal            | A New Geophysical Approach to Ascertain Risk of groundwater contamination In Unconfined<br>Alluvial Aquifers: A Review                          |
| 1.     | IGWC-353    | Manisha Das             | Cr(VI) Transport Modelling in Modified Tothian Basin in a Two Layered Aquifer System  |
| 2.     | IGWC-357    | Dilip Barman            | Health Risk Assessment of Fluoride Contamination in Groundwater: A Case Study of Alwar District, Rajasthan                                      |
| 3.     | IGWC-364    | Aniket Choudhary        | Influence of Mineral Weathering Sequence and Organo-Mineral Complexes on Fate and Transport of Nanoplastics in Riverine and Groundwater Systems |
| 4.     | IGWC-47     | Sonali Aswal            | Impact of Municipal Solid Waste Leachate on Groundwater Quality and Its Potential Public Health<br>Risk   |
| 5.     | IGWC-373    | Abhinesh Kumar<br>Singh | Hydro-Geochemistry and Isotopic Characterization of Phreatic Groundwater in Part of Central Ganga<br>Plain, India                               |
| 6.     | IGWC-374    | Nandkishor<br>Borkar    | Assessment of Groundwater Quality with Special References to Fluoride Concentration Around Bhiwapur, Nagpur District, Maharashtra, India        |
| 7.     | IGWC-460    | Shruti Singh            | A Comparative Study of Biofilter, Vermifilter, And Macrophyte-Assisted Vermifilter for Treatment of<br>Cattle Feedlot Wastewater                |
| 8.     | IGWC-370    | Runti Choudhury         | Hydrogeochemistry and Lead (Pb) Contamination of Groundwater in Guwahati City, Assam, India   |
| 9.     | IGWC-143    | Sanchari Banerjee       | Comparative Analysis of Drinking Water Quality Using Arithmetic and Entropy-weighted methods in Jaipur District, Rajasthan, India               |
| 10.    | IGWC-338    | Dipankar Saha           | Hydro-Fracturing the Unconventional Hydrocarbon Reservoir Rocks Like Shale and its Impact on Ground Water                                       |



## 07th March 2025 (Day 3), Time: 11:30 - 01:30 PM Technical Session: T7 (S3)

#### Technical Session: 17 (55)

## Hall Name: Lecture Room

## THEME: ADVANCED TECHNIQUES FOR GROUNDWATER EXPLORATION AND ASSESSMENT

## Session Chairs: Sreekanth J. & P.G. Jose

| Sr. No. | Abstract-ID | Author                          | Title  |
|---------|-------------|---------------------------------|--|
| ŀ       | Keynote     | Sreekanth J.                    | The Role of Groundwater for Water Security in the Australian Murray Darling Basin and the Indian Ganga Basin   |
| 1.      | IGWC-339    | Somvir Singh                    | Estimation of Aquifer Hydraulic Characteristics Using Dar-Zarrouk Parameters: A Case Study of Lohaghat Block, Champawat District, Uttarakhand                            |
| 2.      | IGWC-350    | Pintu Gupta                     | Mapping Aquifer Potential: A Hydrogeological Investigation of the Luni River Basin,<br>Rajasthan, India  |
| 3.      | IGWC-391    | Surender Pal                    | Satellite Based Approach to Estimate the Groundwater Storage Changes and Land Deformation for Jodhpur City   |
| 4.      | IGWC-396    | Survey Daman Sharma             | Geophysical Investigations to Quantify Freshwater Storage for Conjunctive Water Resource<br>Management in IGNP   |
| 5.      | IGWC-403    | Ashish Pratap Singh             | Geospatial Delineation of Groundwater Potential Zones: A Multi-Criteria Approach for Problematic Districts of Bundelkshand and Kymore Plateau, India.                    |
| 6.      | IGWC-275    | Chandrakant Prabhakar<br>Bhoyar | An Excel Based Programming Approach to Analyze Pumping Test Data from Large Diameter<br>Well by Papadopulos-Cooper (1967) Method Using Drawdown and Recovery Phase Data. |
| 7.      | IGWC-425    | Anshumali                       | Quantification and geospatial mapping of dug wells in disappearing dry tropical watersheds   |
| 8.      | IGWC-429    | Rahul Kumar                     | Groundwater Level and Aquifer Parameters Analysis in the Yamuna River Basin for Sustainable Groundwater Management.  |
| 9.      | IGWC-184    | Nilotpal Lahkar                 | Geospatial Mapping of Groundwater Potential Zones Using AHP Approach in Kopili River<br>Sub-basin, India   |



## 07th March 2025 (Day 3), Time: 11:30 - 01:30 PM Technical Session: T8 (S3) Hall Name: Manthan Hall THEME: AUGMENTATION OF GROUNDWATER RESOURCES

## Session Chairs: Alex Furman & L.N. Thakural

| Sr. No. | Abstract-Id | Author                    | Title   |
|---------|-------------|---------------------------|---|
|         |             | Alex Furman               | Soil Aquifer Treatment: Process Optimization and Alternative Approaches   |
| K       | eynote      | R.M. Patel                | Implementation of Atal Bhujal Yojana for Sustainable Ground Water Resources<br>Management in Gujarat  |
| 1.      | IGWC-319    | Giridhara.Ch.             | Mapping of Vulnerable Area of Drinking Water in Maharashtra   |
| 2.      | IGWC-322    | Varsha Mane               | Identification of Cause for Water Level Depletion in Coal Mine Area of Nagpur District, India   |
| 3.      | IGWC-310    | Apurva D. Fuladi          | An Artificial Recharge in the Deccan Basaltic Terrain: A Case Study of the Exploited Deo Mini-<br>Watershed, Amravati District, Maharashtra, India      |
| 4.      | IGWC-311    | Salahuddin Saiphy         | Impact of Water Conservation Measures Through Check Dams on Water Resources in Semi-Arid<br>Regions: A Case Study from Anantapur, Andhra Pradesh, India |
| 5.      | IGWC-465    | Ragini Saraswati          | Artificial Recharge of Groundwater: Processes and its Impact in India   |
| 6.      | IGWC-246    | Sanjay Tukaram<br>Satpute | Groundwater Recharge Potential of Village Ponds in Ludhiana District of Punjab, India   |
| 7.      | IGWC-333    | Samanpreet Kaur           | Integrating Hydrogeology and Geospatial Techniques for Groundwater Potential Mapping in the Sirhind Canal Tract, Punjab                                 |
| 8.      | IGWC-70     | Shiv Narayan Singh        | Effective Managed Aquifer Recharge: Insights from Gujarat using Precast Modular Systems and Johnson Screens   |



## 07th March 2025 (Day 3), Time: 11:30 - 01:30 PM

## **Technical Session: T11 (S2)**

#### Hall Name: Sangam Hall

## THEME: APPLICATION OF AI, ML, IOT, CLOUD COMPUTING AND OTHER ADVANCED TECHNIQUES IN

### **GROUNDWATER**

## Session Chairs: C.S.P Ojha & P.C. Nayak

| Sr. No. | Abstract-Id | Author                   | Title  |  |
|---------|-------------|--------------------------|--|--|
| К       | eynote      | CSP Ojha                 | Evaluation of Machine Learning Techniques In Groundwater Level Prediction For<br>Sustainable Water Resource Management                                     |  |
| 1.      | IGWC-262    | Malavika A R             | Comparative Performance Analysis of Linear Regression, KNN, and Random Forest for Modelling<br>Total Dissolved Solids in Groundwater: A Case Study         |  |
| 2.      | IGWC-253    | Mahesh Chand Singh       | Development of a Sedimentation Information System for Reservoirs in the Kandi Region, Punjab   |  |
| 3.      | IGWC-367    | Prabhash Kumar<br>Mishra | Utility of Open and Satellite-Based Data for Groundwater Resource Estimation Using Water<br>Accounting Plus (WA+) Framework for An Indian Peninsular Basin |  |
| 4.      | IGWC-290    | Siddhartha Baidya        | Cleaner Technology for Reducing Fresh Water Consumption in the Electroplating Sector of Moradabad: Counter Current Mechanism (CCM)                         |  |
| 5.      | IGWC-404    | Kritika Bansal           | Design, Implementation and Validation of An Automated Infiltrometer  |  |
| 6.      | IGWC-438    | Manish Subba             | Assessing Groundwater Resources in Sikkim Using Remote Sensing, Gis, and Google Earth Engine   |  |
| 7.      | IGWC-167    | Shreyansh Mishra         | Application Of Kolmogorov-Arnold Network (KAN) for Predicting Groundwater Levels with<br>Enhanced Interpret-Ability  |  |
| 8.      | IGWC-170    | Devanand Guleri          | Groundwater Quality Prediction using Machine Learning  |  |
| 9.      | IGWC-358    | Harsh Upadhyay           | ET-Based Irrigation Performance Assessment of a Command Area Using Google Earth Engine   |  |



## 07th March 2025 (Day 3), Time: 11:30 - 01:30 PM Technical Session: T12 (S1)

#### Hall Name: Society Room

## THEME: VADOSE ZONE HYDROLOGY AND AGRICULTURE WATER MANAGEMENT

## Session Chairs: Daniel D. Snow & M.K. Nema

| Sr. No. | Abstract-Id | Author               | Title  |  |
|---------|-------------|----------------------|--|--|
| Keynote |             | Daniel D. Snow       | Groundwater Use Under Intensive Agriculture  |  |
| 1.      | IGWC-158    | Arivoli E            | Significance of Soil Moisture Probes in Calibrating Hydrological Models  |  |
| 2.      | IGWC-274    | Anil Kumar Srivastva | Road Map for Water Efficient Farming in Indian Himalaya  |  |
| 3.      | IGWC-359    | Dilip Barman         | Assessment of Agricultural Water and Land Productivity Using Water Accounting Plus<br>Framework for Luni River Basin, India  |  |
| 4.      | IGWC- 360   | Parth Sarthi         | Intensive Irrigation Affecting Groundwater Quality; A Case Study from Punjab, India  |  |
| 5.      | IGWC-393    | Satendra Kumar       | Determination of Soil Hydraulic Properties Using Pedotransfer Functions from Soil Texture<br>Properties in Luni River Basin  |  |
| 6.      | IGWC-392    | Shubham Shaurabh     | Evaluating Meteorological and Groundwater Droughts in Bihar State  |  |
| 7.      | IGWC-171    | Reshma Susan Jaco    | Evaluation of Spatio-Temporal Variability of Groundwater Quality for Irrigational Suitability<br>and Its Relation with Climatological Parameters in Pondicherry Region |  |



## 07th March 2025 (Day 3), Time: 02:30 - 04:15 PM

## **Technical Session: T11 (S3)**

#### Hall Name: Society Room

## THEME: APPLICATION OF AI, ML, IOT, CLOUD COMPUTING AND OTHER ADVANCED TECHNIQUES IN

## **GROUNDWATER**

## Session Chairs: M.L. Gaur & A.R. Senthil Kumar

| Sr. No. | Abstract-Id | Author                  | Title  |  |
|---------|-------------|-------------------------|--|--|
| Keynote |             | M.L. Gaur               | Attaining Water Security 2047: AI, Nature-Based, and Smarter Hydrology- Driven<br>Hidden Blue Nexus for a Climate-Resilient Future         |  |
| 1.      | IGWC-401    | Sushindra Kumar Gupta   | Prediction of Groundwater Level Using Machine Learning Techniques of the Western Aravali<br>Range, Rajasthan, India                        |  |
| 2.      | IGWC-406    | Prateek Khanna          | Geospatial Intelligence for Groundwater Management   |  |
| 3.      | IGWC-455    | Ratnakar Swain          | Machine Learning-based Groundwater Level Prediction for Sustainable Water Resource<br>Management in an Industrial Catchment                |  |
| 4.      | IGWC-463    | Prosun Bhattacharya     | Participatory GIS Analysis and Mapping of Drinking Water Quality Challenges in Tanzania  |  |
| 5.      | IGWC-348    | ShyamSundar Bhardwaj    | Comparative Evaluation of IMD and NASA Datasets for Hydrological Modelling   |  |
| 6.      | IGWC-231    | Manita                  | A Hybrid Approach to Modelling ETo and Groundwater Recharge  |  |
| 7.      | IGWC-228    | Amit Bera               | A Hybrid Approach Using Deep Learning and Hydrological Modelling to Identify Aquifer<br>Stress Zones in the Barakar River Basin, Jharkhand |  |
| 8.      | IGWC-133    | Yuvraj Nanasaheb Dhivar | Application of Machine Learning Techniques for the Prediction Depth to Water Table in Nashik District                                      |  |



## 07th March 2025 (Day 3), Time: 02:30 - 04:15 PM Technical Session: T12 (S2)

## Hall Name: Jal Tarang Auditorium

## THEME: VADOSE ZONE HYDROLOGY AND AGRICULTURE WATER MANAGEMENT

## Session Chairs: J.V. Tyagi & K.S. Hari Prasad

| Sr. No. | Abstract-Id | Author                             | Title  |  |
|---------|-------------|------------------------------------|--|--|
| Keynote |             | K.S. Hari Prasad                   | Effect of Salinity on Crop Growth and Root Zone Soil Moisture Dynamics: A Study with Root Water Uptake Model                     |  |
| 1.      | IGWC-377    | Ruchir Patidar                     | A Multi-Indicator Retrospective Analysis of Groundwater Drought Dynamics in Central India  |  |
| 2.      | IGWC-217    | Pavan Kumar Harode                 | Evaluation of Impact of Shifting Sowing Date of Rice-Wheat Crops on Groundwater Behavior in Rice-Wheat Plain of North-West India |  |
| 3.      | IGWC-306    | Mayank Raturi                      | Estimation of Groundwater Recharge for Shallow Aquifers in Ganga-Yamuna Doab Region using HYDRUS-1D and IWTF Method              |  |
| 4.      | IGWC-437    | Vipul Kumar Rai                    | Conjunctive use planning of groundwater and surface water to determine optimal cropping pattern                                  |  |
| 5.      | IGWC-254    | Richa Pandey                       | Performance Evaluation of Global ET Datasets Using the Google Earth Engine for Groundwater and Water Resources Applications      |  |
| 6.      | IGWC-111    | Venkata Ramamohan<br>Ramachandrula | Gravity Open-Channel Irrigation Systems in Hill Areas: A Field Study In Andhra Pradesh, India                                    |  |
| 7.      | IGWC-264    | Anushka Chand                      | Enhancing Water Use Efficiency Through Evapotranspiration Partitioning in Agriculture  |  |



## 07th March 2025 (Day 3), Time: 02:30 - 04:15 PM

## **Technical Session: T13 (S2)**

#### Hall Name: Sangam Hall

## THEME: PROTECTION OF GROUNDWATER DEPENDENT ECOSYSTEMS - RIVERS, WETLANDS, LAKES

#### **AND SPRINGS**

## Session Chairs: R.D. Singh & Dipankar Saha

| Sr. No. | Abstract-Id | Author                       | Title   |  |
|---------|-------------|------------------------------|---|--|
| Keynote |             | Dipankar Saha                | Is supply side interventions can effectively neutralize ground water overexploitation in India.                           |  |
| 1.      | IGWC-399    | Subhamgi T.B.                | Ecosystem Health Assessment of Kol Wetlands, A Ramsar Site: Towards Environmental Sustainability                          |  |
| 2.      | IGWC-409    | Pankaj R. More               | Floating Treatment Wetland (FTWS): Innovative Tool for Revival of Kham River in Chhatrapati<br>Sambhajinagar (Aurangabad) |  |
| 3.      | IGWC-414    | Ankit Kumar                  | Rejuvenating Small Water Bodies: A Case for Sustainable Management in Gautam Buddha Nagar,<br>India                       |  |
| 4.      | IGWC-418    | Deepika Sharma               | Encroaching Plastic Pollution in Urban Wetlands: A Threat to Groundwater and Ecosystem Health                             |  |
| 5.      | IGWC-297    | Sushamita Wadde              | Mapping Spatial and Temporal Dynamics of Lakes of Belagavi Taluk, Karnataka Using Geo Spatial<br>Technology               |  |
| 6.      | IGWC-155    | Jaideep Purushottam<br>Yadav | Morphometric Comparison of River Basins in Baramati Tehsil Maharashtra, India   |  |
| 7.      | IGWC-302    | Lakhi Narayan Sahu           | Validation of Craig Gordon Model for Evaporation Estimation in the Ganga Yamuna Doab Region                               |  |
| 8.      | IGWC-426    | Gunjan Chauhan               | Applicability of Kumaraswamy Distribution to Derive Geomorphological Instantaneous Unit<br>Hydrograph (GIUH)              |  |



## 07th March 2025 (Day 3), Time: 02:30 - 04:15 PM Technical Session: T14 (S1)

#### Technical Session: 114 (51)

## Hall Name: Lecture Room

## THEME: ISOTOPIC TECHNIQUES IN GROUNDWATER INVESTIGATIONS AND MANAGEMENT

## Session Chairs: Bhishm Kumar & RV Kale

| Sr. No. | Abstract-Id | Author  | Title   |  |
|---------|-------------|---|---|--|
| Keynote |             | Bhishm Kumar<br>Kumar   | Isotope hydrology applications in the Asia-pacific region- A few case studies.  |  |
| 1.      | IGWC-39     | Bharat Moharana   | Integrating Hydrogeochemistry and Stable Isotopes to Understand the Groundwater Salinization in a Coastal Aquifers of Odisha                                      |  |
| 2.      | IGWC-91     | Madhusmita Nanda Stable Water Isotope is an Indicator of Surface Water and Groundwater Interaction in Aquifers of the Brahmaputra River System. |   |  |
| 3.      | IGWC-175    | Sreelesh R  | Unravelling Groundwater Flow Paths and Contributions to Aquifers Employing Natural Tracers<br>and End Member Mixing Analysis in the Southern Western Ghats, India |  |
| 4.      | IGWC-263    | Vivek Kumar   | A $\delta^2 H$ AND $\delta^{18} O$ Isoscape of Groundwater in the East Khasi Hills District, Meghalaya, India   |  |
| 5.      | IGWC-266    | Sakthivel V   | Radon Level Measurements in Groundwater Samples of Doon Valley of Uttarakhand, India  |  |
| 6.      | IGWC-272    | Praveen Kumar Isotopic Studies of Springs of Lesser Himalayan- A Case Study of Kalsi Region, Uttarakhand, Ind                                   |   |  |
| 7.      | IGWC-363    | Vinay Arya Isotopic and Hydrochemical Insights into Groundwater Sustainability in the Middle Ganga Bas<br>India                                 |   |  |
| 8.      | IGWC-456    | Amit PandeyUnderstanding Surface Water Groundwater Interactions In The Upper Narmada River Basin<br>Its Hydrological Implications               |   |  |



## 07th March 2025 (Day 3), Time: 02:30 - 04:15 PM Technical Session: T14 (S2)

## Hall Name: Manthan Hall

## THEME: ISOTOPIC TECHNIQUES IN GROUNDWATER INVESTIGATIONS AND MANAGEMENT

## Session Chairs: László Palcsu & G.J. Chakrapani

| Sr. No. | Abstract-Id | Author          | Title  |  |
|---------|-------------|-----------------|--|--|
|         | Keynote     | László Palcsu   | Tracer Age, Mean Residence Time, Age Distribution of Groundwater   |  |
| 1.      | IGWC-380    | Radha Dixit     | Control Of Aquifer Material on Groundwater Mineralization Revealed Through Isotopic and Hydrochemical Proxies in Central Ganga Plain   |  |
| 2.      | IGWC-436    | Nitish Kumar    | Hydrological And Isotopic Characterization of Himalayan Springs: Insights from Stable Isotopes,<br>Tritium Analysis, And Seasonal Precipitation in The Takoli Gad Watershed, India |  |
| 3.      | IGWC-347    | Amit Pandey     | Groundwater Age Distribution in The Cambay Basin, India: Insides from Carbon And Oxygen<br>Isotopes  |  |
| 4.      | IGWC-461    | Baljinder Singh | Hydrochemical and isotopic dynamics of (sub)-surface water resources in Chittorgarh, Rajasthan   |  |
| 5.      | IGWC-445    | Akshaya Verma   | Isotopic Composition and Variability of Snowpack in the Himalaya (2011–2022)   |  |
| 6.      | IGWC-15     | Rina Kumari     | Geochemical and Isotopic Evolution of Groundwater Quality in Semi-Arid/Arid Alluvial Aquifer,<br>Jhajjar District, Haryana, India: An Integrated Approach                          |  |

# **Social Program**

#### **Cultural Program**

The organization committee invites you to the cultural evening arranged in Jal Tarang Auditorium (07:30 PM to 8:30 PM) on Wednesday, 05<sup>th</sup> March 2025.

#### Welcome Dinner

A Welcome Dinner has been organised in the Front lawn of NIH (08:30 PM to 10:00 PM) on Wednesday, 05<sup>th</sup> March 2025 accompanied by light instrumental music to energise the participants after a hectic schedule.

#### **Gala Dinner**

The Gala Dinner is arranged at the Hotel Golden Leaf, Haridwar road, Roorkee on Thursday, 06<sup>th</sup> March 2025. A great variety of Indian cuisines will be served with live music performance make it a memorable and enjoyable evening.

#### **Field Trip**

A Field trip on 08th March has been planned to the holy cities of Haridwar and Rishikesh for the interested participants who have made prior-booking.

# **Useful Information**

#### Weather

The weather of Roorkee is likely to be moderate during the Conference duration with days being little warmer and mornings and evenings being little cooler. The maximum temperature is likely to be around 26° C and minimum temperature is likely to be around 11° C. On an average, there are 4 rainy days during March bringing mild showers. Let's hope that this year they won't occur during the Conference duration.

#### Insurance

Registration fee does not include insurance of any kind. It is recommended that delegates arrange for appropriate travel and health insurance prior to travelling on their own.

#### Smoking

Smoking is not permitted inside the NIH campus and even in the adjoining IIT Roorkee campus.

## 10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025

## **Technical Committee**

| Dr. Abhijit Mukherjee    | IIT Kharagpur   | Dr. Stefan Krause        | University of Birmingham, UK                              |
|--------------------------|---|--------------------------|---|
| Dr. Alan MacDonald       | BGS, UK   | Dr. Sudhir Kumar         | Ex-Director, NIH, Roorkee                                 |
| Dr. Ashok Keshari        | IIT Delhi   | Dr. Thomas Grischek      | HTWD, Germany   |
| Dr. B. Venkateswrarao    | JNTUH, Hyderabad  | Dr. Thomas Harter        | UC Davis, USA   |
| Dr. Basant Maheshwari    | Western Sydney University, Australia                      | Dr. Vinay Bharadwaj      | GW Department, Rajasthan                                  |
| Dr. Bhishm Kumar         | Ex-Sc. G, NIH, Roorkee                                    | Dr. Yutaka Matsuno       | Kindai University, Japan                                  |
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| Dr. CSP Ojha             | IIT Roorkee   |                          |   |
| Dr. Daniel D. Snow       | University of Nebraska-Lincoln, Lincoln,<br>Nebraska, USA | Prof. Deepak Kashyap     | Ex-Prof. IIT Roorkee and Visiting<br>Professor, IIT Ropar |
| Dr. David Polya          | University of Manchester, UK                              | Prof. Deepak Khare       | IIT Roorkee   |
| Dr. Dinesh Mohan         | JNU, Delhi  | Prof. L. Elango          | IIT Chennai   |
| Dr. Dipankar Saha        | Ex-Member, CGWB   | Prof. M.D. Behera        | IIT Kharagpur   |
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| Dr. Prosun Bhattacharya  | KTH Sweden  | Prof. Phanindra Kumar    | IIT Hyderabad   |
| Dr. R.D. Deshpande       | Isotopic Division, PRL, Ahmedabad                         |                          | 2   |
| Dr. Salini Sasidharan    | OSU, USA  | Prof. Rajesh Srivastava  | IIT Kanpur  |
| Dr. Samuel Dagalo Hatiye | Arba Minch University, Ethiopia                           | Prof. Rao S. Govindaraju | Purdue University   |
| Dr. Sreekanth J.         | CSIRO, Australia  | Prof. S.P. Rai           | Central University, BHU                                   |
| Dr. Stefan Krause        | University of Birmingham, UK                              | Prof. Sharad Jain        | Visiting Professor, IIT Roorkee                           |

## **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**

# **Local Organizing Committee**

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Dr. A.K. Lohani, Sc.'G'& Chairman Dr. S.D. Khobragade, Sc.'G' Dr. Anupma Sharma, Sc.'G' Dr. M.S. Rao, Sc.'G' Dr. Sumant Kumar, Sc.'E' Dr. Gopal Krishan, Sc.'E' Dr. Santosh Pingale, Sc.'D' Dr. Nitesh Patidar, Sc.'C'

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## **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**

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## Committee for Finalization of Recommendations

All the Conference Chairs Chairs of various technical and Plenary Sessions Dr. A.K. Lohani, Sc.'G' Dr. Y.R.S. Rao, Sc.'G' Dr. Anupma Sharma, Sc.'G'

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## **10<sup>th</sup> INTERNATIONAL GROUNDWATER CONFERENCE 2025**

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## Notes





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