



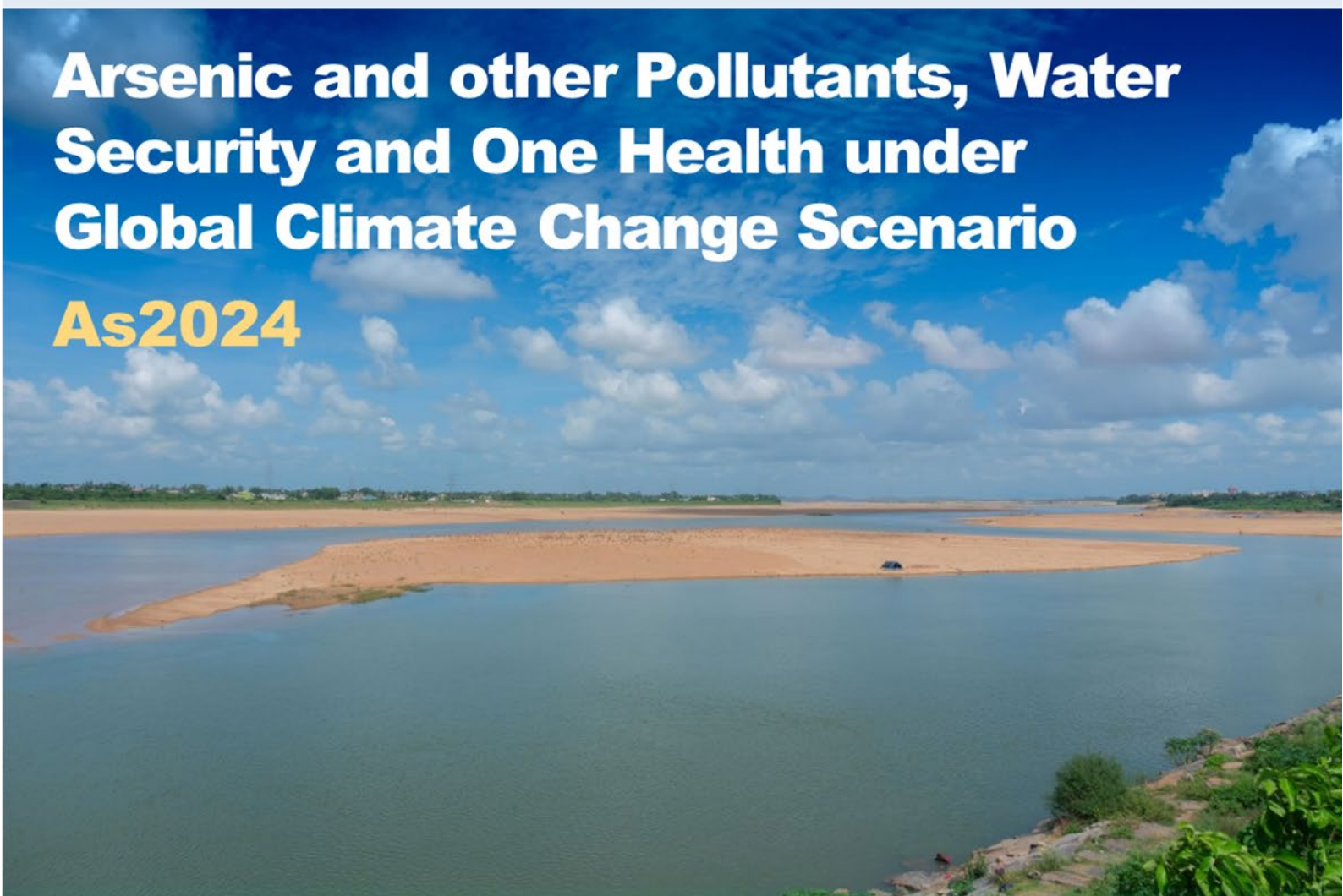
International
Society of
Groundwater
for Sustainable
Development



9th International Congress & Exhibition on **Arsenic in the Environment** First Circular

Arsenic and other Pollutants, Water Security and One Health under Global Climate Change Scenario

As2024



**KIIT, Deemed to be University
Bhubaneswar, Odisha (India)
20-24 October 2024**



Welcome to the 9th International Congress & Exhibition on Arsenic in the Environment

Arsenic and other Pollutants, Water Security and One Health under Global Climate Change Scenario (As2024)

Arsenic and other co-occurring pollutants in the environment have been an issue of major concern in the last decades because of the serious impact on human health coming from drinking water and certain foods with low-medium levels of pollutants for prolonged periods of time. Globally, more than 100 million people are at risk. Since 2006, six events of International Congress and Exhibition on “Arsenic in the Environment” have been held in different areas of the world: Mexico (2006), Spain (2008), Taiwan (2010), Australia (2012), Argentina (2014), Sweden (2016), China (2018), and The Netherlands (2021).

Arsenic, together with other co-occurring pollutants in drinking water (mainly groundwater), has emerged as a global health concern. The problem of arsenic contamination of groundwater in the Indian subcontinent was first reported in Chandigarh (1976) and West Bengal (1978). The first case of arsenic poisoning due to well water consumption was diagnosed in West Bengal in 1983. Over the past three decades, India has been at the forefront of research on arsenic biogeochemical cycling, health effects, technologies for arsenic removal, and sustainable mitigation measures. The presence of arsenic and other pollutants in different food products of both plant and animal origin have received increasing attention. This is particularly true in several South and Southeast Asian countries, to ensure food safety and avoid health hazards from consumption of contaminated food products. However, other pollutants, like different organic and inorganic contaminants, trace elements, bio-medical pollutants, micro/nanoplastics, per- and polyfluorinated substances (PFAS), etc., have been extensively detected in the Indian subcontinent and South Asia and developed as an important field of research.

With a global perspective, the 9th International Congress & Exhibition on Arsenic in the Environment will take place at Kalinga Institute of Industrial Technology (KIIT) in the city of Bhubaneswar, Odisha, India, from 20th to 24th October 2024. Known as As2024, the Congress will be themed **“Arsenic and Other Pollutants, Water Security and One Health under Global Climate Change Scenario”** and endorsed by Executive Board of the International Society of Groundwater for Sustainable Development, Sweden.

Congress Venue: KIIT Deemed to be University, Bhubaneswar, Odisha, India

The Kalinga Institute of Industrial Technology (KIIT), Deemed to be University established in 1992, is located in the famous temple city of Bhubaneswar, Odisha, India. Over the past three decades KIIT has grown into a prominent institution of academic excellence in diverse fields of science and technology. KIIT emphasizes research and

innovation, encouraging faculty and students to engage in research and innovation for societal development. KIIT is known for its social initiatives and dedication to community development. Over the years, KIIT has gained recognition for its contributions to education and has received accreditation and accolades from various national and international bodies.

KIIT Deemed to be University, is unique for integrating professional education with social concern. It offers much more than merely academic qualifications. KIIT maintains a symbiotic relationship with the industry with a vision to enhance overall knowledge ecology and produce industry-ready professionals. KIIT University campus buildings have been designed to blend harmoniously into the aesthetically manicured landscape of the beautiful city of Bhubaneswar and serve as an ideal place for bringing together enlightened scholars. Everything that one would expect of the world-class institution is located here, state-of-the-art lecture theatres, hostels, libraries, conference halls, convention centers, hospitals, banks, outdoor playgrounds, and indoor stadiums.

KIIT provides excellent ambience for national and international conferences and seminars. The Central Convention Centre Complex houses a world-class Auditorium having a seating capacity of 1600, and Suite Guest House with 5-star facilities, 18 Conference Halls, Exhibition Halls, and Banquet Halls. There are 20 Open Air Theatres on campus having capacities ranging from 500 to 50000.



Drone view of KIIT Campus, India

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Technical Programme runs from Monday, 21 October to Wednesday, 23 October 2024. Each morning and afternoon, a 30-minute plenary session is planned. The regular Technical Programme will take place in parallel sessions. Other activities, such as round tables, workshops, a student programme, short courses, and special sessions, will also be scheduled.

Congress Themes

The Congress will address the broader context of arsenic research along the following themes (but not only be restricted) to the following themes:

Theme 1: Arsenic in natural environment

- Sources, dynamics, transport, and fate of arsenic in groundwater systems
- Origin and reactivity of organic matter in high arsenic groundwater systems, mine waste, and tailings
- Biogeochemical processes controlling arsenic mobility and redox transformation
- Impacts of climate change on groundwater arsenic and other redox-sensitive elements
- Arsenic and other trace elements in Indian riverine ecosystems
- Arsenic mobility and fate in contaminated soils and sediments, dust, and road deposits
- Advances in arsenic analysis in solid and aqueous matrix
- Arsenic and their interactions with co-occurring pollutants/emerging contaminants with respect to surface water-groundwater interactions

Theme 2: Arsenic in food and agricultural ecosystem

- Processes and pathways of arsenic in agroecosystems
- Microbial ecology of arsenic biotransformation in soils
- Arsenic dynamics in rhizospheres molecular mechanisms of plant arsenic uptake
- Arsenic in marine biota
- Speciation and toxicity of arsenic in food chain

Theme 3: Health perspectives of environmental arsenic

- Exposure and epidemiology of arsenic on human health
- Arsenic exposome
- Genetic predisposition of chronic arsenic poisoning
- Neurophysiological and IQ impacts of arsenic
- Reliable biomarkers for arsenic exposure
- Risk assessment of chronic ingestion
- Multi-metal synergies in chronic exposure cases
- Impacts of COVID-19 on arsenic-exposed population
- Assessment of global burden of arsenic in drinking water and health care systems
- Longitudinal evaluation of health impacts of arsenic

Theme 4: Advancements in clean water technologies for arsenic removal and immobilization

- Adsorption and co-precipitation for arsenic removal
- Ion exchange and membrane technologies
- Nanotechnology applications in arsenic treatment
- Arsenic solidification and immobilization for contaminated soils
- Phytoremediation of arsenic-contaminated soils
- Innovative technologies

Theme 5: Sustainable mitigation and management

- Policy tools and gaps for regulation of arsenic exposure
- Risk assessment and remediation of contaminated land and water environments
- Societal keys for mitigation of long-term exposure
- Drinking water regulations of water safety plan
- Implementation plan for safe drinking water supply for sustainable development perspectives

Special Sessions

This congress covers legacy (trace elements, organic and inorganic pollutants, etc.) and emerging contaminants (micro/nano-plastics, per- and polyfluorinated substances, endocrine disrupting chemicals, pharmaceuticals, etc.) but is not limited to the following topics:

Session 1: Source and distribution of pollutants in different natural settings

- Origin and reactivity of pollutants in soil and water
- Biogeochemical processes controlling mobility and redox transformation
- Impacts of climate change on groundwater pollutants and other redox-sensitive elements
- Interactions of geogenic contaminants with emerging pollutants in natural systems

Session 2: Advancements in clean water technologies for pollutant removal and immobilization

- Adsorption and co-precipitation for pollutant removal from soil and water ecosystems
- Ion exchange and membrane technologies
- Nanotechnology applications in pollutant treatment
- Pollutant solidification and immobilization for contaminated soils
- Phytoremediation of contaminated soil and sediments
- Disinfection by-products process and techniques

Session 3: Pollutants in dietary systems and health perspectives

- Intake and pathways of pollutants in agroecosystems
- Soil microbial ecology and dynamics of pollutants biotransformation in soils
- Conventional and emerging contaminants in soil-water interface and biota
- Speciation and toxicity of contaminants in food chain and risk assessment
- Threshold values of emerging contaminants in food
- Assessment of contaminant burden in drinking water and health care systems

Session 4: Policies and sustainable management of pollutant

- Policy instruments and gaps for regulation of pollutant exposure
- Risk assessment and remediation of contaminated land and water environments
- Public intervention for mitigation of long-term exposure
- Drinking water supply & regulations of water safety plan
- Pollutants in drinking water for safe and clean water supply from sustainable development perspectives

Session 5: Sensors, innovation, technologies, and artificial intelligence for pollution monitoring and management

- Field-based efficient sensors in contaminants analysis
- Low-cost industrial-scale technologies for wastewater treatment and management
- Modelling tools
- Advancement in remediation techniques
- Application of artificial intelligence in pollution control and detection
- IoT-based artificial intelligence in wastewater treatment

Exhibition Themes

The exhibition aims to provide an opportunity for technology developers to reach the end-users and to bridge the gap between science and practice. Remediation solution providers, analytical equipment producers and distributors, and publishing houses are all welcome. The exhibitors can take advantage of unique sponsorship and partnership opportunities, tailor-made to meet their business models. The As2024 exhibition will be managed by the International Society of Groundwater for Sustainable Development (ISGSD) and Kalinga Institute of Industrial Technology (KIIT), India. The As2024 exhibition will address the broader context of implementation of the scientific research on developing new solutions and innovative designs of techniques needed for the arsenic research along the following themes (but not only be restricted):

- Laboratory analytical equipment
- Portable devices for field monitoring
- Arsenic and other pollutant removal technologies
- Reclamation of contaminated lands
- Scientific Publications

Important Timelines

Abstract submission deadline	30 April 2024
Acceptance of Abstracts	15 May 2024
Early-bird registration deadline	16 May – 1 June 2024
Travel grant application deadline	1-5 June 2024
Booking accommodation	30 August 2024
Letter of invitation for visa and external support	2 June 2024
Late Registration (deadline)	15 August 2024
On-site Registration	20-23 October 2024
Full paper submission deadline (for selected papers)	30 December 2024

Note: Only one abstract will be accepted per registered participant. However, we encourage multi-author submissions, and at least one person must be registered per submission to Congress prior to the deadline for Regular Registration. All papers will be peer-reviewed by the Scientific Committee. **Please observe:** Registration to the Congress is mandatory for Abstract publication in As2024 Proceedings Volume in CRC Press by **1 June 2024**.

Registration Fees

Participants	Registration Fees	
	Early Bird	Late
Student (India) (in INR)	7,000	8,000
Faculty (India) (in INR)	9,500	12,000
Student Members (SAARC) (in USD)	125	200
Student Non-members (SAARC) (in USD)	175	250
Faculty Members (SAARC) (in USD)	300	350
Faculty Non-members (SAARC) (in USD)	350	400
Student Members (non-SAARC) (in USD)	250	300
Student Non-members (non-SAARC) (in USD)	300	350
Faculty Members (non-SAARC) (in USD)	500	550
Faculty Non-members (non-SAARC) (in USD)	550	600
Industry (India) (in INR)	15,000	20,000
Industry (SAARC) (in USD)	500	600
Industry (non-SAARC) (in USD)	1000	1200
Accompanying person (India) (in INR)	5,000	7,000
(International) (in USD)	500	700
Excursion tour (India) (in INR)	5,000	5,000
(International) (in USD)	100	100

Note: Registration fees cover presenter certificate, cost of registration kit along with Program booklet (Congress and Exhibition Proceedings), Abstract publication with DOI in CRC Press, opportunities for publications of selected papers in high impact factor journals, and lunch and high tea complimentary for four days during Congress and Exhibition session at KIIT, Bhubaneswar, India.

Congress Awards

Category	International (USD)
Best Poster Presentation	100
Best Oral Presentation	100
Early Career Researcher	200
Young Scientist	250

Note: National participants will get prize money in Indian rupees. A total of five awards will be distributed in each category, and the top three awards will be distributed among all these categories, as mentioned above. The other two will be awarded with half of the amount mentioned above.

Tentative Program

Sunday, 20 October 2024

16:00-19:00	Registration
18:00-21:00	Welcome Cocktail Reception (Sponsored)

Monday, 21 October 2024

08:00-09:00	Registration
09:00-10:00	Opening Session
10:00-10:30	Plenary Session 1 (30 min)
10:30-11:00	Coffee break
11:00-12:30	Parallel Technical Sessions (Invited and oral presentations) (90 min)
12:30-13:30	Lunch
13:30-14:00	Plenary Session 2 (30 min)
14:00-15:00	Parallel Technical Sessions (Invited and oral presentations) (60 min)
15:00-15:30	Coffee break
15:30-16:30	Parallel Technical Sessions (Invited and oral presentations) (60 min)
16:30-17:30	Panel Discussion 1 (60 min)
17:30-18:30	Poster Session (Lobby) (60 min)

Tuesday, 22 October 2024

08:00-09:00	Registration
08:00-10:00	Parallel Technical Sessions (Invited and oral presentations) (120 min)
10:00-10:30	Plenary Session 3 (30 min)
10:30-11:00	Coffee break
11:00-12:30	Parallel Technical Sessions (Invited and oral presentations) (90 min)
12:30-13:30	Lunch
13:30-14:00	Plenary Session 4 (30 min)
14:00-15:30	Parallel Technical Sessions (Invited and oral presentations) (90 min)
15:30-16:00	Coffee break
16:00-16:30	Plenary Session 5 (30 min)
16:30-17:30	Panel Discussion 2 (60 min)
17:30-18:30	Poster Session (Lobby)
18:30 onwards	CONFERENCE DINNER (Mingling and Drinks followed by Dinner, Sponsored)

Wednesday, 23 October 2024

08:00 to 09:00	Registration
08:00-10:00	Parallel Technical Sessions (invited and oral presentations) (120 min)
10:00-10:30	Plenary Session 6 (30 min)
10:30-11:00	Coffee break
11:00-11:30	Plenary Session 7 (30 min)
11:30-12:30	Parallel Technical Sessions (invited and oral presentations) (60 min)
12:30-13:30	Lunch
13:30-14:00	Plenary Session 8 (30 min)
14:00-15:30	Parallel Technical Sessions (invited and oral presentations) (90 min)
15:30-16:00	Coffee break
16:00-17:00	Panel Discussion 2 (60 min)
17:00-18:00	Award Ceremony and Closing Session

Thursday, 24 October 2024

Excursion day (To be announced)

Other Activities (Panel Discussions, Workshops, or Special Sessions)

The tentative Round Tables, Workshops, or Special Sessions would be side events besides the ordinary technical sessions:

- Arsenic and associated trace elements in relation to geothermal systems
- Legacy and emerging pollutants, mining, and ecological effects
- Health impacts of environmental pollutants and countermeasures
- Arsenic mitigation policies in South and Southeast Asia
- Innovative technologies for drinking water treatment–Water Industries
- Socio-economical impact of pollutants (interface Science & Technology with State & Society)
- Water security and crops and food security
- ISGSD Business and Board Meeting

Short Course(s)

There will be opportunities for organizing short courses, preferably on Sunday, 20 October 2024, based on the special topics related to As2024 themes and the interests of the participants. We encourage proposals for short courses within **March 15, 2024**. This option may take place on Sunday, 20 October 2024, according to the interest of the participants, and will be selected from special topics related to As2024 themes. For more information about short courses, please check the website at as2024.kiit.ac.in and send proposals for courses at as2024india@gmail.com & as2024.kiit@kiit.ac.in.

Submission of Abstracts

Participants wishing to present a paper at the As2024 Congress are encouraged to submit an extended abstract in the **specific template** written in English with a length of **maximum of 2 pages**. Only one abstract will be accepted per registered participant as a presenting author. However, we encourage multi-author submissions, and at least one person must be registered per submission to Congress prior to the deadline for Regular Registration. All papers will be peer-reviewed by the International Scientific Committee. Please observe: Registration to the Congress is mandatory for Abstract publication in As2024 Proceedings Volume in CRC Press by **1 June 2024**. All abstracts must be submitted through the [Abstract Submission Portal](#).

Post-conference Publications

- As2024 Proceedings Volume, CRC Press, Scopus Indexed with DOI will be published in [Arsenic in the Environment - Proceedings](#)
- Selected high-quality work will be published in [Groundwater for Sustainable Development](#) (Elsevier, Impact factor: 5.9) and other partner journals. Announcement can be found [here](#).

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Exhibition (Organizations/Institutions/NGOs)

National	INR 50,000
International	USD 3000

Note: Sponsors are offered an Exhibition booth during the Conference for advertisement, promotion, and banners of their organizations and institutes. This cost covers five, three, and two registrations in Platinum, Gold, and Silver, respectively, included in sponsorships. Please visit the website for further details.

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Account type: **Current Account**

UPI payment Details: **Updated on website.**

Congress Website and Contact

For more information about the event, please check the website at as2024.kiit.ac.in. For suggestions and questions about As2024 in general, the Technical Programme, or proposals for workshops, please do not hesitate to contact us at as2024india@gmail.com & as2024.kiit@kiit.ac.in. For information about registration, accommodation, payments, etc., please contact the Congress Bureau.

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The Konark Sun Temple

https://en.wikipedia.org/wiki/Konark_Sun_Temple



9th International Congress & Exhibition on **Arsenic in the Environment**



**Arsenic and other Pollutants, Water Security
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As2024

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