

Goverment Of India Ministry of Jal Shakti





Centre for Ganga River Basin Management and Studies Indian Institute of Technology, Kanpur



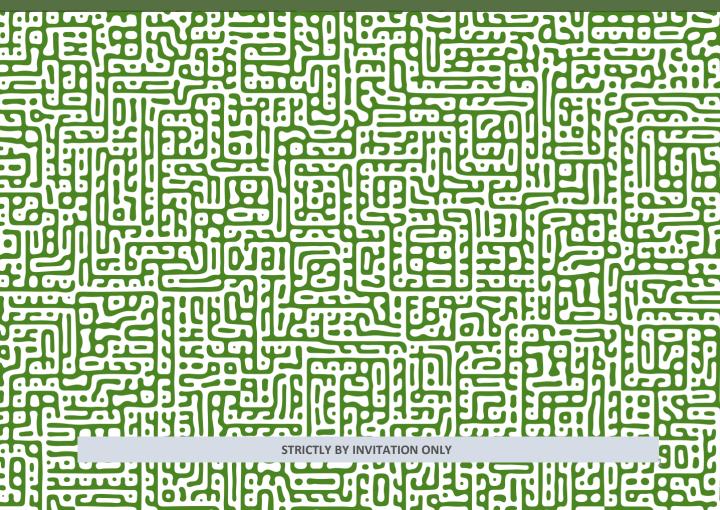
National Mission for Clean Ganga Ministry of Jal Shakti, Government of India

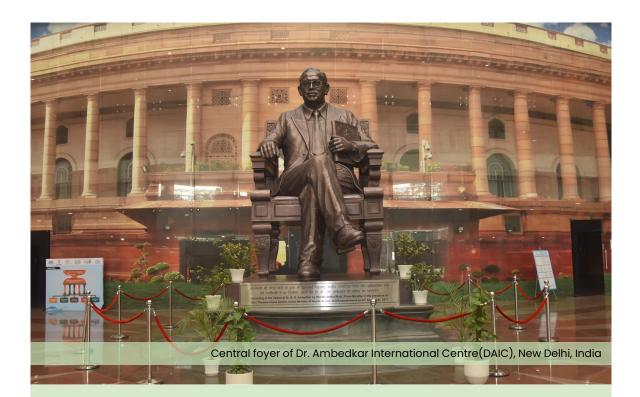
# 1<sup>st</sup> Climate Investments and Technology Impact Summit and Exhibition **CITIS 2023**

22-24 November 2023 Dr. Ambedkar International Centre (DAIC), New Delhi, India

Climate Impact = Deep Technology + Rigorous Policy + Innovative Finance

Co-organised and Co-located with 8<sup>th</sup> India Water Impact Summit (IWIS)





Men are mortal. So are ideas. An idea needs propagation as much as a plant needs watering. Otherwise, both will wither and die

### Dr. B.R. Ambedkar

India's first Law and Justice Minister and Chairman of the Constitution Drafting Committee



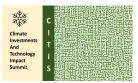
Climate Investments And Technology Impact Summit



### Introducing the inaugural Climate Investments and Technology Impact Summit

where ideas are not only transformed into action but also rekindled from the brink of stagnation, inspiring a sustainable future for our planet.

# CITIS 2023 | Climate Impact = Deep Technology + Robust Policy + Innovative Finance



### The Climate Investments & Technology Impact Summit

(CITIS) represents a groundbreaking initiative, marking the first event of its kind dedicated to presenting innovative solutions aimed at generating awareness and fostering the uptake of climate action measures. The core philosophy underpinning CITIS is the recognition that addressing global systemic issues like climate change necessitates a comprehensive and deep-rooted approach. This approach is encapsulated in the overarching theme of the conference: "Climate Impact", which emphasizes the synergistic integration of three critical components: deep technology, robust policy, and innovative finance. CITIS will serve as a unique platform, bringing together disruptive technology companies at the forefront of climate innovation with influential policy makers and forward-thinking financial institutions that specialize in providing innovative financial solutions for climate initiatives.



### **Grand Challenges**

CITIS introduces a format where it presents **Grand Challenges** that the nation and the world is facing across 5 thematic sectors. By bringing together experts, innovators, and decision-makers, CITIS aims to catalyze meaningful progress towards addressing the urgent and complex challenges posed by climate change, offering a roadmap for a sustainable and prosperous future.





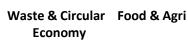






Water

Energy



Transport



### **Technology Showcase and Poster Exhibition**

In addition to its comprehensive discussions and collaborative initiatives, CITIS will feature a **Technology Showcase and poster exhibition**, spotlighting disruptive technologies and innovative solutions that have the potential to revolutionize climate action. This exhibition will provide attendees with a firsthand look at cutting-edge innovations and serve as a catalyst for collaboration and knowledge sharing among stakeholders from various sectors.



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NE FAMILY . ONE FUTURE

### **Making Solutions Affordable and Accessible**

The timing of CITIS is particularly significant, taking place during India's G20 Presidency. This alignment not only underscores the global importance of the event but also positions India as a leader in the Global South when it comes to delivering climate solutions that **prioritize affordability** through the transformative scale effect. This strategic positioning is poised to have a resounding impact on the trajectory of climate action within the Global South, highlighting India's commitment to fostering sustainable and **accessible climate solutions**.



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**Summit Main Days** 

## **Programme At a Glance**

#### Summit Preliminary Day

Day 1: Wednesday, 22 November 2023

Exhibition Inauguration and Walkthrough 0930 – 1100 hrs

**Technology Pitches to Evaluation Panel** Pitch Session 1: 0930-1100 Pitch Session 2: 1400-1530 Pitch Session 3: 1600-1730

#### Networking & Refreshments

 Coffee Break 1:
 1100-1130

 Lunch:
 1300-1400

 Coffee Break 2:
 1530-1600

 Dinner:
 1930-2230

#### Summit Inauguration

Day 2: Thursday,

23 November 2023

Investing in Water 0930 – 1100 hrs

Summit Plenary: 1130 – 1300 hrs

Investing in Energy 1400 – 1530 hrs

Investing in Waste & Circular Economy 1600 – 1730 hrs

 Networking & Refreshments

 Coffee Break 1:
 1100-1130

 Lunch:
 1300-1400

 Coffee Break 2:
 1530-1600

 Dinner:
 1930-2230

Summit Closing Day

Day 3: Friday, 24 November 2023

Investing in Food & Agri 0930 – 1100 hrs

Investing in Transport Systems 1130 – 1300 hrs

Summit Closing Valedictory 1400 – 1530 hrs

Networking & RefreshmentsCoffee Break 1:1100-1130Lunch:1300-1400Coffee Break 2:1530-1600

----- END OF CITIS 2023 -----

### **Genesis of CITIS**

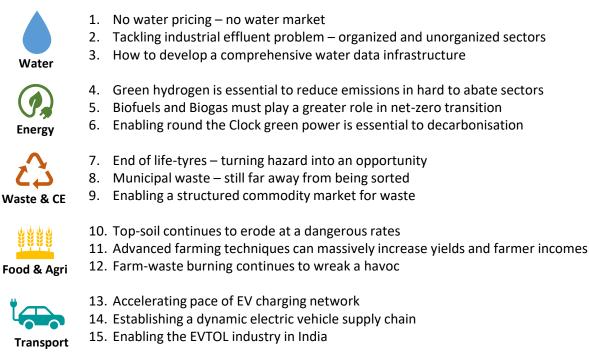
CITIS was born out of the "technology and innovation" track of the India Water Impact Summit (IWIS) that will run its 8<sup>th</sup> edition in 2023. The driver behind it was the need to bring policy makers, technology innovators and finance community together to discuss the dynamics of investing in high impact projects. Furthermore, an imperative need has grown to incorporate climate change mitigation and adaptation, energy transition along with solutions for the water and environmental sector. This necessitated the need for a dedicated event which has been instituted as CITIS and will be co-located and co-organized alongside with IWIS 2023.

#### **Glimpses from past events**



L to R: Dr. Vinod Tare, Founding Head, cGanga at IIT-Kanpur; Rajiv Ranjan Mishra, Fmr Director General, National Mission for Clean Ganga; Hon. Nitin Gadkari, Minister of Water Resources, River Development and Ganga Rejuvenation; Hon. Hardeep Singh Puri, Minister for Housing and Urban Affairs, Mr. UP Singh, Secretary, Ministry of Jal Shakti. (2018 Summit)

# **Grand Challenges presented at CITIS 2023**



### Group photograph



Hon. Gajendra Singh Shekhawat, Minister of Jal Shakti, hosting an Ambassador's meet in New Delhi on International Collaboration and Partnerships on Impact



nect exhibition area in City of Glasgow College

Hon. Bhupender Singh Yadav, Minister of Environmnet, Forests and Climate Change inaugurating the Ganga Connect exhibition in Glasgow in the margins of COP-26







### Exhibition



Nearly 30 disruptive solutions will be showcased at CITIS. These are in two formats: "exhibition stall" or "poster exhibition".

#### Climate technologies that will be showcased:

- Recycle and reuse of waste-water to in a continuous mode to treat drains
- Membrane based soil-less farming to enhance crop yields
- Processing end-of-life tyres using ultra high-pressure water jets
- Satellite based remote sensing of flood plains
- Sludge management for top-soil rejuvenation
- Faecal sludge capture and transport systems
- Industrial effluent recovery
- Carbon capture and storage
- First generation electric vertical/short take-off and landing vehicles (EV/STOLS)
- Plastic waste to hydrogen
- Digital carbon trading platform
- Digital waste-water trading platform
- Odour control systems
- Liquid fertilizer from processed waste
- Waste to biofuels
- Recycling of electronic waste, batteries and panels
- Fast charging systems
- And many more.....

#### **Registration and Participation in the Summit**

- Participation in the Summit is strictly by invitation only.
- Participants must have a formal invitation from the organizers before attempting registration.
- International participants may register through the following mechanism:
  - o Their country's official participation channels
  - Presentation slot in CITIS subject to prior approval
  - If your nation is not represented formally then kindly send in a formal request so that an invitation may be generated.
- Media partners must be accredited and registered.

#### **Registration for your Participation**

- Register "your interest" for participation using the following link: Click Here
- All invitations to the Summit shall be issued during 15-30th October 2023.
- If you have not received the invitation, then please get in touch with the Summit organizers.

#### **Contact Details**

- For Investor and Panelists Participation

   Mr Sanmit Ahuja: <u>sanmit.ahuja@cganga.org</u>
  - C IVIT Saminic Anuja. <u>Saminic anuja@cganga</u>
  - For Indian Government Related Queries:
    - Dr Vinod Tare: <u>founding.head@cganga.org</u>
- General Enquiries and participation requests:
  - Rupika Choudhury: po\_outreach@cganga.org
- For Summit Exhibition and Sponsorships
  - Mr. Kailash Shirodkar: <u>kailash.shirodkar@bharatia.org</u>
- For Media Enquiries:
  - o media@bharatia.org

#### **Steering Committee Members**

- Dr. Vinod Tare
- Sanmit Ahuja
- Sundeep Chauhan
- Ashish Mathur
- Jas Sohl
- Guneet Banga
- Rajiv Kapahi
- Ravi Kapoor
- Dr. Sreevas Sahasranamam
- Nish Balashanmugam



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# Day 1: Wednesday, 22<sup>nd</sup> November 2023

1000 – 1100	<b>Exhibition Inauguration and Walkthrough</b> The CITIS exhibition will showcase pioneering and high-impact innovative solutions spanning various sectors, encompassing Water, Energy, Waste, Food & Agriculture, and Transport. Between 20-30 disruptive technologies will be showcased at CITIS 2023.	
0930 – 1100	<b>CITIS 1: Technology Presentations / ETV Panel Evaluation</b> Prominent climate technology companies specializing in disruptive innovations will deliver comprehensive presentations to an audience comprised of discerning investors, influential policy makers, and esteemed clients. These presentations will elucidate cutting-edge solutions and breakthrough advancements that address pressing climate challenges and offer insights into their potential impact on the market, regulatory landscape, and sustainable business strategies.	
1100 - 1130	Coffee Break	
1130 – 1300	Networking Time	
1300 - 1400	Lunch	
1400 – 1530	<b>CITIS 2: Technology Presentations / ETV Panel Evaluation</b> Disruptive climate technology companies present their presentations to investors, policy makers and clients.	
1530 - 1600	Coffee Break	
1600 – 1730	<b>CITIS 3: Technology Presentations / ETV Panel Evaluation</b> Disruptive climate technology companies present their presentations to investors, policy makers and clients.	
1730 - 1930	Day 1- Conference ends and Free Time	
1930 – 2230	Networking Reception The networking reception will bring together audiences and participants of both IWIS and CITIS streams to allow cross-networking.	

### Day 2: Thursday, 22<sup>nd</sup> November 2023

0930 – 1100 Climate Impact = Deep Technology + Rigorous Policy + Innovative Finance The high-level Ministerial panel will convene, alongside prominent climate investors, to deliberate and introduce new investment paradigms tailored specifically for technology-driven climate solutions. Recognizing that climate change is an intricate challenge demanding multifaceted responses, the discussions will emphasize that the depth of climate impact necessitates the convergence of deep technology, rigorous policy frameworks, and innovative financial mechanisms. This holistic approach underscores the complexity of climate change mitigation and underscores the need for a comprehensive and integrated strategy to address this global imperative.

#### 1100 – 1130 Coffee Break

#### 1130 – 1300 CITIS 4: Investing in Water



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Investing in water infrastructure and management is paramount to achieving water resilience and water security on a global scale. As we strive for universal water coverage, it becomes imperative to address the challenges of reducing water pollution and increasing water use efficiency. These objectives are not only essential for safeguarding our ecosystems but also for meeting the growing demands of our burgeoning population. Sustainable investments in technologies and practices that promote cleaner water sources, advanced purification methods, and smart distribution networks are crucial steps in this endeavor. By channeling resources into these areas, we not only ensure the availability of clean water for all but also fortify our resilience against water-related challenges, ultimately contributing to a more sustainable and secure future.

#### **Grand Challenges Presented**

- 1. No water pricing no water market
- 2. Tackling industrial effluent problem organized and unorganized sectors
- 3. How to develop a comprehensive water data infrastructure

#### 1300 – 1400 Coffee Break



Energy

#### CITIS 5: Investing in Energy

Investing in the energy sector is pivotal as we navigate the complex journey of the energy transition. Achieving a sustainable future demands a diverse energy mix that combines renewable sources, fossil fuel alternatives, and innovative technologies. In this context, green hydrogen and biofuels emerge as promising game-changers in our battle against carbon emissions. These clean energy sources have the potential to significantly reduce our carbon footprint and offer a bridge towards a more sustainable energy future. Moreover, as we continue to harness renewable energy, the development of efficient energy storage systems takes precedence.

Day 2 continued

i) 1400 - 1530

Our goal should be to ensure round-the-clock access to renewable energy, mitigating the intermittent nature of sources like wind and solar power. By directing investments towards these key areas, we can accelerate the energy transition and drive meaningful progress towards a cleaner, more sustainable energy landscape.

#### **Grand Challenges Presented**

- 1. Green hydrogen is essential to reduce emissions in hard to abate sectors
- 2. Biofuels and Biogas must play a greater role in net-zero transition

**CITIS 6: Investing in Waste Management and Circular Economy** 

3. Enabling Round the Clock green power is essential to decarbonisation

#### 1530 – 1600 Coffee Break

#### 1600 - 1730



Investing in waste management and fostering a circular economy is not just a local or regional concern; it has evolved into a pressing global issue with farreaching consequences. Municipal solid waste has grown into a formidable challenge that transcends geographical boundaries, bringing forth escalating public health, environmental, social, and economic costs that reverberate worldwide. Moreover, it is crucial to recognize that inadequate solid waste management significantly exacerbates climate change, contributing to approximately 5% of global carbon emissions. This sobering statistic underscores the urgent need for comprehensive solutions. Furthermore, it is disheartening to note that poorly functioning Municipal Solid Waste Management (MSWM) systems are responsible for a staggering 80% of ocean plastic pollution. By strategically investing in advanced waste management practices and embracing circular economy principles, we can mitigate these challenges, reduce carbon emissions, and work collectively toward a more sustainable and cleaner future for our planet.

#### **Grand Challenges Presented in the Panel:**

- 1. End of life-tyres turning hazard into an opportunity
- 2. Municipal waste still far away from being sorted
- 3. Enabling a structured commodity market for waste

#### 1730 - 1930 Day 2- Conference ends and Free Time

#### 1930 – 2230 Networking Reception and Dinner

The networking reception followed by dinner will bring together audiences and participants of both IWIS and CITIS streams. The guests will be able to appreciate cultural presentations and savouring Indian delicacies.

### Day 3: Friday, 24<sup>th</sup> November 2023



Food & Agri

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#### **CITIS 7: Investing in Food and Agriculture**

Investing in food and agriculture is a multifaceted endeavor with far-reaching benefits. One promising avenue of investment is in regenerative agriculture, a holistic approach that not only enhances soil health and biodiversity but also reduces the environmental footprint of farming practices. Additionally, investing in innovative agricultural technologies and practices holds the potential to increase farm yields and uplift farmer income, thereby fostering economic growth in rural communities. Furthermore, it is crucial to allocate resources towards agricultural practices and technologies that help reduce agriculture emissions, as this plays a pivotal role in addressing climate change. By channeling investments into these key areas, we can not only ensure food security but also promote sustainable farming practices that benefit both farmers and the planet.

#### **Grand Challenges Presented**

- 1. Top-soil continues to erode at a dangerous rates how to regenerate
- 2. Advanced farming can massively increase yields and farmer incomes
- 3. Farm-waste burning continues to wreak a havoc

#### 1100 - 1130 Coffee Break





Transport

#### **CITIS 8: Investing in Transport**

Investing in the transport sector is paramount as we navigate the transformative shifts in mobility and sustainability. A crucial aspect of this investment is accelerating the pace of electric vehicle (EV) charging network expansion. This infrastructure development not only encourages the adoption of EVs but also addresses range anxiety, making electric vehicles a more attractive option for consumers. Furthermore, investments in a dynamic electric vehicle supply chain are essential to support the growing demand for EVs and to ensure a steady and efficient flow of electric vehicles from manufacturing to market. Additionally, the emergence of electric vertical takeoff and landing (eVTOL) vehicles represents a disruptive force in the transport industry. These innovative aircraft have the potential to revolutionize urban transportation, reduce congestion, and lower carbon emissions. By strategically directing investments into these areas, we can propel the transport sector towards a sustainable and technologically advanced future.

#### **Grand Challenges Presented**

- 1. Accelerating pace of EV charging network
- 2. Establishing a dynamic electric vehicle supply chain
- 3. Enabling the EVTOL industry in India

#### 1300 – 1400 Lunch

**Day 3 continued** Ħ 1400 - 1530 **CITIS Closing Valedictory: Making Technologies Affordable** India extends an invitation to the global community to collaborate and endorse the AAA Declaration. Through this collaborative effort, we aim to expedite the commercialization of technology-led solutions that are vital for both "life" and "mission" critical purposes. Our overarching objective is to ensure that these technologies align with the following principles: - Making technologies Accessible to all nations - Making technologies Affordable for all socioeconomic segments - Making technologies Available to all communities. 1530 - 1600 **Coffee Break END OF CITIS** 1600 - 1730 **Closing Valedictory of IWIS** 

#### **Glimpses from past events**



Ms. Debashree Mukherjee, Special Secretary, Ministry of Jal Shakti with H.E. Mateja Vodeb, Ambassador of Slovenia to India and other dignitaries at IWIS 2022.

# **Twin Summits at a Glance**

Time	India Water Impact Summit	Climate Investment & Technology	
	(IWIS)	Impact Summit (CITIS)	
0930 - 1100	Walk through of Exhibition	CITIS 1	
		ETV/Tech presentations - 1	
1100 - 1130	TEA/COFFEE BREAK		
1130 - 1300	IWIS Plenary		
1300 - 1400	LUNCH		
1400 - 1530	IWIS 1	CITIS 2	
	Samarth Ganga & Productive Land	ETV/Tech presentations - 2	
1530 - 1600	TEA/COFFEE BREAK		
1600 - 1730	IWIS 2	CITIS 3	
	Lifestyle for Rivers: Water Markets	ETV/Tech presentations - 3	
1930 – 2230	DINNER		

#### 🕂 Day 1: Wednesday 22 November 2023

#### Day 2: Thursday 23 November 2023

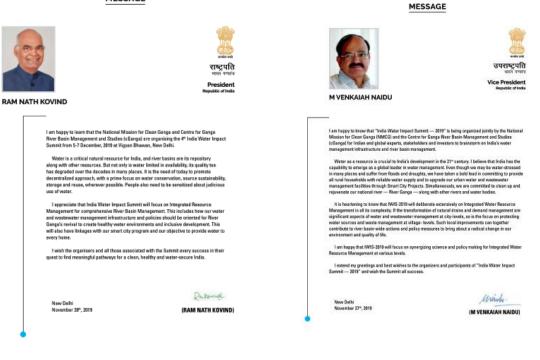
Time	India Water Impact Summit	Climate Investment & Technology	
	(IWIS)	Impact Summit (CITIS)	
0930 - 1100	CITIS Plenary		
1100 - 1130	TEA/COFFEE BREAK		
1130 - 1300	IWIS 3	CITIS 4	
	Launch of Global Alliance for	Investing in Water	
	River Basin Science and		
	Management		
1300 - 1400	LUNCH		
1400 - 1530	IWIS 4	CITIS 5	
	Digital Tools for River Basins	Investing in Energy	
1530 - 1600	COMMON TEA/COFFEE BREAK		
1600 - 1730	IWIS 5	CITIS 6	
	Data and Evidence Based	Investing in Waste	
	Approaches for River Basins		
1930 – 2230	DINNER		

#### Day 3: Friday 24 November 2023

Time	India Water Impact Summit	Climate Investment & Technology		
	(IWIS)	Impact Summit (CITIS)		
0930 - 1100	IWIS 6	CITIS 7		
	Projects and Partnerships	Investing in Food & Agri		
1100 - 1130	TEA/COFFEE BREAK			
1130 - 1300	IWIS 7	CITIS 8		
	Projects and Partnerships	Investing in Transport		
1300 - 1400	LUNCH			
1400 - 1530	CITIS Valedictory			
1530 - 1600	TEA/COFFEE BREAK			
1600 - 1730	IWIS Valedictory			
END OF IWIS and CITIS				

## **Letters of Support**

#### MESSAGE



#### MESSAGE



NARENDRA MODI

The joint organization of the 4<sup>th</sup> India Water Impact Summit – 2019 by National Mission for Clean Ganga (NMCG) and Centre for Ganga River Basin Management and Studies (oGanga) is an appropriately-timed initiative.

Water is a precious, life-giving natural resource. Our Country is rich in natural resources including water. However, water scarcity affects many parts of the country every year. The predicament that not even 10% of water received from the rains in the entire year is however, needs to be changed. It is time to act and conserve water for the present and fature generations.

Our Government is firmly committed to ensure India's water security. We are striving to make available adequate and safe drinking water to every household.

We need to transform water conservation into a community-based movement at the grassroot level. With the power of Janshakti, we can make even impossible possible and conserva overy drop of water. Water conservation tachniques have been practiced for centuries in our country. We now need to advance with a judicious blend of time-tested techniques and latest best practices.

The '4" India Water Impact Summit – 2018' will provide an opportunity to the experts to utilize the scientific knowledge and help in integrating the inputs with palicy-making in the water sector. I am sure that the ideas of various stakeholders will lead to the preparation of a time-bound readmap and strategies.

May the deliberation at the Summit benefit from new lessons and experiences, and lead to an enhanced water security for the posterity.

I wish the deliberations at the 4<sup>th</sup> India Water Impact Summit all success.



New Delhi December 2<sup>w</sup>, 2019 ल्काल प्रधान मंत्री गल लल्ल

Prime Minister Government of India

## **Glimpses from past events**



Hon. Nitin Gadkari, Minister of Water Resources, River Development and Ganga Rejuvenation visit to London, UK to invite technology disruptors to set up in India.

This marked the start of the ETV programme.

#### Amitabh Kant, CEO, NITI Aayog





Pankaj Kumar, Secretary, DoWR, RD & GR, Ministry of Jal Shakti, Gol



### THE OUTCOMES AND

recommendations of the summit in form of guiding document or framework will serve as a toolkit for the state governments, district administration and different ministries associated with river restoration so that they can go for the restoration of the whole ecosystem rather than conserving only the larger rivers of the country

D. Thara, Additional Secreatary, MoHUA



"Convergence has to happen in the states, cities and districts, and they should have a common idea of convergence. Hence, we need both silos and integrated approach.

## **Organiser Profiles**



National Mission for Clean Ganga Ministry of Jal Shakti, Government of India



#### National Mission for Clean Ganga (NMCG)

NMCG is the implementation wing of National Ganga Council which was setup in October 2016 under the River Ganga Authority order 2016. Initially NMCG was registered as a society on 12th August 2011 under the Societies Registration Act 1860. It acted as implementation arm of National Ganga River Basin Authority (NGRBA) which was constituted under the provisions of the Environment (Protection) Act (EPA) 1986. NGRBA has since been dissolved with effect from the 7th October 2016, consequent to constitution of National Council for Rejuvenation, Protection and Management of River Ganga (referred to as National Ganga Council). NMCG is under the aegis of Ministry of Jal Shakti, Government of India.

<u>www.nmcg.in</u>

#### Centre for Ganga River Basin Management and Studies (cGanga)

is a think tank and a centre of excellence formed under the aegis of NMCG, and one of its stated objectives is to make India a world leader in river and water science. The Centre is headquartered at IIT Kanpur and has representation from most leading science and technological institutes of the country. cGanga's mandate is to serve as think-tank in implementation and dynamic evolution of Ganga River Basin Management Plan (GRBMP) prepared by the Consortium of 7 IITs. In addition to this it is also responsible for introducing new technologies and innovations as well as novel policy, governance and financial solutions for the water sector in India.

www.cganga.org

### **Supporting Partners**

The organisers are grateful to all supporting partners for their contribution in making this event possible.

#### samarth ganga

FOUNDATION





Samarth Ganga Foundation is a new entity and a strategic collaborator to cGanga. Designed as an "applied innovation and impact" think-tank, the non-profit entity specialises in developing solutions with high economic impact. SGF is supporting cGanga to advocate the solution across the nation to various urban local bodies.

The Bharat Technology & Impact Accelerator (BHARA**TIA**) specialises in technology commercialisation by bringing disruptive innovation from around the world to India. BHARATIA is a SGF initiative.

The India Water Leaders' Council is composed of senior representation from various stakeholders of the water industry ecosystem in India. The IWLC meets once per quarter to discuss and debate critical issues and how to address those. IWLC stands firmly behind the decentralised waste-water treatment.

# Supporting Partners Continued



The Green Hydrogen Organisation (GH2) is a global non-profit foundation working with government, industry, and civil society to dramatically accelerate the production and utilisation of green hydrogen and its derivatives across a range of sectors globally. GH2 brings together government, industry, and civil society to enable the rapid uptake of green hydrogen globally. It has developed and is currently working with a group of governments and companies on refining and piloting the Green Hydrogen Standard. GH2 manages the Green Hydrogen Blended Finance Roundtable, bringing together 16 multilateral developments banks. The report "Getting the right blend: Innovative development finance for the large-scale renewable and green hydrogen economy" is available here. GH2 manages the collaborative Good Green Hydrogen Contracting and Legislation – for People and Planet, with a group of law firms providing pro bono support alongside experts from governments, industry, and civil society.

And many more partners joining ..