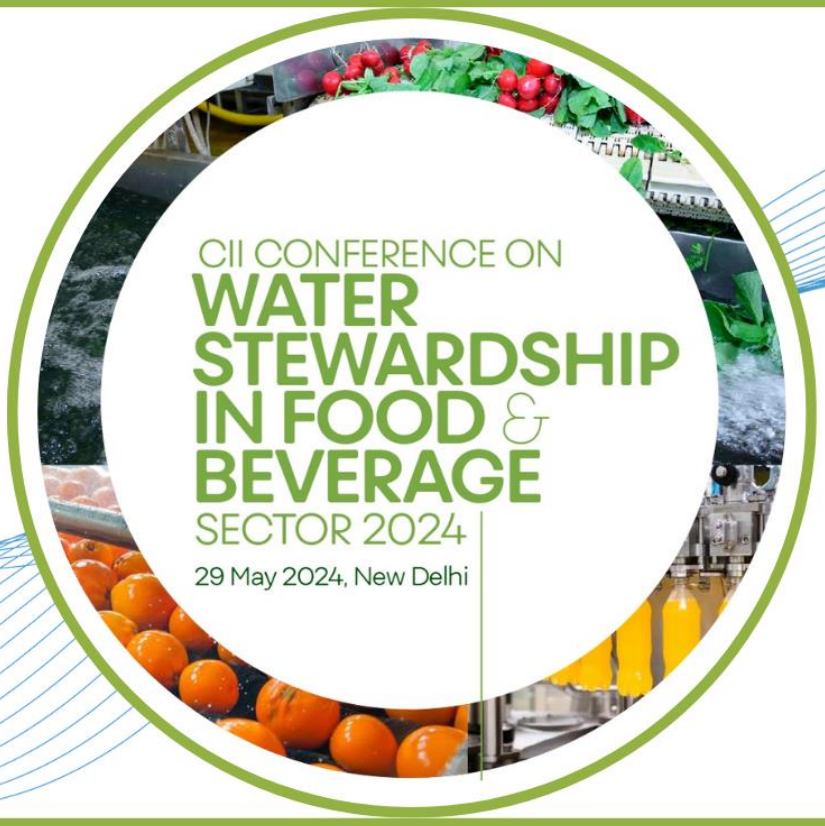
CII-TRIVENI WATER INSTITUTE

Confederation of Indian Industry



RETROSPECT

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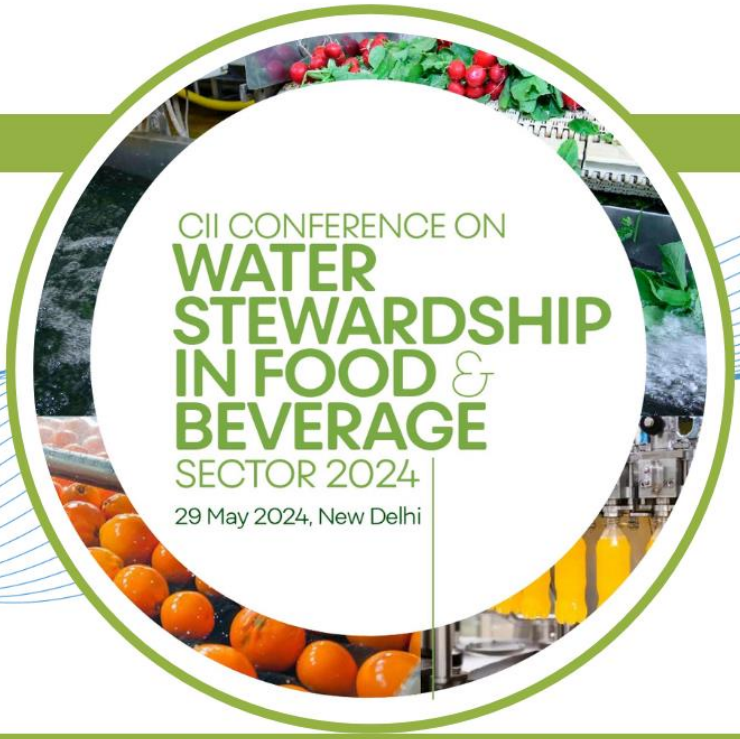

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ABOUT THE CONFERENCE

Water is critical for the food and beverage (F&B) sector. It plays a central role in every aspect of production, from nurturing crops to crafting products. Therefore, within the F&B industry, water isn't merely significant; it's fundamental. Rising pressures on natural water resources, exacerbated by climate change prompts heightened focus on water conservation and management within the F&B industry and will continue in future. Thus adoption of water stewardship practices stands as a cornerstone in ensuring the enduring sustainability and resilience of the F&B sector amidst growing challenges posed by water scarcity and pollution.

As the industry expands to meet growing global demand, the need for sustainable water management becomes increasingly critical. Water stewardship is vital for ensuring the sustainable use and management of water resources. Effective stewardship not only supports the operational efficiency of the food and beverage industry but also safeguards water availability for future generations. By integrating water stewardship into business practices, companies can contribute to the overall health of ecosystems and the communities that depend on them.

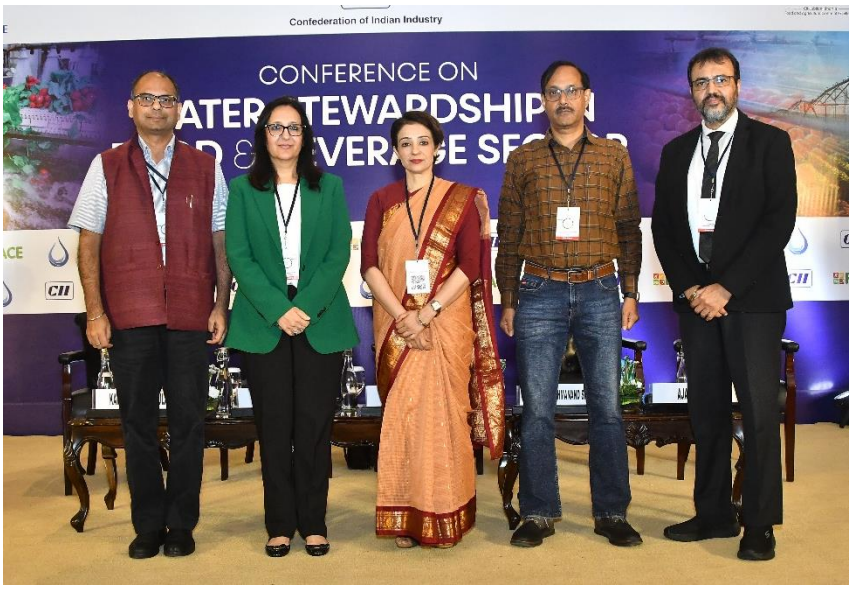
The food and beverage industry plays a crucial role in global water stewardship. Therefore, it is the responsibility of the industry to take decisive action towards water stewardship. Against this backdrop, a conference on Water Stewardship in Food & Beverage Sector 2024 was organised by CII's Centre of Excellence CII Water Institute and CII Food & Agriculture Centre of Excellence with the aim to enhance the competitiveness of Food & Beverage Industry by coming together to share knowledge, collaborate, and innovate, we can ensure a sustainable future for our water resources, the industry, and the communities we serve.

The first of its kind, CII Conference on F&B, highlighted some of the pertinent issues, challenges and solutions specific to water and focus on opportunities that exist to improve productivity and quality standards while also find ways to reduce resource usage and costs through the following plenaries

- Water Stewardship: Role of Policies, Governance and Institutions
- Sustainability: Role of Technology and Collaborative Approaches
- Water, Climate, Food Security: Good Practices

The conference showcased opportunities to improve productivity by leveraging cutting edge innovation & technology, adopting standards and collaborative actions for sustainable water management in the sector and marked a significant step towards achieving these goals and underscores our collective commitment to sustainable water management. The key points discussed, and the highlights of the various sessions are presented in the following chapters.

INAUGURAL SESSION



*(L_R) **Dr Kapil Kumar Narula,** CEO & Executive Director, CII Water Institute, **Ms Hina Nagaraj,** Managing Director & CEO, Diageo India - Opening & Context Setting by Conference Chairperson, **Ms Inoshi Sharma,** Executive Director, Food Safety and Standards Authority of India (FSSAI), Government of India, **Mr Thakur Brahmanand Singh,** Member Secretary, Central Ground Water Authority, Government of India – Address, **Mr Ajay Popat,** Chairman – Core group on New & Cutting-Edge technologies (NCW) & President, Ion Exchange (India) Limited, Address*

Speakers

Mr Thakur Brahmanand Singh, Member Secretary, Central Ground Water Authority, Government of India - Address

Ms Inoshi Sharma, Executive Director, Food Safety and Standards Authority of India (FSSAI), Government of India

Ms Hina Nagarajan, Managing Director & CEO, Diageo India - Opening & Context Setting by Conference Chairperson

Mr Ajay Popat, Chairman – Core group on New & Cutting-Edge technologies (NCW) & President, Ion Exchange (India) Limited, Address

Dr Kapil Kumar Narula, CEO & Executive Director, CII Water Institute

Discussions

Address by Ms Inoshi Sharma, Executive Director, Food Safety and Standards Authority of India (FSSAI), Government of India.

Ms Inoshi Sharma observed that labelling is a critical aspect for packaged drinking water and its compliance continues to be a challenge. She emphasized that adherence to labelling requirements and corrective measures to ensure compliance is of paramount importance.

She further emphasized that Industry needs to innovate to create products from treated wastewater. Focus on harvesting rainwater could help recharge our water bodies and make use of a resource that is otherwise wasted, said Ms Sharma also mentioned that in alignment with the government's vision of 'One Nation, One Commodity, One Regulator,' FSSAI intends to simplify regulations and administrative processes for businesses operating in the food sector by merging BIS mark mandatory requirement for packaged drinking water within FSSAI regulations.

Address by Mr Thakur Brahmanand Singh, Member Secretary, Central Ground Water Authority, Government of India,

Mr Singh underlined that in the context of depleting ground water resources underscored the use of harvested rainwater and grey water as a gamechanger in addressing water crisis. On the increasing water demand from Industry, Mr Singh emphasized that industry should strive to improve its specific water consumption. Regular water audits are essential for determining water use efficiency, mentioned Mr Singh.

Opening & Context Setting by Ms Hina Nagarajan, Conference Chairperson and Managing Director & CEO, Diageo India

Ms Hina Nagarajan underlined that water stewardship is a shared commitment towards securing our future. The conference organised by CII Water Institute will go a long way in driving large scale collective action. The deliberations focussed on the need for integrating water risk considerations into the Environmental, Social, and Governance (ESG) strategies of F&B companies. The cross-learning emanating from the plenaries will prompt all stakeholders to evaluate the importance of transparent water management approaches with clear accountability and performance indicators. By integrating purpose with profitability, industry can demonstrate that business success and environmental sustainability can go hand in hand.

Ms Nagarajan shared that, at Diageo India, preserving water for life is integral to our 10-year 'Society 2030: Spirit of Progress' ESG action plan that sits at the heart of our business strategy. From fostering collaborative initiatives to overachieving replenishment targets, we strive to set a holistic example of responsible water management, inspiring collective action.

Address by Mr Ajay Popat, Chairman – Core group on New & Cutting-Edge technologies, CII National Committee on Water & President, Ion Exchange (India) Limited

Mr Ajay Popat emphasized on the holistic management of water resources and the various strategies for Water Stewardship which include efficient water use through adoption of water audits, technology integration, wastewater management by focusing on treatment and reuse, supply chain management involving sustainable sourcing, collaborative initiatives and risk mitigation through water risk assessment. By prioritizing water stewardship, organizations can contribute to a more sustainable future while reaping significant environmental, economic, social, and reputational benefits, stressed Mr Popat.

Concluding Remarks by Dr Kapil Kumar Narula, CEO & Executive Director, CII Triveni Water Institute

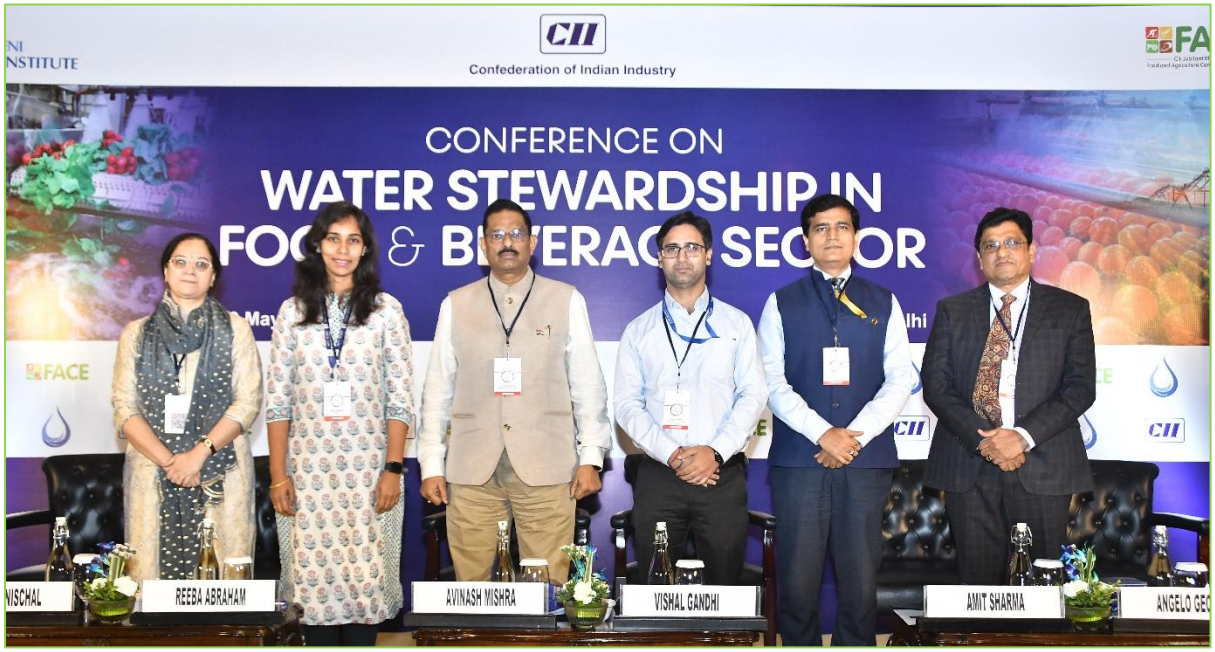
Dr Narula urged industry to be conscious of the watershed in which their plant is located. This will enable industry to undertake measures to ensure operational sustainability of their business operations, added Dr Narula. In this connection, he mentioned the water neutrality guidelines prescribed by NITI Aayog which provide a systematic, scientific roadmap for addressing vulnerabilities and embarking on the journey of water neutrality.

Key Highlights

- By prioritizing water stewardship, organizations can contribute to a more sustainable future while reaping significant environmental, economic, social, and reputational benefits
- There is a need for integrating water risk considerations into the Environmental, Social, and Governance (ESG) strategies of F&B companies. By integrating purpose with profitability, industry can demonstrate that business success and environmental sustainability can go hand in hand.
- Industry needs to be conscious of the watershed in which their plant is located. This will enable industry to undertake measures to ensure operational sustainability of their business operations
- Industry should strive to improve its specific water consumption. Regular water audits are essential for determining water use efficiency.
- Harvested rainwater and grey water as a gamechanger in addressing water crisis. Industry needs to innovate to create products from treated wastewater.

Session 1 : Water Stewardship: Role of Policies, Governance and Institutions

Focus/ Objective: The importance of water stewardship actions for sustainability and strengthening the ecosystem through appropriate policies, Governance and Institutions . This session explored how these elements can be aligned to support water stewardship and contribute to a sustainable future for all.



(L-R) ***Ms Shilpa Nischal,*** *Principal Counsellor, CII-Triveni Water Institute,* ***Ms. Reeba Abraham,*** *Deputy General Manager, Agricultural & Processed Food Products Export Development Authority (APEDA),* ***Mr Avinash Mishra,*** *Former Adviser – Water & Land Resources, NITI Aayog, Government of India,* ***Dr Vishal Gandhi,*** *Scientist E, Central Pollution Control Board (CPCB),* ***Dr Amit Sharma,*** *Director (Science & Standards), Food Safety and Standards Authority of India (FSSAI),* ***Mr Angelo George,*** *CEO, Bisleri International Pvt. Ltd*

Moderator

Mr Avinash Mishra, Former Adviser – Water & Land Resources, NITI Aayog, Government of India

Speakers

- **Dr Vishal Gandhi,** Scientist E, Central Pollution Control Board (CPCB)
- **Dr Amit Sharma,** Director (Science & Standards), Food Safety and Standards Authority of India (FSSAI)
- **Ms. Reeba Abraham,** Deputy General Manager, Agricultural & Processed Food Products Export Development Authority (APEDA)
- **Mr Angelo George,** CEO, Bisleri International Pvt. Ltd
- **Ms Shilpa Nischal,** Principal Counsellor, CII-Triveni Water Institute

Discussions

Mr Avinash Mishra, Former Adviser – Water & Land Resources, NITI Aayog, noted that the food and beverage industry contribute nearly 3% of India's GDP ($13.4 billion) and is expected to grow to $32 billion in the next five years. The sector at the same time has a high-water footprint, particularly in the production, the embedded water and processing stages. He stressed the need for a combination of efficiency, technology, and sustainability to meet targets.

Dr Vishal Gandhi, Scientist E, Central Pollution Control Board, emphasized the need for collective measures for water conservation and reduction of water pollution. He informed that the CPCB along with SPCB has established a network of around 4800 monitoring station operating throughout the country which facilitates data collection with respect to ambient water quality and sources of pollution and identifying pollution hotspots in rivers which helps in formulation an action plan for preventing, controlling, and abating water pollution, Effective implementation of the action plan by the States has resulted in reduction in the number of polluted river stretches in the country from 351 in 2018 to 311 in 2022.

Speaking on actions to promote water conservation, he stressed on the use of treated wastewater for non-potable purposes by industry and urged food and beverage industry to explore treatment of wastewater and use the same for industrial consumption. He referenced an initiative of paddy cultivation in Phagwara where the farmers are using alternate cycle of fresh water and treated water for irrigation.

Dr. Amit Sharma, Director (Science & Standards) at FSSAI, discussed food safety regulations and standards in India, highlighting that the Food Safety Act prescribes standards for packaged drinking water, mineral water, and water used in food manufacturing and processing.Dr. Sharma shared that the regulator with the aim of promoting ease of doing business, is working on exempting packaged drinking water from BIS standards so that industry has to follow only one standard. FSSAI will also set guidelines for the frequency and parameters for testing and inspecting packaged drinking water units, both internally by the industry and externally by FSSAI. He emphasized the need for uniform water quality standards to streamline testing for domestic, EU, and non-EU exports, urging industry stakeholders to engage with the Department of Commerce for a common water quality testing framework.

Dr. Sharma raised concerns about water quality used in food processing and treatment of food items, advocated for regular testing of water by accredited laboratories and appropriate remedial actions based on test results. He also alerted people on reusing single-use plastic bottles for food storage without proper cleaning and stressed on more awareness on the same.

He pointed out recent cases of regulatory circumvention by industrial establishments and urged compliance with regulatory provisions. Dr. Sharma encouraged the industry to engage with regulatory authorities to amend the existing framework and promote adherence to the rules.

Ms. Reeba Abraham, Deputy General Manager, APEDA, emphasized that water is one of the main components of sustainability and highlighted the need for its judicious use at production level and safe use of water at the processing level to prevent

contamination. She stressed that maintaining regulatory standards is crucial for India to remain a credible supplier in the global food sector. Sharing India's regulatory response to the global compliance requirement for agriculture and processed food exports, has continuously evolved from confirming to permissible limit, to traceability to the current focus on overall sustainability.

Ms Abraham shared that to facilitate testing of the food products 144 commercial labs have been recognized throughout the country with modern testing facilities. To further enhance the testing ecosystem for analytical purpose APEDA has allowed processors with manufacturing facility to set up in-house testing facilities and is extending assistance for upgradation.

She addressed the need for a common platform to streamline the various compliance requirements faced by exporters, such as country-specific regulations and product authorizations. Ms. Abraham noted that recent FTAs with Australia and UAE include provisions for recognizing existing standards.

At International Level, under the codex committee on food and hygiene of Codex Alimentarius, the global food law setting body, certain parameters on the use and reuse of water have been taken up for discussion, with 180 countries to deliberate on how to overcome the challenges and set a common standard.

Ms. Abraham urged the industry representatives to incentivize farmers who adhere to sustainable agricultural practices and meet standards, as seen with certifications like Global GAP, Fair Trade, organic certifications etc. She concluded by stating that regulatory compliance should be viewed as a measure to ensure environmental sustainability.

Mr. Angelo George, CEO, Bisleri International Pvt. Ltd, highlighted the potential for the water sector to generate green credits through conservation, harvesting, and improved efficiency, emphasizing the importance of water credits to alleviate pressure on India's strained water resources.

Mr. George referred a study on "Water Credits: Impact-Adjusted Virtual Water Footprint," conducted by Bisleri International and TERI School of Advanced Studies. The study aimed to review national and international practices and policies in water trading, water credits, and fiscal instruments, and to develop a methodological framework for estimating the water footprint of a production unit.

Unlike carbon emissions, water savings require a localized approach, considering variables like rainfall and watershed consumption. The study aims to make water credits a practical solution, reflecting a commitment to sustainability and environmental stewardship. He stated that the study would establish a framework for water credits similar to carbon credits, promoting sustainable water management.

Mr. George also suggested measures such as factoring in regional challenges, reviewing water allocation rules, determining market types for water, including safeguards to protect water quality and the environment, enforcing compliance mechanisms, and promoting water-prudent crops and efficient irrigation.

Ms Shilpa Nischal, Principal Counsellor, CII-Triveni Water Institute briefed on the "Guidelines on achieving Water Neutrality for Indian Industry". The essence and underlying principles for the prescribed guidelines were presented at the forum, to enable appropriation of practices and measures for an improved water scenario, considering both water resource availability and water quality.

Key take aways

- The food and beverage industry has a high-water footprint and must combine efficiency, technology, and sustainability to meet future growth targets. Food and beverage industry to explore treatment of wastewater and use the same for industrial consumption.

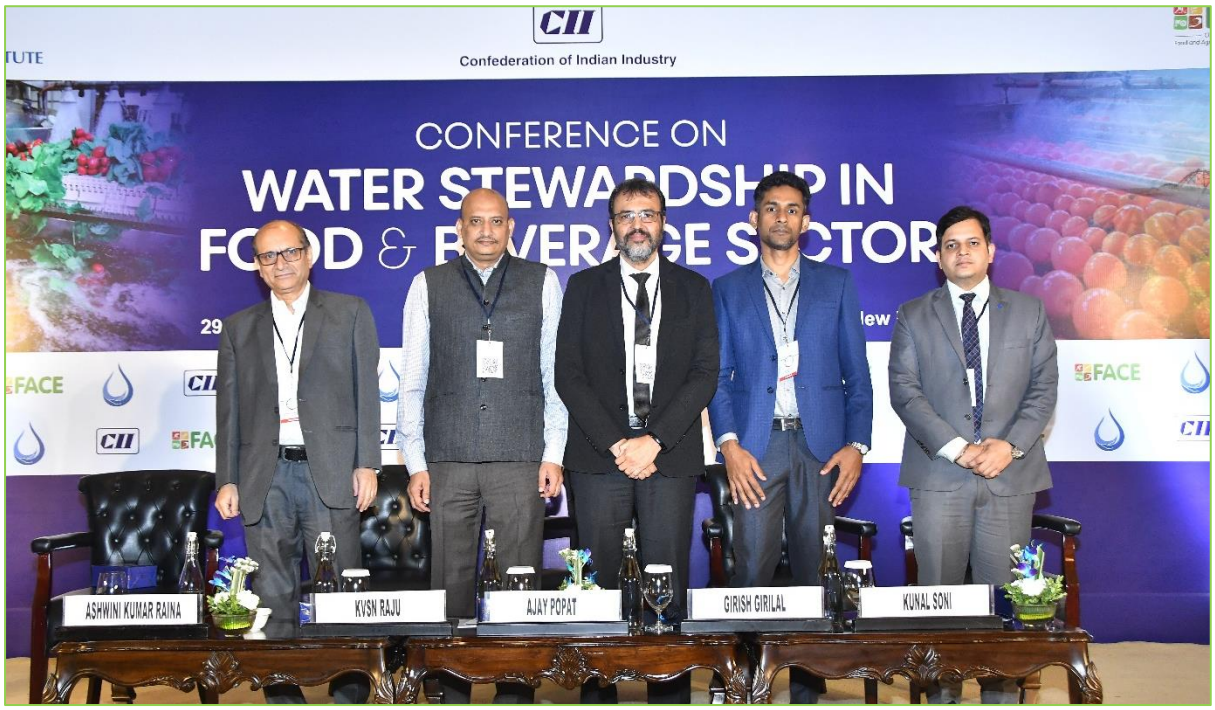
- Regulatory compliance should be viewed as a measure to ensure environmental sustainability.

- Promotion of Initiatives like water credits and treated wastewater usage to alleviate pressure on water resources and encourage sustainable practices.

- Farmers who adhere to sustainable agricultural practices and meet standards, and certifications like Global GAP, Fair Trade, organic certifications etc. should be incentivized.

Session 2: Sustainability: Role of Technology and Collaborative Approaches

Focus/ Objective: To explore the role of technological innovations in advancing sustainability and the importance of collaborative approaches and collective actions can drive significant progress in sustainability efforts within the food and beverage industry and beyond.



(L-R) ***Mr Ashwini Kumar Raina,*** *Danfoss Industries Pvt Ltd,* ***Mr KVSN Raju,*** *President,* ***Elico Ltd, Mr Girish Girilal,*** *Business Development - Food & Beverages Solutions and Water, Siemens,. Ltd* ***Mr Kunal Soni,*** *Deputy Group Field Officer- Environment, India and SAARC Nation HORIBA India Private Limited*

Moderator

Mr Ajay Popat, President**,** Ion Exchange (India) Limited

Speakers

- **Mr KVSN Raju,** President**,** Elico Ltd
- **Mr Girish Girilal,** Business Development - Food & Beverages Solutions and Water**,** Siemens
- **Mr Ashwini Kumar Raina,** Danfoss Industries Pvt. Ltd
- **Mr Kunal Soni,** Deputy Group Field Officer- Environment, India and SAARC Nation HORIBA India Private Limited

Discussions

Mr KVSN Raju, President, Elico Ltd, emphasised on importance of water quality for human health, industrial production & product quality, meeting regulatory standards and achieving Sustainable Development Goals especially SDG 6. Speaking on innovative water quality monitoring technologies to address the water quality challenges in food and beverage sector, he spoke about the role of technological advancements like real-time monitoring, automation in water quality analysis, advanced detection methods like nanotechnologies and biosensors in meeting the challenges in water quality monitoring.

He pointed on that availability of skilled manpower to operate the instruments, preparation of standard solutions (for analysis), regular maintenance of analytical instruments are the key challenges. To bridge this gap, automated multiparameter analysers using bio sensors, optical sensors and power of Machine Learning (ML) which are automated and less time consuming, he informed.

Mr Girish Girilal, Business Development - Food & Beverages Solutions and Water**,** Siemens emphasized the potential of digital transformation for accelerating water sustainability. On comprehensive solutions for F&B industry, he stressed on the importance of seamless integration and inter-operability of all the system components for an effective Decision Support System. He discussed holistic Digital Twins and decision support systems to create a total water balance for the industry. He also referenced a case study on predictive modelling for a wastewater treatment plant through use of operations intelligence.

Mr Ashwini Kumar Raina, Danfoss Industries Pvt. Ltd stressed on the need and scope for reducing energy consumption by about 15% and water consumption by more than 20% in water supply networks through installation of Variable Speed Drives (VSDs). He mentioned that the power consumption of pumps can be reduced through speed optimization which can be achieved through VSDs. He also mentioned that pumps with built-in harmonic filters, intelligent heat management systems and 3C3 coating are being developed which can be installed even in harsh environmental conditions.

Mr Kunal Soni, Deputy Group Field Officer- Environment, India and SAARC Nation HORIBA India Private Limited highlighted the importance of accurate monitoring to generate data which can be utilized through data analytics for informed decision making. He spoke about customisable water quality instruments being developed by HORIBA both for real time monitoring and for water quality analysis in laboratories. He shared a case study about a multi-parameter water quality analyser based on principle of colorimetry, which has titanium oxide coating on its electrode to prevent fouling.

Key takeaways

- Use of technologies such as automated water quality analyzers, remote monitoring systems with cloud connectivity, can help address issues with respect to real-time water quality monitoring by addressing gaps such as lack of skilled manpower, infrastructure constraints, safety, etc.

- Integrated Systems such as Digital Twins and Variable Speed Drives make use of use of sensors and analytics (operations intelligence) for predictive modelling to ensure smooth operation and reduce down-time of wastewater treatment plants and utilities.

- There is a potential to reduce energy consumption and water consumption in water supply networks through application of real-time monitoring, predictive modelling systems and installation of Variable Speed Drives.

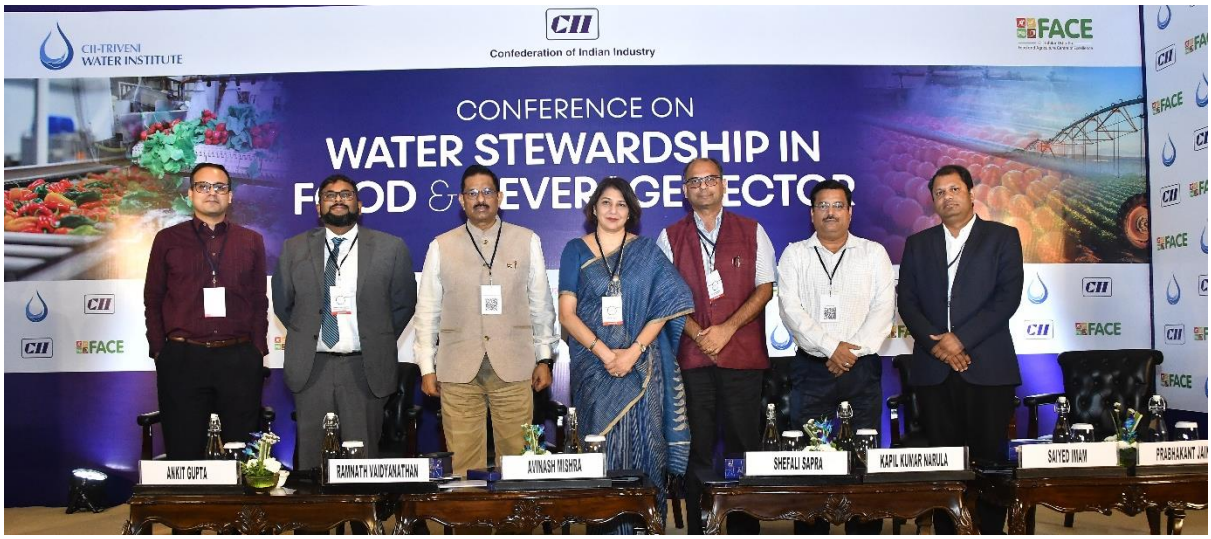
- Generation of accurate data is pivotal for informed decision making through application of data analytics, and automated multiparameter analysers using bio sensors, optical sensors ensure accuracy in real-time water quality data collection.

- Advancements in manufacturing such as application of coatings in water quality analyzers and built-in harmonic filters & intelligent heat management systems in pumps enable installation even in harsh environmental conditions, thereby addressing infrastructure-related challenges.

Session 3: Water, Climate, Food Security: Good Practices

Focus/ Objective:

To enhance awareness of good practices in water management, climate resilience, and food security to encourage stakeholders to think innovatively about adopting and implementing sustainable water management practices in their sector and improve competitiveness of the Food & Beverage Industry while ensuring the sustainability of our resources and communities.



(L-R) ***Mr Ankit Gupta,*** *General Manager-Sustainability, ITC Limited,* ***Mr Ramnath Vaidyanathan,*** *AVP and Head of Environmental Sustainability– Good & Green, Godrej Industries Limited and Associate Companies,* ***Mr Avinash Mishra,*** *Former Adviser – Water & Land Resources, NITI Aayog, GoI,* ***Ms. Shefali Sapre,*** *Vice President – Corporate Communication, Diageo,* ***Dr Kapil Kumar Narula,*** *CEO & Executive Director, CII Water Institute,* ***Mr Saiyed Imam,*** *DSR Portfolio & Agronomy Lead – Asia, Bayer Crop Science Limited,* ***Mr Prabhakant Jain,*** *Lead CSR, DS Group*

Moderator

Mr Avinash Mishra, Former Adviser – Water & Land Resources, NITI Aayog, Government of India

Speakers

- **Mr Ramnath Vaidyanathan,** AVP and Head of Environmental Sustainability– Good & Green, Godrej Industries Limited and Associate Companies
- **Ms. Shefali Sapre,** Vice President – Corporate Communication, Diageo
- **Mr Saiyed Imam,** DSR Portfolio & Agronomy Lead – Asia, Bayer Crop Science Limited
- **Mr Ankit Gupta,** General Manager-Sustainability, ITC Limited
- **Mr Prabhakant Jain,** Lead CSR, DS Group

Mr Avinash Mishra, Former Adviser – Water & Land Resources, NITI Aayog, Government of India highlighted the critical nexus between water, energy, and climate. He emphasized that climate change significantly impacts water availability, which in turn affects food production. The sustainability and growth of the food and beverage industry heavily relies on the availability of water and the implications of climate change.

Mr Mishra advocated for various measures to address the scarcity of water, including conservation efforts and improvements in efficiency. He stressed the importance of learning from successful practices implemented by industry leaders and corporations. According to him, proven and tested methods should be propagated and adopted widely to ensure effective water management in the face of climate change.

Mr. Ramanath Vaidyanatham, AVP and Head Environmental Sustainability Good and Green Godrej Industries Limited, started that water's been a priority area for Godrej for a very long time and Godrej has prioritized water sustainability. The company has achieved a 15X water positive status through watershed programs and has nearly all facilities as zero liquid discharge facilities.

Mr Vaidyanatham shared that despite these successes, the ongoing challenges, particularly the high-water stress risk still exists at all manufacturing sites and therefore the next phase of company's sustainability journey focusses specifically on water. He advocated for a shift from water conservation to water stewardship, emphasizing community collaboration for sustainable water practices.

Mr Vaidyanatham highlighted the inefficiency in water pricing as a significant barrier to adopting water-saving technologies. He argued for risk-based pricing to reflect the true cost of water, including potential production losses due to water scarcity. He advocated for a holistic approach that considers the interconnectedness of water, energy, climate, and biodiversity. He also recommends the Life Cycle Assessment (LCA) approach for companies to understand and improve the environmental impact of their products.

Ms. Shefali Sapre, Vice President – Corporate Communication, Diageo highlighted Diageo's commitment to enhancing water use efficiency by replenishing more water than they use, particularly in water-stressed areas, by 2026. Ms Sapre informed that the company is leveraging technological advancement to improve water use efficiency, rainwater harvesting, prioritizing catchment & source protection and active collaboration with stakeholders for embarking towards an improved water scenario. The company has already improved water use efficiency in its distilleries by 48% and in packaging by 31%, surpassing the target of 40% by 2030. An example of their water efficiency is the reuse of water nine times in bottle washing operations before treatment, with all units achieving zero liquid discharge. Ms Sapre shared that a water replenishment capacity of over 9,000 cubic meter They have been able to replenish more than 1 million cubic meter of water in the last three years across all water stress sites and have exceeded their total water replenishment target by 25% and three years ahead of our 2026 goal, she informed.

Diageo's sustainability efforts focus on three areas: preserving water for life, transitioning to a low-carbon world, and sustainable design. By 2030, they aim to reduce water use by 40% per drink, achieve net zero carbon across operations by

2026, and increase the recycled content in packaging to 60% by 2028. The company also partners with government and NGOs for projects like mass plantation and constructing sanitation facilities. They also work with organizations like Source Global to generate water from air and have collected back 100% of plastic waste under the EPA. The Alwar distillery received the Alliance for Water Stewardship certification, the first in Asia for a distillery.

Mr Saiyed Imam, DSR Portfolio & Agronomy Lead – Asia, Bayer Crop Science Limited highlighting the challenges before agriculture due to climate change and labor migration shared Bayers initiatives in rice cultivation which is vital for food security. He briefed about the Bayer's project, "Shaping Regenerative Rice Cropping Systems", which promotes a shift from transplanted rice cultivation to direct seeding of rice (DSR), reduces water usage, labor needs, and greenhouse gas emissions, benefiting both farmers and the environment. The program also imparts training to farmers in best practices, ensuring profitability and yield improvement. Currently Bayer is running this project in 46,000 hectares, across all rice growing states, he informed.

Bayer has also collaborated with various stakeholders, including the Department of Agriculture and research organizations like the International Rice Research Institute (IRRI), to validate and promote DSA. The initiative seeks to reduce water usage and carbon footprint, partnering with companies interested in carbon credits to incentivize farmers. Mr. Imam further emphasized the need for continued collaboration with like-minded organizations to further develop and implement these sustainable practices.

Mr Ankit Gupta, General Manager-Sustainability, ITC Limited shared ITC's unique approach to water stewardship, highlighting its efforts in addressing water stress in its operational areas by employing a comprehensive risk assessment approach, incorporating data from the Groundwater Board, climate models, water quality, and social issues to identify high water risk locations.

ITC aims to reduce water usage per unit of production by 40% by 2030, with significant progress already made in its food business. ITC uses technologies like rainwater harvesting and risk-based pricing to justify investments in water conservation, In its Malur unit in Karnataka which is extremely water stressed, the company used risk-based pricing to undertake investments and a present rainwater harvesting meets 25-30% of water requirements at Malur. Beyond the factory, ITC adopts a stewardship approach, collaborating with local communities to enhance water availability and efficiency. The company has created a capacity of 55 million KL through integrated watershed management programs and targets 60 million KL by 2030. ITC's efforts have already resulted in annual savings of 1,100 million KL, aiming for 2,000 million KL.

Mr Gupta sharing ITCs forward-looking approach to mitigating water-related risks informed that ITC has transitioned from water conservation to a river basin level strategy, addressing rapid urbanization and increased water usage. They have achieved a significant milestone by making the Godh River Basin water positive in five years through supply and demand measures, and they are working on other river basins as well.

Climate change is a key consideration in ITC's strategies, using climate models to anticipate future water availability and integrating these insights into factory and

agricultural operations. For building resilience, ITC classifies villages based on yield and resilience, categorizing them as low yield/low resilience or high yield/high resilience. Over time, they aim to shift villages from low resilience and yield to higher resilience and yield. This approach ensures that in good years, villages benefit more, and in bad years, they lose less, significantly impacting water management and farming sustainability. The company is also empowering women farmers by integrating them into climate-smart agriculture and agribusiness roles. This includes training women as drone pilots for efficient water usage in farming. The company also aims to target around four million acres in sustainable agriculture by 2030. Currently, they have reached 2.7 million acres and are observing significant positive effects on inclusivity and environmental impact. As farmers become more resilient, the business's resilience also strengthens, he concluded.

Mr. Prabhakant Jain, Lead CSR at DS Group, emphasized that as a food and beverage company, DS Group recognizes its responsibility towards farmers and the sustainable use of water and has initiated a project called the Water Economic Zone, aiming to treat water as an economic resource rather than merely a natural one. This project focusses on two fronts, first, Water Conservation and Sustainable Use by ensuring the best practices in water conservation so that downstream users can also benefit from the water resources, promoting sustainable conservation and judicious use. Second, is encouraging farmers to adopt less water-intensive crops and sustainable agricultural practices. This includes crop diversification, which is crucial for the income growth of marginal and small farmers, who constitute 85% of the farming population in India. The project also focuses on market linkages, connecting farmers to markets, including DS Group or local markets, to ensure economic benefits. This initiative by DS Group has been recognized with a National Water Award, underscoring its impact and success in sustainable water management and agricultural practices, informed MrJain.

Key Takeaways

- **Sustainability and Growth for Food and Beverage Industry**
    - The sustainability and growth of the food and beverage industry heavily rely on the availability of water and mitigation of climate change impacts. The companies can achieve significant gains from efforts in water, climate and food security.
    - Acknowledge and prepare for the impacts of climate change on water availability and quality. Adopt Life Cycle Assessment (LCA) approaches and other tools to measure and improve environmental impacts, including water footprint and carbon footprint.
    - Integrate climate models and data into operational and agricultural strategies to anticipate and mitigate future water-related risks. Set clear, measurable targets for water use reduction, replenishment goals, and sustainability initiatives.

- **Collaboration with Stakeholders**
    - Changing mindsets and behaviours toward water use, whether internal or external, is a time-consuming process. Achieving sustainability demands patience, commitment, and strategic planning, tailored to local contexts while aligning with global sustainability goals.
    - Collaboration among stakeholders and distributed leadership roles amplify impact through collective action and partnerships towards shared sustainability goals.
    - Foster partnerships with government bodies, NGOs, research organizations, and local communities to implement sustainable water management practices.
- **Water Stewardship and Efficiency:**
    - Emphasize a shift from water conservation to water stewardship through active collaboration with local communities and stakeholders to ensure sustainable water practices.
    - Collaborate on watershed management programs, which can include watershed restoration and conservation efforts to replenish water sources.
    - Utilize technological advancements to enhance water efficiency in operations and agriculture. Implement technologies like rainwater harvesting, zero liquid discharge facilities, and efficient water reuse systems to optimize water use efficiency.role of new technologies, MSMEs, and improved supply chain practices.
- **Policy Advocacy:**
    - Advocate for policy changes that support sustainable water practices, including risk-based pricing that reflects the true cost of water and incentivizes investments in water conservation technologies.
- **Promote and incentivise Sustainable Agriculture Practices:**
    - Promote crop diversification and less water-intensive agricultural practices to enhance water resilience and support farmers' income growth.
    - Encourage the adoption of regenerative farming practices like direct seeding of rice, which reduces water usage and greenhouse gas emissions.
- **Capacity Building and Training:**
    - Provide training and education to farmers and stakeholders on best practices in water management and sustainable agriculture.
    - Empower local communities, including women farmers, through training in climate-smart agricultural practices and efficient water usage techniques.

- **Awareness, Recognition and Awards:**
    - Highlight successful initiatives and practices through recognition programs and awards, which can encourage broader adoption of sustainable practices across industries.
    - Learning from successful practices implemented by industry leaders and corporations. proven and tested methods should be propagated and adopted widely to ensure effective water management in the face of climate change.