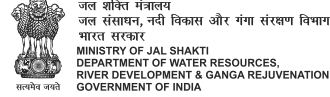


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CONFERENCE ON
**DECIPHERING TRANSVERSALITY OF
WATER-ENERGY-ENVIRONMENT NEXUS**



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**Water Transversality
Global Awards & Conclave 2024**

5th-6th December, 2024

**Dr. Ambedkar International Centre,
New Delhi**



भारत सरकार, डाक विभाग

Water

Sustainable and Natural Water Conservation

मुख्य पोस्टमार्स्टर कार्यालय, दिल्ली परिसर, नई दिल्ली-110001

भारत सरकार, डाक विभाग

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Executive Summary

The Water Transversality Global Awards and Conclave 2024, themed “Deciphering the Transversality of the Water-Energy-Environment Nexus,” was held on December 5–6, 2024, at the Dr. Ambedkar International Centre, New Delhi, India. Organized by the India Water Foundation in collaboration with prominent international and national organisations. The event brought together global leaders, policymakers, researchers, practitioners, and thought leaders to address the critical interdependencies between water, energy, and the environment.

My genuine thanks go to all our distinguished speakers, panelists, and collaborators for their engagement in the 2–day discussions. My humble and profound respect goes to the supporting organizations, our trusted/knowledge partners and supporters for making this program a success and, by agreement, stepping the ladder to success ahead.

The conclave delivered innovative ideas, interdisciplinary discussions and efforts to transform these into real partnerships for a sustainable and resilient future. Planned as part of the conclave was a packed two-day session, with four plenary sessions, two dialogues under leadership, three high level policy discussions, and many thematic sessions dissecting the policy aspects of water, energy, and environmental sustainability. The topics ranged from climate-resilient water management to the water-energy-food nexus, renewable energy and sustainability opportunities, and industrial water use challenges in times of climate emergencies. These core sessions were conducted along with six parallel sessions by knowledge partners like IHE Delft, IUCN, UNOPS, ISID and GIZ, including all the components such as capacity building, restoring ecosystems, innovative water purification technologies, and promoting green industrialization in India.



The Global Water Transversality Awards recognized the sustainable efforts of individuals and organizations for excellence in water conservation, innovations, and partnerships. International water authorities like IHE Delft, WAPCOS, schools and community leaders who have demonstrated excellence in sustainability, received awards concurrently. This is a conclave where innovative steps and partnerships would be celebrated as sweeter steps to a sustainable future.

The conference outcomes emphasized the need to take a holistic nexus approach to deal with the interlinked challenges of water, energy, and the environment. Participants underscored the importance of breaking down silos in decision-making processes and the value of integrated frameworks that leverage synergies across these sectors. The discussions also brought to the fore innovations in technology: from water purifiers based on biomass to solar irrigation pumps, all the way to green hydrogen advancement. The conference also urged a climate-resilient approach in adaptive water management and circular economy principles for mitigating the climate crisis.

The conference was guided on institutional and policy reforms, technological innovation, capacity building, and stakeholder collaboration. It was recommended that integrated water resource management models be developed and National bodies established to enable cross-sectoral cooperation. It also highlighted the need for investments in decentralized renewable energy technologies, advanced water treatment systems, and sustainable infrastructure. To spur impactful actions, the conference called for strong capacity-building initiatives for water professionals and youth, as well as the integration of Water, Sanitation and Hygiene (WASH) education into school curricula. Governments, academia, private sectors and international organizations needed to strengthen partnerships to scale solutions and ensure the sharing of knowledge, it was argued.

The conclave also sketched a plan ahead to convert the learnings into strategies. They recommended the development of monitoring and evaluation frameworks for tracking progress, called for legislative and financial support, and the establishment of a dedicated task force to follow up on outcomes from the conference. The need for convergence of both supply chain and impact initiatives with global mechanisms, whether the SDGs, the Kunming-Montreal Global Biodiversity

Framework, the Paris Climate Agreement, and others was emphasized. In addition, participants suggested creating an annual conference to evaluate progress in the movement, discuss barriers, and acknowledge innovation in the field.

In light of this testimony, we can see the Water Transversality Global Awards and Conclave 2024 as a demonstration of the powers of interdisciplinary, collaborative ways to tackle complex interconnections between water, energy and the environment. Through promoting creativity, diversity, and collective intention, the gathering not only offered a space for conversation but also outlined a path for the revolutionary movement. The findings and recommendations provide a blueprint to develop an inclusive, just, sustainable and resilient future for all people.

This conference is not a destination, but a place to go to motivate and recommit ourselves to new action and engagement. May we always remember the power of transversality, the importance of innovation, and the drive to be accountable for our actions when it comes to protecting our planet and the communities that inhabit its natural resources. We CAN and MUST have a future where water, energy and the environment coexist in harmony for the benefit of all.

Foreword

The challenges posed by climate change and environmental degradation and depletion underscore the urgency of reimagining our pathways toward sustainable development. Climate change is closely intertwined with environmental issues, but it presents profound economic and social challenges that manifests across the globe and disproportionately impacts countries, communities and people that are already most vulnerable. At the heart of these challenges lies water—a resource that is the lifeline of ecosystems and communities.



The Water Transversality Global Awards and Conclave 2024 exemplify a collective commitment to addressing these urgent issues. Anchored in the principles of the 2030 Agenda for Sustainable Development, this event unites leaders, policymakers, researchers, and visionaries under a common goal: to forge collaborative and innovative solutions. The interconnectedness of water, energy, and the environment, as explored in this Conclave, emphasizes that these resources form the backbone of our economies and societies. Achieving resilience demands integrated approaches that align with Sustainable Development Goals, particularly SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), and SDG 13 (Climate Action).

Inclusivity remains pivotal to these efforts. By embracing the sustainable development principle of “leaving no one behind,” this Conclave amplifies the voices of marginalized communities, women, and youth—those most affected by climate-induced vulnerabilities. It is a call to action, urging us to design solutions that are not only effective but equitable.

As we navigate the complexities of water security, energy transition and sustainable governance, may this proceeding report inspire bold commitments and foster collective action. Together, we can shape a future where equity, sustainability, and innovation converge, ensuring a resilient world for generations to come.



Mikiko Tanaka
Director and Head

हर्ष मल्होत्रा
HARSH MALHOTRA



राज्य मंत्री
कारपोरेट कार्य मंत्रालय एवं
सड़क परिवहन और राजमार्ग मंत्रालय
भारत सरकार
Minister of State for
Corporate Affairs and
Road Transport & Highways
Government of India



12th February, 2025

MESSAGE

I would like to express my appreciation to the India Water Foundation for their initiative in organizing the Water Transversality Global Awards and Conclave 2024 on the topic of the Water-Energy-Environment Nexus. This important event has brought together thought leaders, policymakers, and innovators to discuss the vital interconnections between water, energy, and the environment.

The discussions and outcomes from this conclave have demonstrated that collaboration and integrated thinking are key to unlocking new opportunities for sustainability. From climate-resilient water management practices to the utilization of renewable energy and the promotion of circular economies, this platform has paved the way for initiatives that respect both national priorities and global commitments, such as the Sustainable Development Goals (SDGs).

One of the most inspiring aspects of this event is the recognition of global citizens and organizations through the Water Transversality Global Awards, which honor their leadership in advocating for sustainable water solutions. Their achievements serve as a testament to the power of innovation, dedication, and collective action in addressing contemporary challenges.

We recognize the transformative role that partnerships and corporate responsibility play in advancing sustainability. Through frameworks such as corporate social responsibility (CSR), businesses can contribute to addressing our most pressing challenges, including water conservation and environmental protection. Events like this conclave further strengthen these efforts by providing a platform for sharing knowledge and fostering new synergies across sectors.

Moving forward, I urge all stakeholders—government agencies, businesses, academic institutions, and civil society—to collaborate in creating an ecosystem that supports sustainability. We must develop innovative solutions to strengthen our institutional frameworks and ensure a secure future for all.

I commend the India Water Foundation and all supporting partners for organizing this conclave and look forward to their continued success in inspiring action, mobilizing partnerships, and developing sustainable solutions for a water-secure future.

(Harsh Malhotra)

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डॉ. राज भूषण चौधरी
Dr. Raj Bhushan Choudhary



सत्यमेव जयते

जल शक्ति राज्य मंत्री
भारत सरकार
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MINISTER OF STATE FOR JAL SHAKTI
GOVERNMENT OF INDIA
NEW DELHI - 110001

Message

I take this opportunity to extend my warm felicitation to the India Water Foundation for the outstanding effort it has taken in hosting the Water Transversality Global Awards and Conclave 2024 on Deciphering Transversality of Water- Energy- Environment Nexus – a prime event that marks the deep interconnections between water, energy, and the environment.

The conclave took place at the prestigious Dr. Ambedkar International Centre, New Delhi. It is an extraordinary gathering of minds around the world. Leaders, policymakers, researchers, and practitioners are coming together to address some of the most difficult challenges facing us today. That is precisely what we need for transformative solutions in a sustainable and resilient future.

Water, we know, is the core of life and development. Management of it goes hand in hand with energy, food security, and environmental well-being. Through this event, the India Water Foundation has taken forward the dialogue of adopting holistic approaches toward the management of these interconnected domains. The conclave discussion on climate-resilient water management to green industrialization and innovations in renewable energy has provided us with a solid foundation on how to chart our future path.

This allows me to identify great people and organizations recognized under the Water Transversality Global Awards. Apart from celebrating their great contributions to innovation and water resource conservation, these recognitions inspire me and all of us to do even better in our spheres of influence.

This would ensure that ministry initiatives remain relevant, with chances of sustainable usage while at the same time enhancing the determination of many to achieve safe and clean drinking water for everyone. Jal Jeevan Mission is one program that has already had a real positive impact in the lives of millions, allowing them to gain access to pure and safe water. But through such forums as this conclave, we can solidify our efforts, harmonize innovative solutions, and act as one in responding to the various challenges brought forth by climate change and resource scarcity.

It needs to be brought out into all the activities. Collective, embracing an integrated framework in the strengthening of partnerships and a spirit of fostering innovation will build a future wherein water, energy, and environment are in tune.

Every speaker, panelist, partner, and participant deserves our appreciation for their valuable contribution to making this conclave a success. Special thanks to the India Water Foundation for excellent leadership and vision to converge upon such a dialogue that has been so crucial to the future. Together, let's recommit ourselves to protecting our water resources to have an equitable and sustainable future for generations.

Raj Bhushan Choudhary
(Dr. Raj Bhushan Choudhary)

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UNITED NATIONS RESIDENT COORDINATOR INDIA

More than 2 billion people worldwide still lack access to safely managed drinking water. Moreover, over 1.5 billion people globally still do not have basic sanitation services.

Here in India, major initiatives such as the Government's 'Jal Jeevan mission' have helped 145 million rural households get access to tap water. In addition, the 'Swachh Bharat Mission', launched in 2014 with the aim of eliminating open defecation in rural areas has contributed to the construction of more than 100 million toilets across rural India.

While challenges do remain, these are only two of many initiatives demonstrating the country's firm commitment to achieve Agenda 2030 and the Sustainable Development Goals, for which India's uniquely large-scale contributions are critical.



The UN is a proud partner with the Government of India and other stakeholders in helping walk the extra mile to ensure that no one is being left behind. Multiple UN Agencies in India support initiatives which empower local communities to adopt sustainable water management practices, help improve data-driven approaches to enhance access to clean water and promote renewable energy projects while minimizing water usage.

The 2024 Water Transversality Global Awards and Conclave provides a platform to explore interdisciplinary approaches to address interconnected challenges across multiple topics. These include water use efficiency in industries, the role of green hydrogen in decarbonization, and environmental benefits of ecosystem restoration.

The focus of this conference also showcases that water, energy, and environment are not just resources to exploit – but the very foundation of our existence.

Ultimately, the Sustainable Development Goals remind us that these paths are not isolated but interconnected, and therefore that we will only get to where we want to go if we travel together.

Jal hi Jeevan Hai.



Shombi Sharp
United Nations Resident Coordinator in India

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नवनीत कुमार सहगल,
आई.ए.एस. (से.नि.)
अध्यक्ष

75
आज़ादी का
अमृत महोत्सव



प्रसार भारती | PRASAR BHARATI

Navneet Kumar Sehgal,
IAS (Retd)
Chairman

Dated : January 31, 2025

Message

I feel privileged to express my congratulations to India Water Foundation for successfully holding the Water Transversality Global Awards and Conclave 2024 on "Deciphering the Transversality of the Water-Energy-Environment Nexus" on 5-6 December 2024. This two-day meeting was intended to tackle the progressively vital role that integrated approaches play in answering the difficulties we are confronted with at the intersection of the water, energy, and environment nexus.

Especially as we face the challenges of water security and climate change, working together and thinking outside the box has never been so important. Drawing together a unique blend of global leaders, policymakers, researchers, and practitioners, the conclave was an unparalleled opportunity to address the multi-faceted, interconnected challenges facing humanity today — through a more sustainable lens.

Water crises in India remain a significant challenge, with rising demand, uneven distribution, and pollution exacerbating the situation. As the national public broadcaster, Prasar Bharati recognizes its responsibility in disseminating awareness and empowering citizens with knowledge about water conservation and sustainable practices. The Government of India has been addressing these challenges through initiatives such as the *Jal Shakti Abhiyan*, the *Namami Gange* program, and the *Atal Bhujal Yojana*, which emphasize rejuvenating water bodies, ground water management, and community engagement. By leveraging its vast network, Prasar Bharati actively supports these efforts, ensuring that messages of water sustainability reach every corner of the country.

Water Transversality Global Awards is the recognition of best practices that underline the need for collective action and shared responsibilities. It was heart warming to see people and organizations — be it at the grassroots level or in the research and policy circles — applauded for their commitment to pushing to conserve water and adopt sustainable practices.

The outcomes and future arrangements of this conclave hold great promise as a foundation for advancing water governance and environmental sustainability in India. I would like to take this opportunity to express my gratitude to everyone who worked tirelessly behind the scenes to make this conclave a success. It is only through ongoing dialogue, strong partnerships, and innovative approaches that we can develop sustainable solutions for the water-energy-environment nexus. I eagerly look forward to continued collaboration in the years ahead.

Best wishes,

(Navneet Kumar Sehgal)



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AMIT KUMAR GHOSH, I.A.S.
Additional Secretary



सत्यमेव जयते



आज़ादी का
अमृत महोत्सव

भारत सरकार
सामाजिक न्याय और अधिकारिता मंत्रालय
सामाजिक न्याय और अधिकारिता विभाग
GOVERNMENT OF INDIA
MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT
DEPARTMENT OF SOCIAL JUSTICE & EMPOWERMENT

MESSAGE


The International Conference on Deciphering Transversality of Water-Energy-Environment Nexus, convened on December 5-6, 2024, at Dr. Ambedkar International Centre in New Delhi, marked a watershed moment in addressing India's resource management challenges. This international conference orchestrated through a strategic partnership between India Water Foundation and key stakeholders such as UNESCAP-SSWA office and various ministries such as Ministry of Power, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti and Ministry of Social Justice and Empowerment of the Government of India, established a ground-breaking platform for cross-sectoral dialogue.

The Conference addressed a critical paradigm at the heart of India's sustainable development journey; the intricate interconnection between water resources, energy systems, and environmental sustainability. India's unique position—managing 4% of global freshwater resources while supporting nearly one-fifth of humanity—underscores the urgency of this discourse. The nation's energy infrastructure, particularly its thermal and hydroelectric facilities, maintains a symbiotic relationship with water resources, while the water sector's operations, from agricultural irrigation to urban distribution networks, constitute a significant energy demand. This complex interdependency is further challenged by climate-induced perturbations, manifesting as irregular monsoon patterns, increased extreme weather phenomena, and accelerating Himalayan glacial retreat. The majority of India's population is marginalized, with unequal access to resources leading to wastage. To achieve the Sustainable Development Goals (SDGs), there is major need to align objectives, targets, policies, and action plans for poverty alleviation and improved living conditions.

The Water Transversality Global Awards and Conclave 2024, exemplified an innovative approach to problem-solving through its celebration of cross-disciplinary excellence. This platform transcended traditional sectoral boundaries, catalysing a new era of collaborative solution-finding and strategic innovation in resource management.

: 2 :

I am convinced that this conference's valuable insights and suggestions will provide the key to help facilitate dialogues and cooperation on the nexus and the related issues for consideration of Governments, technical experts, professionals and policy makers to lead us towards more sustainable future. I eagerly await the next edition of these awards and conclave, hoping it will be an even grander event.


(Amit Kumar Ghosh)



ARCHANA VARMA, IAS
Addl. Secy & Mission Director
National Water Mission



सत्यमेव जयते



भारत सरकार/GOVERNMENT OF INDIA
जल शक्ति मंत्रालय/MINISTRY OF JAL SHAKTI
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
DEPTT. OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION
राष्ट्रीय जल मिशन/NATIONAL WATER MISSION

Message

I would like to extend my congratulations to the India Water Foundation for successfully hosting the Water Transversality Global Awards and Conclave 2024 on "Deciphering the Transversality of the Water-Energy-Environment Nexus" on 5-6 December 2024. This two-day meeting was intended to deliberate on the vital role of integrated policy approach in addressing the intersection of the **Water, Energy, Environment and Food Nexus**.

Out of box and innovate thinking on integrated policy has become particularly significant in view of the complex challenges being faced for a water secure future, due to the adverse impact of climate change, growing demand and limited supply of fresh water availability, world over. Bringing together global leaders, policymakers, researchers, and practitioners, the Conclave provided a useful platform to discuss the multi-faceted, interconnected challenges facing the world from the perspective of sustainable growth with equity in WEEF Nexus.

While integrated approaches, leveraging technology for unified action is very important, intensifying community action and ownership is equally vital for a sustainable future.

Water Transversality Global Awards is the recognition of best practices that underline the need for collective action and shared responsibilities. It was heartwarming to see people and organizations — be it at the grassroots level or in the research and policy circles — applauded for their commitment to pushing to conserve water and adopt sustainable practices.

The call to action in the final outcome of the Conference for a robust institutional architecture, integrated resource management, focus on equity, capacity building and stakeholder collaboration is in sync with the goals and objectives of the National Water Mission. As we work towards realizing the goals of the National Water Mission and the larger Vision of water security, such events prove helpful for communication, exchange and deliberation on existing policies and the possible way ahead.

I want to take this opportunity to also thank the invisible members of the team who worked behind the scenes to deliver a world class experience. I wish the Foundation continued success in all its future endeavors.

Best regards,

Archana Varma
(Archana Varma)

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It is not just an honour but a privilege to send warm congratulatory messages to the India Water Foundation on the spectacular success of the Water Transversality Global Awards and Conclave 2024. The two-day event focusing on "Deciphering the Transversality of the Water-Energy-Environment Nexus" indeed stands powerfully testifying as to how much effort needs to be reposed in finding solutions concerning interlinked challenges of water, energy, and environment in this fast-changing world.

The conclave attracted a superset of experts, thought leaders, and innovators from every nook and cranny of the world. Climate-resilient water management strategies to renewable energy solutions formed a thematic canvas, speaking to the crucial need for cross-sectoral approaches in sustainable development. Only such multidisciplinary collaborations shall help meet the ever-increasing challenge that we face while trying to manage our resources intertwined.

Never was the time so apt for the India Water Foundation to be devoted to meaningful dialogue and transformative partnerships. The ceremony of the Water Transversality Global Awards mainly focuses on giving honour to excellent contributions by various people, organizations, or communities whose work in water conservation, innovation, and collaboration pave the way for a more sustainable and resilient future.

These recommendations and outcomes of this conference give us an action blueprint. Strengthened institution frameworks, innovative technologies, and integrated management models are not only a call to action to resonate with today's challenges and tomorrow's opportunities but also vital in addressing our short-term problems while building long-term resilience against climate change and equitable access to resources for generations yet to come.

What all of these conclave discussions have truly made me think about is, that by coming all together – government to the academia and civil society or just the private sector – it should be nourished and taken care of. Collaborative most probably holds the capacity for practical solutions and amplifying whatever we craft toward real and long-term effect.

Let us carry forward the debates and results of this conference into the future. Let's work together with renewed energy, forge partnerships that cross borders, and make bold strides toward a sustainable future.

Congratulations once more to the India Water Foundation for again entrusting us with an opportunity such as this occasion. I'm much looking forward to further cooperation and jointly further progress along such common interests relating to waters, energy and environmental issues in all their diversities.

Warm regards,

Yours sincerely,

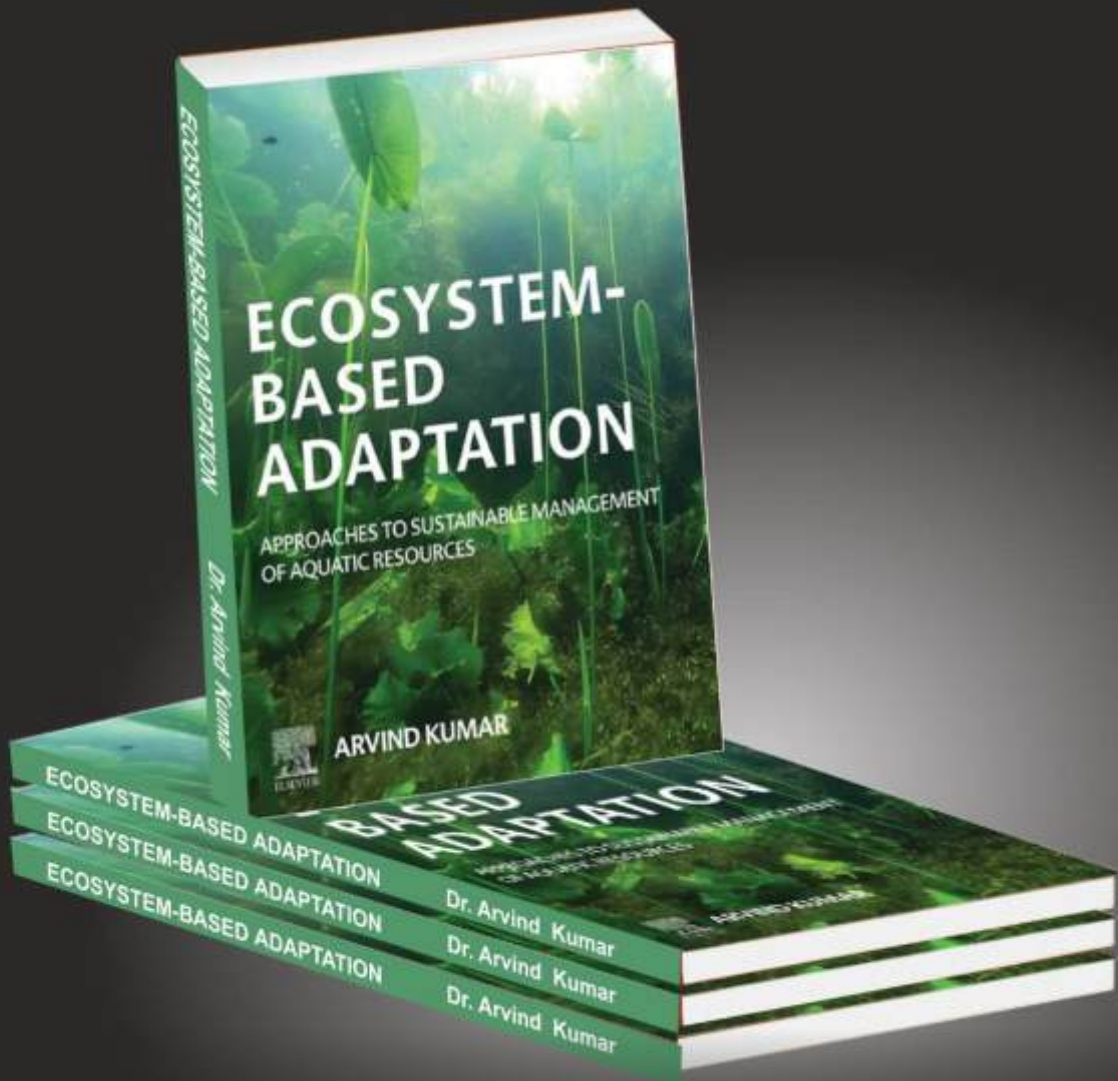
Sachin Chaturvedi

Introduction

The Water Transversality Global Awards and Conclave 2024, an international conference themed "Deciphering the Transversality of the Water-Energy-Environment Nexus", was held on December 5–6, 2024, at the prestigious Dr. Ambedkar International Centre, New Delhi, India. Organized to bring attention to the complex interdependencies between water, energy, and the environment, this event convened a diverse group of global leaders, policymakers, researchers, practitioners, and thought leaders. Together, they explored innovative and integrative solutions to some of the most pressing sustainability challenges of our time. The event was organised by India Water Foundation with support from South and South West Asia Office of UN ESCAP, Ministry of Jal Shakti, Ministry of Power, Ministry of Social Justice and Empowerment of the Government of India. The knowledge partners in organising the event were World Water Council (WWC), Global Alliance for a Sustainable Planet (GASP), Institute of Studies on Industrial Development (ISID), International Union for Conservation of Nature (IUCN), GIZ, UNOPS, International Commission for Irrigation and Drainage (ICID), IHE Delft Institute of Water Education, Embassy of Israel in India.

The two-day conference featured a dynamic program that included four plenary sessions, two leadership dialogues, three high-level policy dialogues, and four thematic sessions focusing on critical issues at the nexus of water, energy, and the environment and six side events to further enrich the discussions. The plenary sessions set the stage for high-level discussions on global challenges, while leadership dialogues provided a platform for influential leaders to share insights and propose actionable pathways for sustainable development. The high-level policy dialogues brought together decision-makers and experts to discuss policy frameworks and implementation strategies, and the thematic sessions delved into specialized topics such as sustainable hydropower, transboundary water governance, the water-energy-food nexus, and digital innovations in resource management. There were five parallel side events organised by some knowledge partners like IHE Delft Institute of Water Education, GIZ, IUCN, UNOPS, ISID etc.

A key highlight of the event was the Water Transversality Global Awards, which recognized groundbreaking contributions to the field, celebrating innovation, collaboration, and impact. The conclave also served as a networking hub for stakeholders to exchange knowledge, foster partnerships, and drive forward global commitments to sustainable water, energy, and environmental solutions. The whole event was made possible due to the support of the collaborating partners like GAIL India Ltd, Indian OIL, OIL India, BPCL, Anondita Medicare Ltd., HPCL, WAPCOS India Ltd, and Dedicated Freight Corridor Corporation India Ltd.



INAUGURATION CEREMONY



The inaugural ceremony of the Water Transversality Global Awards and Conclave 2024 marked a significant milestone, concluding the first day of the international conference focused on "Deciphering Transversality of Water-Energy-Environment Nexus." The ceremony brought together dignitaries, experts, and stakeholders to address critical challenges and explore sustainable solutions related to water resources.



Dr. Arvind Kumar

President, India Water Foundation (IWF)

He commenced the proceedings with a warm welcome to all attendees. His opening address eloquently articulated the intricate connections between water, energy, and agriculture, emphasizing the urgent need for integrated and sustainable approaches. Dr. Kumar highlighted the global reliance on water for power generation, stating that 90% of global power production is water-dependent. He further stressed the looming water crisis, citing projections that 2.3 billion people will be living in water-stressed regions by 2025. This stark reality, he argued, necessitates innovative strategies and collaborative efforts to build a more resilient future.

Following the welcome address, a traditional lamp-lighting ceremony took place, symbolizing the dispelling of darkness and the ushering in of knowledge and enlightenment. This symbolic act was followed by the felicitation of the



Chief Guest, Sh. Harsh Malhotra

Hon'ble Minister of State, Ministry of Corporate Affairs

Sh. Harsh Malhotra then provided a concise overview of the conference's objectives, positioning it as a vital platform for fostering learning, knowledge sharing, and collaborative discussions. He reiterated the Government of India's firm commitment to achieving net-zero carbon emissions by 2070, emphasizing the pivotal role of water resource management in achieving this ambitious target. In his address, reinforced the critical importance of water for maintaining a healthy environment and sustainable development. He called for concerted action from all stakeholders, focusing on conservation, promoting cleanliness, and encouraging water reuse and recycling practices.

A notable highlight of the ceremony was the unveiling of a special postal cover dedicated to the Conclave by



Col. Akhilesh K. Pandey,
Chief Post Master General, Delhi Circle.

This philatelic tribute served a dual purpose: commemorating the Conclave as a significant event and celebrating the India Water Foundation's sustained dedication to promoting water conservation and facilitating inclusive dialogue among diverse stakeholders. The special cover served as a tangible reminder of the event's importance and the IWF's ongoing efforts.

Furthermore, the inaugural ceremony witnessed the release of two significant publications:

• **"FRIDAY MUSINGS"**
by Dr. Arvind Kumar:

This book is a compilation of Dr. Kumar's reflections on contemporary global challenges and concerns. While addressing a broad spectrum of issues, many of the musings hold particular relevance to the Indian context, offering insightful perspectives on pressing domestic challenges.

• **Report on "Accelerating Progress of SDG 6 (Clean water and Sanitation) in the South and South West Asia sub region" for the UNESCAP SSWA Office:**
 This comprehensive report provides a detailed analysis of



the progress made towards achieving Sustainable Development Goal 6, which focuses on ensuring access to clean water and sanitation for all, within the South and South West Asia subregion. The report offers valuable data, insights, and recommendations for accelerating progress towards this critical goal.

The release of these publications added further substance to the inaugural ceremony, underscoring the Conclave's commitment to disseminating knowledge and contributing to evidence-based policy discussions. The ceremony concluded on a high note, setting the stage for productive discussions and collaborations throughout the remainder of the Conclave.



KEY STATEMENTS FROM OPENING PLENARY



Water, Energy, and Environment: Can a Nexus Approach Drive Sustainable Solutions?

The first plenary session set the tone for the conference by emphasizing the transformative power of multi-sectoral strategies to address the critical nexus of water, energy, and the environment.



Dr. Arvind Kumar

President, India Water Foundation (IWF)

In his insightful speech, he emphasized the urgent need for integrated, multi-sectoral strategies. He showcased India's comprehensive initiatives, including the Jal Jeevan Mission (JJM) and the National Water Mission (NWM), as examples of how interconnected strategies can effectively address water security, energy transformation, and environmental sustainability. Dr. Kumar stressed the importance of global collaboration and a holistic understanding of the interconnectedness of these vital systems. This is a call to action for governments, organizations, and individuals to work together to reimagine our relationship with the natural world.

Mr. Shombi Sharp

UN Resident Coordinator in India

"Water is the foundation of our existence, prosperity, and future," He highlighted the intricate nexus between water, energy, and environment, which is crucial for achieving the Sustainable Development Goals (SDGs). Water is not just a resource, but a global common good that connects us all, impacting health, sanitation, hygiene, peace, security, and sustainable development. Despite its importance, 2 billion people worldwide lack access to safely managed drinking water, with 800 million without access to drinking water at home. The Indian government's Jal Jeevan Mission has made remarkable progress in providing adequate drinking water to rural households, showcasing the potential for collective action to address this enormous challenge.



Sh. Sachin Chaturvedi, Director General, RIS

Dr. Sachin Chaturvedi, explored the interconnections between water, energy, environment, and social policy, emphasizing the centrality of SDG 6 (Clean Water and Sanitation) to sustainable development. Dr. Chaturvedi highlighted the role of water in health, gender equality, urbanization, and climate action, advocating for localized strategies, policy convergence, and anticipative planning to address water crises and promote regional stability. Referencing global efforts like the UN Water Conferences and the G7 Water Coalition, he called for greater collaboration between the Global South and developed nations, alongside institutional innovation to integrate water policies. He emphasized the need to reduce the virtual water footprint, reconnect communities with local water bodies, and educate students on water conservation, aligning with India's "Lifestyle for Environment (LiFE)" initiative. Dr. Chaturvedi also stressed the importance of inclusive funding mechanisms and equitable resource access, urging the Global South to lead a new development consensus through initiatives like RIS's DAKSHIN.



Sh. Amit Ghosh

Additional Secretary at the Ministry of Social Justice and Empowerment, Government of India

He emphasized the critical importance of the water-energy-environment nexus and highlighted the need for inclusivity—social, educational, and economic—in addressing sustainability challenges, stressing the importance of introducing sustainable living concepts into education. Reflecting on India's water resource degradation, Ghosh shared personal and professional experiences, warning of a looming water crisis, with demand projected to exceed supply by 40% by 2030 and energy demand set to double.

He highlighted agriculture's significant water consumption (80%) and the environmental impact of untreated wastewater (80% flows into rivers and lakes). Mr. Ghosh also stressed the need for integrated solutions, such as blending biofuels, improving hydropower efficiency, and managing waste effectively. Concluding, he urged alignment of policies and action plans to achieve SDG 6 while addressing poverty and inequality, expressing optimism about the conference's outcomes and its role in guiding sustainable development efforts.

Ms. Mikiko Tanaka

Head of the South and South-West Asia Office, UN ESCAP

She highlighted the critical need for regional cooperation in addressing the water-energy-environment nexus. She emphasized the transboundary nature of water resources, the interconnectedness of ecosystems across borders, and the upstream-downstream impacts on rivers, aquifers, and oceans, underscoring the importance of collective responsibility. Ms. Tanaka stressed the challenges posed by national legal frameworks and policies that often conflict in transboundary contexts, advocating for greater coordination and harmonization at the regional level. She also linked water scarcity, driven by population growth, industrialization, and climate change, to the risk of conflicts, emphasizing cooperation as a vital measure for conflict prevention. Praising the India Water Foundation's efforts to bring together diverse stakeholders, she underscored the collective responsibility required to address the complex challenges of the water-energy-environment nexus.



Key Takeaways:

- **Interconnectedness of Water, Energy, and Environment:** The session strongly emphasized the critical nexus between water, energy, and the environment, highlighting the need for integrated, multi-sectoral strategies.
- **Water as a Global Common Good:** Water was recognized not merely as a resource but as a global common good essential for existence, prosperity, and the achievement of the SDGs, impacting various aspects like health, sanitation, peace, and security.
- **Need for Holistic Understanding and Action:** Speakers stressed the importance of a holistic understanding of development and the interconnectedness of the SDGs, particularly the central role of water (SDG 6). Localized action, especially in the Global South, was deemed crucial.
- **Importance of Transversality and Convergence:** The session underscored the need for transversality, nexus thinking, synergy, and convergence in addressing global challenges, urging a shift from siloed approaches to more holistic perspectives.
- **Transboundary Nature of Water Resources:** The transboundary nature of water resources, including aquifers and river systems, was highlighted, emphasizing the need for international cooperation and harmonization to prevent conflicts and ensure water and energy security.
- **Importance of Collaboration:** Global collaboration among governments, organizations, and individuals was consistently emphasized as crucial for reimagining our relationship with the natural world and achieving sustainable development.

Recommendations:

- **Develop and Implement Integrated Strategies:** Prioritize the development and implementation of integrated, multi-sectoral strategies that address the interconnected challenges of water, energy, and the environment.
- **Promote Global Collaboration:** Foster international cooperation and collaboration among nations, particularly regarding transboundary water resources, to prevent conflicts and ensure equitable access and sustainable management.
- **Prioritize Localized Action:** Encourage and support localized action, especially in the Global South, tailoring solutions to specific regional and community contexts.
- **Integrate Policies:** Integrate industrial, social, biodiversity, and climate policies at local, regional, and global levels to drive holistic development and achieve the SDGs.
- **Promote Holistic Understanding:** Foster a holistic understanding of the interconnectedness of the SDGs and the central role of water, promoting awareness and education among all stakeholders.
- **Align Objectives and Action Plans:** Align objectives, targets, policies, and action plans for poverty alleviation and improved living conditions with the SDGs, ensuring equitable access to resources and sustainable development for all.
- **Recognize and Address Upstream-Downstream Relationships:** Explicitly acknowledge and address the upstream-downstream relationships in transboundary water management to ensure equitable sharing of resources and prevent conflicts.



LEADER'S FORUM - Deciphering the Water-Energy-Environment Nexus through Multi-Sectoral Dialogues



Deciphering the Nexus: How Can We Optimize Resource Allocation and Minimize Trade-offs?

This session brought together experts to explore the complexities and opportunities of this critical interconnection.

Dr. Eddy Moors

Rector, IHE Delft Institute for Water Education

He delivered a fascinating global perspective on the water sector's critical challenges at the Leaders Forum. He revealed an eye-opening data on energy needs for wheat and rice production, and explains how climate change is creating unprecedented uncertainties in water resource management. Drawing from his experience in the Netherlands, Dr. Moors shared striking comparisons of water usage across different regions – from countries using just 36 m³ per person yearly to others requiring thousands. He also shared the latest findings from COP 29 in Azerbaijan on water use in renewable energy production, and why capacity development in the water sector is more crucial than ever. His compelling insights on the Economics of Water report's key recommendations, including the ambitious goal of reducing water usage to 1460 m³ per person yearly. Dr. Moors explained why investing in water education yields a remarkable 300-fold return, why attracting new talent to the water sector is vital for our future. Moors concluded by advocating for intergenerational collaboration and inviting stakeholders to participate in capacity development initiatives.



Mr. Saraswati Prasad

Senior Advisor, UNOPS



He delivered a compelling address on the interdependent challenges of water, energy, and the environment in India, stressing that these sectors are deeply interconnected and must be tackled in an integrated manner. He highlighted the alarming water stress in India, where 16-18% of the global population relies on just 4% of the world's freshwater resources. A major portion of this water is used in agriculture, which heavily depends on inefficient flood irrigation, contributing to significant water wastage. Prasad emphasized the urgent need to optimize water usage in agriculture through methods like drip and sprinkler irrigation, and recognized the government's "Per Drop More Crop" initiative as an important step in this direction. He also pointed out the challenges in providing safe drinking water to India's vast population, particularly in water-stressed areas, and the difficulties in maintaining water supply systems. The sustainability of water sources is further threatened by

polluted rivers and shrinking wetlands, which not only harm biodiversity but also compromise essential resources for communities and industries. He called for a holistic, integrated policy approach that breaks silos between

sectors, improves capacity-building, and ensures collaboration across government and state agencies. In conclusion, he reiterated UNOPS' readiness to partner with governments to develop resilient infrastructure solutions for sustainable development, ensuring long-term water, energy, and environmental security for India.

Dr. Rajan Sudesh Ratna

Deputy Head, South and South-West Asia Office at UN ESCAP



He emphasized the critical need for cross-boundary, multi-sectoral dialogue to address the interconnected challenges of water, energy, and the environment in South and Southwest Asia. Highlighting the region's lagging progress on key SDG 6 targets—such as water stress (6.4.2), wastewater treatment (6.3.1), and integrated water resource management (6.5.1)—he stressed the urgency of addressing declining renewable energy contributions and negative trends in water management. He underscored the importance of stakeholder engagement, particularly in border areas, where there is often disconnect between policymaking and ground realities. Dr. Rajan advocated for collaborative approaches, such as cross-border water use efficiency mechanisms, flood forecasting, and early warning systems, to mitigate disasters and foster social benefits. He concluded by stressing that inclusive, multi-sectoral dialogue is essential for conflict resolution, disaster preparedness, and achieving the principle of "leaving no one behind."

Dr. Kapil Narula

Senior Analyst at the Breakthrough Agenda, Climate Champion Team

He emphasized the need to address the interconnected challenges of water, energy, and food not as resource problems, but as issues of inequity, particularly inequitable access. He proposed a multi-dimensional approach, highlighting the need for centralized water data sharing platforms that are accessible at local, national, regional, and global levels inspired by Niti Aayog's successful energy data initiative. Dr. Narula also shared that current water pricing in India – at 100 times less than Moscow's rates – is unsustainable, and how market mechanisms could revolutionize resource-efficient water use. Dr. Narula also advocated for incentivizing resource-efficient projects and market mechanisms to improve water use efficiency, noting that water pricing in India is insufficient, with domestic water use often being treated water for all purposes. He stressed the importance of integrating nature-positive and regenerative systems in city planning to ensure sustainable water management. Furthermore, he underscored the critical role of both technological and financial innovations in streamlining water distribution and treatment, and emphasized the need for strong policy support to make water access more affordable. Finally, Dr. Narula echoed the need for faster implementation of these ideas, drawing inspiration from the medical sector's approach to accelerating practical solutions.



Ms. Shweta Tyagi

Chief Functionary, India Water Foundation

The Moderator of this session highlighted the importance of fostering coordination and collaborative actions to tackle the water, energy, and environment Nexus, emphasizing the crucial role of governments and policymakers in driving integrated resource management through cohesive policies and sustainable practices. She pointed out the need to bridge the disconnect between policymakers and grassroots stakeholders, stressing those successful collaborations among public, private, and civil society sectors can create effective, scalable solutions. Ms. Shweta also underscored the need to align global frameworks, such as the SDGs, with local initiatives tailored to

community-specific needs. She called for the integration of financial capacity, particularly through blended finance, alongside technical expertise, to advance sustainable solutions while addressing social inequities.

Key Takeaways:

- **Global Water Challenges and Regional Disparities:** Significant variations in water usage exist globally, with some regions facing extreme water stress. Climate change exacerbates these challenges, creating uncertainties in water resource management.
- **Interconnectedness of Water, Energy, and Food:** The session highlighted the intricate links between water, energy, and food production, particularly the energy requirements for agriculture and the impact of green steel production on water resources.
- **India's Water Situation:** India faces a unique challenge, managing a large portion of the world's population with limited freshwater resources. Initiatives like the Jal Jeevan Mission are crucial for addressing these challenges.
- **Need for Systemic Change:** Conventional approaches to water management are insufficient. Systemic changes, including policy shifts, innovative solutions, and market mechanisms, are necessary for sustainable water use.
- **Trans-boundary Water Management:** Cross-boundary water management is critical, especially in South Asia, impacting flood and drought management and net-zero targets. Alignment between national policies and ground realities in border regions is essential.
- **Water Pricing and Market Mechanisms:** Current water pricing in some regions, like India, is unsustainable. Market-based mechanisms could incentivize more efficient water use.
- **Importance of Capacity Development and Education:** Investing in water education yields significant returns and is crucial for attracting talent to the water sector.
- **Focus on Equity:** The water-energy-food challenge is also an issue of inequity, requiring solutions that address unequal access to resources.

Recommendations:

- **Promote Integrated Resource Management:** Implement cohesive policies and strategic incentives to drive integrated resource management across sectors.
- **Invest in Water Education and Capacity Development:** Prioritize investments in water education and capacity building to develop a skilled workforce and foster innovation in the sector.
- **Implement Sustainable Water Pricing and Market Mechanisms:** Explore and implement sustainable water pricing strategies and market-based mechanisms to incentivize efficient water use and promote resource conservation.
- **Enhance Regional Cooperation on Transboundary Water Management:** Strengthen regional cooperation and dialogue on transboundary water management to address shared challenges related to floods, droughts, and water security.
- **Develop Centralized Water Sharing Platforms:** Consider developing centralized water sharing platforms, inspired by successful energy data initiatives, to improve water allocation and management.
- **Promote Sustainable Agricultural Practices:** Encourage the adoption of sustainable agricultural practices, such as drip irrigation and appropriate crop selection, to reduce water consumption in agriculture.
- **Break Down Policy Silos:** Foster inter-ministerial and inter-departmental collaboration to break down policy silos and promote integrated approaches to water, energy, and environment management.
- **Address Inequities in Water Access:** Implement policies and programs that address inequities in water access and ensure equitable distribution of resources.
- **Learn from International Best Practices:** Study and adapt successful water management practices from other regions, such as the UAE's urban water management strategies



Water Security in a Changing Climate: What Actions Are Needed Now?

Plenary 2 on Water focused on the critical role of sustainable water management in addressing climate resilience and ensuring water security for future generations.

Ms. Archana Varma

Additional Secretary and MD, National Water Mission, GOI



She focused on the pressing issue of water management in India, emphasizing the need for a comprehensive and integrated approach. She began by recalling a personal story about her mother's reaction to paying for water in Delhi, highlighting the broader cultural and economic perception of water as a free public good in India. She emphasized that the economics of water has not yet fully permeated public consciousness and that, as stated by the Prime Minister, a successful water policy must rest on several key principles: political will, efficient water management, public participation, sustainability, and partnerships. Drawing attention to India's water scarcity, she pointed out that despite India's average rainfall being not necessarily low, the country struggles with inefficient water management and poor water storage infrastructure. She highlighted the fact that India extracts more groundwater than China and the United States combined but has one of the lowest water storage capacities. This, along with the extreme spatial and temporal variation in rainfall across regions, makes managing water supply a significant challenge. Ms. Archana also focused on the importance of managing water demand alongside supply, especially given the projected rise in water requirements due to increasing food demands. She outlined the key objectives of the Jal Shakti Abhiyan, launched in 2019 with the tagline "Catch the Rain, Where it Falls, When it Falls." This flagship initiative aims to create resilient water infrastructure, encourage the construction of rainwater harvesting structures, and foster community participation in water conservation efforts. Additionally, the campaign includes building district-level Jal Shakti Kendras for training and capacity building, particularly targeting farmers, women, and children, and promoting intensive afforestation. Archana concluded by emphasizing the need for a holistic, whole-of-society approach to water management to ensure sustainable water use across the nation.

Ms. Noa Amsalem

Water Attaché at the Embassy of Israel

She presented Israel's remarkable journey in water management despite its challenging desert climate. Israel, with only 500mm of average annual rainfall, has developed innovative solutions like desalination, wastewater treatment and reuse, and efficient agricultural practices. She highlighted that Israel now produces 120% of its water needs through these strategies, with 70% of domestic water coming from desalination and over 90% of wastewater being reused, primarily for agriculture. The country's emphasis on technology-driven solutions, such as drip irrigation and leak detection, has helped develop a circular water economy, ensuring water sustainability while maintaining food security. Ms. Noa also pointed out the similarities between Israel's water challenges and India's, urging the adoption of such technologies in regions facing water scarcity. She emphasized the importance of smart planning and cross-sectoral collaboration in managing water resources efficiently.



Sh. U.P. Singh

Former Secretary, Ministry of Textile & Jal Shakti, GOI

He shared his experiences and insights into India's water challenges, stressing the importance of water literacy. He noted that despite India receiving over 1,000 mm of rainfall annually, many consider the country water-stressed due to a lack of understanding of how water resources are managed. He emphasized the disconnect between water management practices and the fundamental knowledge of water systems, citing his own experience in government where he was initially unaware of critical issues such as groundwater levels and crop water demands. He pointed out that crop selection in India, particularly the widespread cultivation of water-intensive crops like paddy, contributes to excessive water consumption, which is compounded by policies like the minimum support price (MSP) and subsidized electricity that encourage unsustainable practices. Mr. Singh proposed the need for policy reform in crop selection and water pricing to better align agriculture with available water resources. He also introduced the "five Rs" of water management: Reduce, Reuse, Recycle, Recharge, and Respect. According to him, while reduce, reuse, and recycle are commonly discussed, recharge and respect for water are equally important but often overlooked. He called for a shift in approach, urging respect for water as a critical resource and advocating for river rejuvenation to restore natural water cycles. His address highlighted the critical need for integrated, long-term solutions to India's water challenges, rooted in better understanding, policy reform, and community engagement.

Sh. Ashwin B. Pandya

Secretary General, ICID

He reflected on water's transformative nature, emphasizing its intrinsic value as it cycles through various stages and its critical role in supporting life. He delved into the interconnectedness of these three elements presents both opportunities and significant challenges. With 70% of India's freshwater resources dedicated to agriculture and energy production heavily reliant on industrial water supplies, the WEE nexus directly impacts food security and overall development. Pandya's analysis emphasizes the transversality of food, energy, and water, while also addressing India's unique context of localized water abundance juxtaposed with widespread scarcity. This necessitates integrated water resources management that recognizes water



as a dynamic, multidimensional resource. Furthermore, the session underscores the exacerbating effects of climate change on the WEE nexus, calling for holistic and equity-focused solutions to mitigate future risks.

Key Takeaways:

- **Urgent Need for Climate-Resilient Agriculture:** The session emphasized the urgent need for adopting climate-resilient agricultural practices, especially in regions like Punjab and Haryana, and promoting public awareness about the value of water.
- **Israel's Success in Water Management:** Israel's experience demonstrates the potential for achieving water self-sufficiency even in arid climates through innovative strategies like desalination, wastewater treatment and reuse, and smart water management systems.
- **Sustainable Water Management in Indian Agriculture:** The agricultural sector, consuming 90% of India's water, requires sustainable practices, addressing the high-water usage of specific crops like wheat, paddy, and sugarcane. The 5Rs of water management (Reduce, Reuse, Recycle, Recharge, and Respect) were highlighted.
- **Interconnectedness of Water, Energy, and Environment (WEE Nexus):** The session underscored the interconnectedness of water, energy, and the environment and how this nexus impacts food security and overall development, particularly in India where agriculture and energy production heavily rely on water resources.
- **Impact of Climate Change:** Climate change exacerbates the challenges within the WEE nexus, requiring holistic and equity-focused solutions.
- **Importance of Integrated Water Resources Management:** The need for integrated water resources management was emphasized, recognizing water as a dynamic, multidimensional resource and addressing the localized variations in water availability within India.

Recommendations:

- **Promote Climate-Resilient Agricultural Practices:** Implement policies and programs that encourage the adoption of climate-resilient agricultural practices, such as water-efficient irrigation techniques and drought-resistant crops.
- **Raise Public Awareness about Water Conservation:** Launch public awareness campaigns to educate citizens about the value of water and promote water conservation practices at the household and community levels.
- **Adopt and Adapt Israeli Water Management Technologies:** Explore the potential for adapting and implementing Israeli water management technologies, such as desalination and wastewater treatment systems, in water-stressed regions.
- **Implement the 5Rs of Water Management:** Promote the implementation of the 5Rs of water management (Reduce, Reuse, Recycle, Recharge, Respect) across all sectors, particularly in agriculture.
- **Reform Agricultural Procurement and Price Support Policies:** Review and reform existing agricultural procurement and price support policies to incentivize the cultivation of less water-intensive crops.
- **Promote Integrated Water Resources Management:** Implement integrated water resources management strategies that consider the interconnectedness of water, energy, and the environment, addressing both localized abundance and widespread scarcity.
- **Develop Holistic and Equity-Focused Solutions to Address Climate Change Impacts:** Develop and implement holistic and equity-focused solutions to mitigate the impacts of climate change on the WEE nexus, ensuring that vulnerable communities are not disproportionately affected.
- **Conduct Demand-Side Analysis:** Conduct thorough demand-side analysis to understand water consumption patterns and identify opportunities for reducing water demand.
- **Protect Groundwater Resources:** Implement measures to protect and recharge groundwater resources, recognizing their importance for water security.

High Level Policy Dialogue on Renewable Energy, Green Hydrogen and its impact on Water and Environment



Climate Change, Energy, and Water: A Systems Approach to Interconnected Challenges?

The High-Level Policy Dialogue on Renewable Energy, Green Hydrogen, and its Impact on Water and Environment explored the multifaceted nexus of climate change, energy, food, water, and economics, emphasizing the need for informed decision-making and trans-boundary cooperation.

Dr. S. K. Sharma

Principal Advisor, IWF

He emphasized the critical role of green hydrogen in India's energy transition and sustainable future. He outlined its production process via renewable energy-powered electrolysis and highlighted its potential to decarbonize key sectors such as transportation, industry, and power. Dr. Sharma detailed the National Hydrogen Mission's goals, including producing 5 million tons of green hydrogen by 2030, creating hydrogen hubs, and achieving 500 GW of renewable energy capacity. While he acknowledged challenges like high production costs and infrastructure limitations, he stressed the benefits of sustainability, energy independence, and export potential. He concluded by urging accelerated investment, research, and international collaboration to position India as a global leader in green hydrogen development and achieve the nation's net-zero goals by 2070.



Dr. Rabi H. Mohtar

Governor, WWC

He emphasized the importance of system approaches to water management, highlighting the need for integrated water resources management (IWRM) that considers water's interaction with other systems, including energy, food, health, and education. He detailed the limitations of sectoral approaches and presented a framework with additional pillars to address systemic challenges, engage stakeholders, and identify synergies across sectors. Using a case study from Matagorda County, Texas, he demonstrated how the water-energy-food nexus approach enables sustainable water-related infrastructure decisions, mitigating water stress while benefiting agriculture, energy generation, and communities. Mohtar concluded by advocating for holistic solutions that balance environmental, economic, and societal needs.

Dr. Rajan Sudesh Ratna **Deputy Head, SSWA-UNESCAP**

He highlighted the potential and challenges of transitioning to green energy in South and Southwest Asia, emphasizing the region's untapped renewable energy potential: 939 GW of solar, 1,289 GW of wind, and 350 GW of hydro energy. Despite this, only 3.8% of solar, 3% of wind, and 18% of hydro capacity have been utilized. Dr. Rajan stressed the need for stronger policy frameworks, financing mechanisms, and cross-border cooperation to address challenges like energy-intensive green hydrogen production, social and environmental impacts of hydropower, and equitable water redistribution. He cited successful cross-border electricity trade between Nepal, India, and Bangladesh as a model for fostering cooperation and technological transfer. Finally, he advocated for a shift from a hydrologic to a hydro-eco-

social paradigm to ensure water security for human, ecosystem, and food needs while promoting sustainable green energy development.



Dr. Amitabh Tripathi **Senior ED, WAPCOS**

He emphasized the urgent need for a careful and granular approach to renewable energy transitions. He cautioned against the rapid adoption of technologies without addressing long-term challenges, particularly citing the lack of a circular economy for solar panel disposal as a major environmental concern. Highlighting WAPCOS' expertise in pump storage projects, he stressed the importance of prioritizing high-head pump storage systems to minimize water footprints and ensure viability. Tripathi also underlined the need for robust capacity building, careful appraisal of technologies, and inclusive stakeholder consultations to avoid repeating past mistakes with unsustainable energy systems, ensuring a successful transition to renewable energy.

Dr. Kapil Narula **Senior Analyst at CCT-COP28**

Dr. Kapil's presentation focused on the interplay between hydrogen, renewable energy, and water, emphasizing hydrogen's pivotal role in the global clean energy transition. He highlighted that current hydrogen production is predominantly fossil fuel-based, with only 1% classified as green, necessitating significant scaling to meet the projected 500 million tons annual production by 2050. He underscored the relatively low water intensity of green hydrogen production, requiring 9 kg of ultra-pure water per kilogram of hydrogen, but raised concerns about high water stress in regions where most hydrogen projects are planned in India. Dr. Kapil concluded by advocating for careful spatial and geographical planning of hydrogen projects to balance water demand and minimize stress on already scarce resources.





Ms. Archana Varma Additional Secretary & MD, NWM

The Chair of the session outlined key takeaways emphasizing the inevitability and advantages of transitioning to renewable energy over fossil fuels while highlighting the importance of evidence-based project implementation. She noted that despite higher upfront costs, environmentally sustainable projects are more acceptable due to their long-term benefits. She also stressed the need to accelerate the adoption of renewable energy while exercising caution, as technological solutions can have unforeseen ecological consequences. Drawing a parallel with Punjab and Haryana's water crisis post-Green Revolution, she underscored the importance of anticipating challenges and conducting mid-course corrections to ensure sustainable energy transitions.

Dr. Eddy Moors Rector, IHE Delft

As a Moderator of the session, He commended Dr. SK Sharma's comprehensive overview of green hydrogen opportunities in India, and highlighted Dr. Rabi Mohtar's emphasis on the role of political capital in policy integration. Dr. Moors noted Mr. Rajan Ratna's valuable insights on collaboration in renewable energy implementation, and appreciated Dr. Amitabh Tripathi's focus on capacity development in the solar sector. The session concluded with Dr. Kapil Narula's presentation, which effectively connected green hydrogen strategies to the water-energy-environment nexus. Throughout the discussions, Dr. Moors emphasized the interconnected nature of green hydrogen development with water resources, energy systems, and environmental considerations.



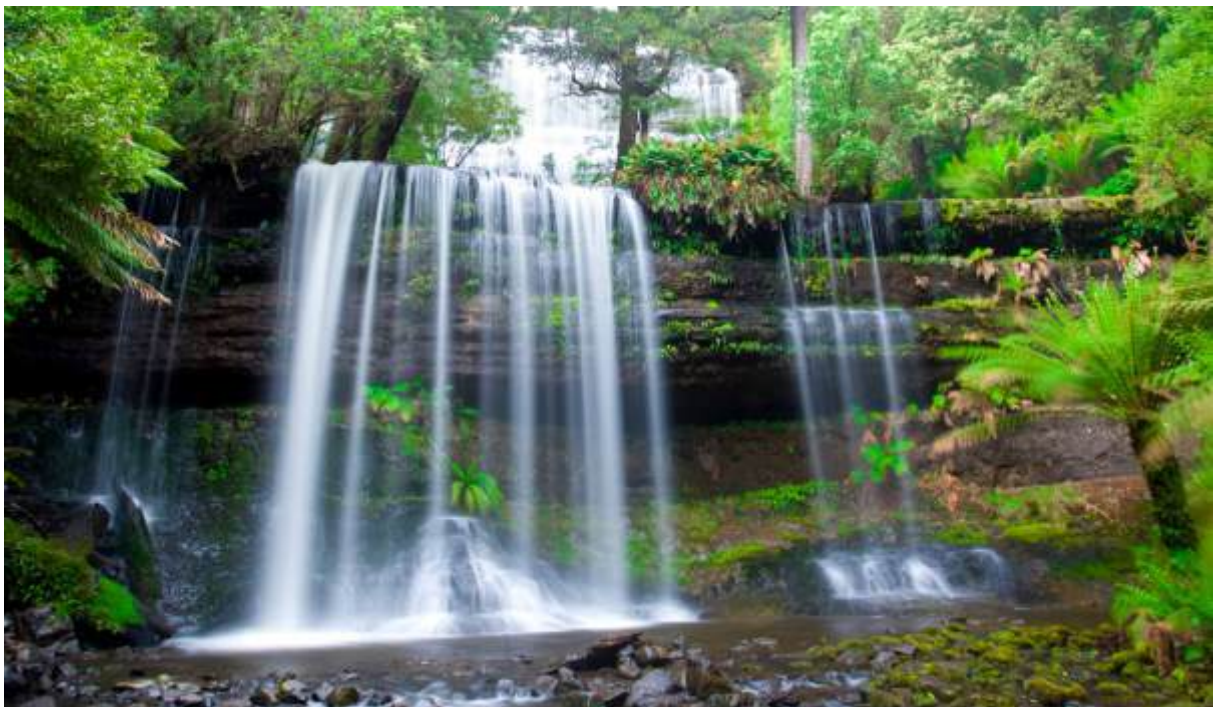
Key Takeaways:

- **Need for Systems-Based Water Management:** Shifting from sectoral to systems-based water management is crucial for optimizing resources and minimizing environmental harm. Integrated Resource Management (IWRM) across food, health, energy, and education sectors is essential.
- **Untapped Renewable Energy Potential in South Asia:** South Asia has substantial untapped renewable energy potential (solar, wind, and hydro), despite ambitious net-zero targets set by various countries.
- **Solar Panel Disposal and Circular Economy:** The lack of planning for solar panel disposal and the absence of a circular economy model for these materials pose a significant challenge to the long-term sustainability of solar energy.
- **Water Intensity of Green Hydrogen Production:** Green hydrogen production requires substantial amounts of ultrapure water, with significant energy used for its purification. This poses a challenge, particularly in water-stressed regions.
- **Need for Holistic Approach:** A holistic approach, including evidence-based project implementation, cost-benefit analyses, and technology maturation, is crucial for successful renewable energy adoption.

Recommendations:

- **Adopt Systems Thinking:** Employ systems thinking to address the interconnected challenges of climate change, energy, food, and water, considering the complex interactions between these sectors.
- **Promote Green Hydrogen Production and Research:** Increase investment in and research on green hydrogen production technologies to reduce water and energy intensity and improve efficiency. Develop a clear roadmap for a hydrogen economy, including pilot projects in various sectors like transportation and urban development.
- **Implement Integrated Resource Management (IWRM):** Implement IWRM strategies that integrate water management across different sectors, including food, health, energy, and education.

- **Unleash Renewable Energy Potential in South Asia:** Accelerate the utilization of untapped renewable energy potential in South Asia through policy support, investment, and technology transfer.
- **Develop a Circular Economy for Solar Panels:** Develop and implement a circular economy model for solar panels, including recycling and reuse strategies, to address the challenge of disposal and minimize environmental impact.
- **Plan for Sustainable Water Use in Green Hydrogen Production:** Implement sustainable water resource planning, especially in water-stressed regions, to support the growth of green hydrogen production without compromising water security.
- **Conduct Comprehensive Lifecycle Assessments:** Conduct comprehensive lifecycle assessments for new energy technologies, including considerations for resource use, environmental impacts, and economic implications.
- **Promote Transboundary Cooperation:** Strengthen transboundary cooperation on water resource management and energy development to address shared challenges and prevent conflicts.
- **Prioritize Evidence-Based Decision-Making:** Base policy decisions and project implementation on robust scientific evidence and thorough cost-benefit analyses.
- **Invest in Technology Maturation:** Support research and development to mature renewable energy technologies and improve their efficiency and cost-effectiveness.



Multi-stakeholder partnerships for Inclusive Disaster Risk Management



Dr. Ajeet Tyagi Honorary Patron & Chairman of the Committee on Climate Change



The Moderator opened the session in emphasizing the critical importance of addressing risk management in the water sector amidst the mounting climate crisis. He highlighted the interconnectedness of water, energy, and the environment, acknowledging the challenges posed by climate change, such as increased frequency and intensity of extreme weather events, including cyclones, floods, and droughts. Citing recent examples from across India, he stressed the urgency of preparing for these risks, as they threaten both economic growth and social well-being. India's annual rainfall of 120 cm, while significant compared to arid regions like Israel, is marked by stark spatial and temporal variability. Regions like Northeast India receive over 250 cm, whereas parts of Rajasthan get less than 50 cm. Additionally, 80% of rainfall is concentrated in the four monsoon months, often in short, intense spells, leading

to prolonged dry periods that impact agriculture and water resources. Dr. Tyagi underscored the need for region-specific vulnerability analyses and solutions to manage these risks effectively. With urbanization and population growth reducing per capita water availability, India is approaching critical thresholds of water stress. Dr. Tyagi advocated for efficient water resource management, proactive planning, and leveraging science and technology for solutions, citing successful cyclone prediction efforts as an example of coordinated action. Concluding on an optimistic note, he emphasized that timely and proactive measures can mitigate the risks of the climate and water crises.

Inclusive Disaster Risk Management: Can Multi-Stakeholder Partnerships Make a Difference?

The session on Multi-Stakeholder Partnerships for Inclusive Disaster Risk Management underscored the critical role of science, technology, and collaboration in mitigating the impact of disasters and addressing interconnected challenges.

to prolonged dry periods that impact agriculture and water resources. Dr. Tyagi underscored the need for region-specific vulnerability analyses and solutions to manage these risks effectively. With urbanization and population growth reducing per capita water availability, India is approaching critical thresholds of water stress. Dr. Tyagi advocated for efficient water resource management, proactive planning, and leveraging science and technology for solutions, citing successful cyclone prediction efforts as an example of coordinated action. Concluding on an optimistic note, he emphasized that timely and proactive measures can mitigate the risks of the climate and water crises.

Ms. Manpreet Kaur Senior Project Associate, IUCN

She emphasized the critical role of multi-stakeholder partnerships in disaster risk management, highlighting the need for collaborative approaches to address interconnected challenges. She advocated for the convergence of schemes, blended



finance models, and the inclusion of diverse stakeholders, such as local communities, governments, NGOs, and the private sector, to ensure practical and inclusive solutions. Citing the RECAP for NDC project, Ms. Kaur showcased the success of partnerships in advancing nature-based solutions (NbS). She explained how NbS, such as restoring forests and wetlands, reduce disaster impacts by acting as natural barriers. Ms. Kaur highlighted IUCN's global leadership in promoting NbS, including creating standards and integrating these solutions into policies and disaster management strategies. In conclusion, she stressed that inclusive disaster risk management depends on strong partnerships and nature-based approaches to build resilient communities.

Mr. Rajnish Ranjan ED, DDF Consultants



He Began With The Evocative Line "Water, Water Everywhere, Nor Any A Drop To Drink," Drawing Parallels To Contemporary Disaster Situations. He emphasized the pressing need for a comprehensive approach to flood management in India, highlighting the shift

from reactive disaster response to proactive resilience building. He underscored the devastating impact of recurrent floods across the country, citing examples like the annual monsoon-induced floods in Assam, Bihar, and Gujarat, and the impact of cyclones like Fengal in Tamil Nadu and Andhra Pradesh. He stressed the importance of Enhancing flood resilience in India requires a multifaceted approach combining community-led resilience (empowering communities through training and initiatives like 'Apda Mitra'), technological advancements (leveraging AI and improved forecasting systems), sustainable water management (conserving water and addressing issues like groundwater depletion and urban flooding), and data-driven decision making (using accurate data on flood-prone areas and hydrological cycles) to effectively anticipate, prepare for, and respond to flood events. Mr. Ranjan concluded by emphasizing the importance of a multi-sectoral approach involving

government agencies, NGOs, private sector, and local communities to effectively address the challenges of flood management in India and build a more resilient future.

Key Takeaways:

- **Interconnectedness of Water, Energy, and Environment in Disasters:** Disasters highlight the crucial link between water, energy, and the environment, as emphasized at COP 29. Extreme weather events, such as floods and droughts, are increasing in frequency and intensity, exacerbated by factors like rapid urbanization and declining water tables.
- **Need for Integrated Disaster Management:** Disasters impact multiple sectors, requiring holistic and integrated response strategies. This includes converging government schemes, utilizing blended financing models, implementing locally-led solutions, and integrating stakeholders at all levels.
- **Importance of Multi-Stakeholder Partnerships:** Effective disaster risk management relies heavily on multi-stakeholder partnerships, bringing together government agencies, NGOs, research institutions, local communities, and the private sector. Projects like IUCN's "Recap for NDC" exemplify the success of such collaborations.
- **Role of Nature-based Solutions (NbS):** Nature-based solutions, such as using mangroves and wetlands as natural barriers, offer effective and sustainable approaches to disaster risk reduction. Global standards for NbS can help governments integrate these approaches into their protocols.
- **Advancements in Disaster Prevention and Response:** Advancements in disaster prevention include integrating AI and ML for prediction and response, implementing recommendations from the 15th Finance Commission, establishing robust disaster response funds, and working towards self-reliance in disaster risk management.

Recommendations:

- **Develop Integrated Disaster Management Plans:** Develop and implement integrated disaster management plans that address the interconnected challenges of water, energy, and the environment. These plans should incorporate multi-sectoral perspectives and involve all relevant stakeholders.
- **Promote Multi-Stakeholder Partnerships:** Foster and strengthen multi-stakeholder partnerships at local, national, and regional levels to enhance disaster preparedness, response, and recovery efforts.

- **Invest in Nature-based Solutions:** Invest in and promote the use of nature-based solutions for disaster risk reduction, recognizing their ecological and economic benefits. Integrate NbS into national and local disaster management strategies and adhere to global standards.
- **Leverage Technology for Disaster Prediction and Response:** Utilize advanced technologies like AI and ML for improved disaster prediction, early warning systems, and efficient response coordination.
- **Strengthen Financial Mechanisms for Disaster Management:** Strengthen financial mechanisms for disaster management, including the establishment and adequate funding of national and state disaster response funds and exploration of blended financing models.
- **Promote Locally-Led Solutions:** Prioritize and support the development and implementation of locally-led disaster risk management solutions, empowering communities to take ownership of their resilience.
- **Enhance Capacity Building and Knowledge Sharing:** Enhance capacity building and knowledge sharing among stakeholders on integrated disaster management, NbS, and the use of technology for disaster risk reduction.
- **Facilitate Multi-Stakeholder Dialogues:** Facilitate regular multi-stakeholder dialogues to foster innovation, create synergies, and promote a culture of prevention and preparedness.
- **Address Urban Water Management Challenges:** Implement effective urban water management strategies to address the challenges posed by rapid urbanization and declining water tables, including rainwater harvesting, water conservation measures, and improved water infrastructure.



Water use efficiency in industrial sector amidst Climate emergency



Climate Change and Industrial Water Use: How Can We Adapt for a Resilient Future?

The session on Water Use Efficiency in the Industrial Sector amidst the Climate Emergency highlighted the growing urgency to adapt industrial practices in light of changing climatic patterns.

Mr. U.P. Singh

Former Secretary, Ministry of Textile & Jal Shakti, GOI

The Chair of the Session sets the Stage for a Crucial Discussion on Urban Flooding, by highlighting the changing rainfall patterns due to climate change, noting that while total rainfall remains similar, and the number of rainy days has decreased, and the intensity of rainfall has significantly increased. He pointed out that infrastructure in India was not designed to handle extreme rainfall events, such as 200-400 mm in 2-3 hours, which are becoming more frequent. He also criticized the rampant encroachments and the over-reliance on concretization in urban development, which disregards the importance of preserving natural water bodies. Mr. Singh emphasized that India's groundwater stores more water than all of its reservoirs combined and underscored the loss of water bodies in cities like Delhi and Bangalore.

He stressed the need to protect natural drainage systems and respect the right of water in urban planning.



Ms. Noa Amsalem,

Water Attache, Embassy of Israel in India

Moderator of the session, She introduced the panel discussion on water use efficiency in the industrial sector, emphasizing the significance of collaboration between industries and the government. With a focus on innovative solutions, Noaa shared an inspiring example from Israel, where all wastewater is treated and reused; an innovative project promoting drip irrigation for paddy, a collaboration between Israel companies and Indian industries. With a focus on sustainable solutions, she shared the impressive results of this project, leading to over a 30% increase in crop production.



Ms. Laura Sustersic
Project Manager, India-EU Water Partnership

She discussed her work on the Ganga Rejuvenation project since 2018, in collaboration with the Ministry of Jal Shakti. With support from the European Union, they developed a framework for the safe reuse of treated wastewater, officially launched in January 2023. The framework aims to harmonize national and state policies, and is already being used to develop state-level policies, including in Uttarakhand and Uttar Pradesh. She also presented a case study from Panipat, Haryana, where treated wastewater from municipal STPs was considered for reuse by the local textile industry. The study found that the STPs, located close to the textile cluster, could meet the industry's water demand. A feasible business model, based on a Build-Operate-Transfer (BOT) approach, was developed, where capital costs would be provided by the state and operational costs covered by the textile industry's water fees. She also highlighted that this solution could help conserve water resources, reduce pollution in the Yamuna River, and provide an alternative to over-exploited groundwater. While reverse osmosis was the ideal technology for water treatment, ultra-filtration was identified as a more cost-effective option that still met the industry's needs.

Dr. S.K. Sharma
Principal Advisor, IWF

He focused on the importance of water use efficiency in the industrial sector, especially as industries like textiles, thermal power plants, and steel are highly water-intensive and contribute to regional water scarcity. He introduced the concept of water use efficiency, which measures biomass produced per unit of water used. To address challenges from high water intensity, climate change, and technological gaps, he emphasized the need for industries to adopt practices such as rainwater harvesting, water treatment and reuse, and water audits. Dr. Sharma outlined strategies to improve water efficiency, including adopting advanced filtration and AI-driven water quality monitoring, creating policy frameworks for water efficiency standards, and encouraging behavioural changes within industries. He shared successful case studies, such as the Netherlands' zero liquid discharge systems, Singapore's advanced membrane filtration in electronics manufacturing, and Tata Steel Jamshedpur's water management program, which reduced water intensity by 25%. He recommended that industries invest in water-efficient technologies, implement rainwater harvesting, and regularly report water usage to ensure accountability. Addressing India's regulatory environment, he called for stronger enforcement against illegal groundwater extraction and stressed the need for industries to adopt water conservation practices to mitigate water scarcity and climate change while supporting sustainable growth.



Prof. A.K. Keshari
IIT Delhi

He advocated for transformative interventions in industrial water use, emphasizing advancements in processes, technology, operations, and utility management. He highlighted his institute's role in developing technologies that can be effectively applied at the field level. A key initiative was the collaboration with CII to develop the Blue Rating System, inspired by the water footprint concept from the Netherlands. The system helps industries calculate the specific water use for each product (e.g., textiles, steel, automobiles) by measuring both water quality and quantity, as well as recycling and recovery efforts. It also

encourages community-focused water management through CSR activities like rejuvenating water bodies. Dr. Keshari emphasized the importance of intra-fence (within the industry) and outside-the-fence (community) water management. The Blue Rating System rates industries on their water management practices, awarding ratings such as Silver, Platinum, or Starting level. He cited successful examples, such as Tamil Nadu Newsprint and Tata Group, which now use treated wastewater, significantly reducing freshwater consumption. He also discussed the use of satellite imagery and machine learning to improve water resource management, particularly for urban areas. Multispectral satellite images and mathematical modeling are used to assess impervious surfaces, estimate runoff, and design storm-water drainage systems. This technology has been applied in Delhi, where it helps estimate runoff and plan infrastructure. Additionally, it is used to assess the viability of sites for sanitary landfills and predict groundwater contamination. Dr. Keshari showcased studies on glacier mass loss in Himachal Pradesh, affecting hydroelectric power generation, and the impacts of climate change on water availability in Maharashtra, where reduced runoff and changing land use have worsened drought conditions. In conclusion, Dr. Keshari stressed the importance of cutting-edge technologies like satellite imagery, machine learning, and mathematical models for improving industrial water management and assessing environmental impacts, contributing to broader sustainability efforts.

Mr. Devendra Singh Fonia

Chief Marketing Officer, Bio Petro Clean



He Raised Critical Concerns About The Zero Liquid Discharge (ZLD) Mandate. He also focused on practical use cases and technological solutions that can help industries manage water resources more effectively. He began by discussing a project at Panipat Refinery, where automation and digitization were introduced in the wastewater treatment plants. The refinery was producing 20 million liters per day of wastewater but could only recycle half due to quality issues. By incorporating Industry 4.0 principles, they were able to enhance the refinery's ability to reuse wastewater without additional investments, increasing its capacity by 5 million liters per day. This demonstrates how digital transformation in wastewater management can optimize existing infrastructure. Mr. Devendra also highlighted the challenge of zero liquid discharge (ZLD) in industries, particularly in textile clusters in Tuticorin, where salt accumulation is a significant issue. Zero liquid discharge, while aiming to eliminate wastewater discharge, inadvertently creates challenges in salt disposal. Currently, industries are resorting to mixing salt with water and disposing of it in the ocean. He pointed out that before implementing ZLD nationwide, the issue of salt disposal needs to be addressed. He suggested that there is a technological opportunity for industries to develop solutions for managing salt in a sustainable way. He further discussed how automation and data analytics were used at a pharmaceutical site to optimize their ZLD process, reducing operational costs by 38%. By fine-tuning chemical dosing and steam consumption, significant operational savings were realized, demonstrating the potential of closed-loop automation and data analytics to improve water treatment efficiency. In his concluding remarks, Mr. Devendra shared an insight about the adoption of new technologies in India, noting that Indian companies are often more receptive and quicker to implement innovations compared to those in Europe and the U.S. He cited the Panipat Refinery project as an example of how rapidly new technologies are being adopted in India.

Key Takeaways:

- **Urgent Need for Efficient Water Management:** The session emphasized the urgent need for efficient water management in the face of increasing rainfall intensity and urban flooding, driven by climate change.
- **Importance of Demand-Side Management:** Demand-side management, including efficient water use in agriculture and industries, along with mechanisms like water certificates and trading, was highlighted as crucial.
- **Industry-Government Collaboration and Innovation:** Collaboration between industries and the government,

along with the adoption of innovative solutions like wastewater treatment and reuse (as demonstrated by Israel), is essential for improving water use efficiency.

- **Technology Adoption and Reuse:** Supporting the adoption of technology in industries, such as the safe reuse of treated wastewater in sectors like textiles, offers significant potential for enhancing water use efficiency.
- **Holistic Approach and Knowledge Sharing:** A holistic approach to water use efficiency, encompassing knowledge sharing and capacity building, is necessary for effective implementation. Geo-hydro-morphological maps created by ISRO can play a significant role in improving water management.
- **Need for Transformative Interventions:** Transformative interventions in industrial water use are required, including advancements in processes, technology, operations, and utility management, with collaboration between academia and industry.
- **Challenges of Zero Liquid Discharge (ZLD):** While ZLD is a commendable goal, its implementation faces challenges, particularly regarding sustainable salt disposal methods, which must be addressed to avoid unintended environmental consequences.

Recommendations:

- **Promote Demand-Side Management Strategies:** Implement policies and programs that promote demand-side management in agriculture and industries, including incentives for efficient water use and the development of water trading mechanisms.
- **Foster Industry-Government Partnerships:** Encourage and facilitate collaboration between industries and the government to develop and implement innovative water management solutions.
- **Support Technology Adoption and Knowledge Sharing:** Support the adoption of water-efficient technologies in industries and promote knowledge sharing and capacity building among stakeholders.
- **Invest in Research and Development:** Invest in research and development to advance water treatment and reuse technologies, as well as innovative irrigation methods.
- **Develop Sustainable Salt Disposal Methods for ZLD:** Address the challenges associated with ZLD, particularly the sustainable disposal of salt deposits, through research, innovation, and the development of appropriate regulations. Avoid blanket implementation of ZLD without addressing these challenges.
- **Utilize Geo-Hydro-Morphological Maps for Improved Water Management:** Utilize the geo-hydro-morphological maps created by ISRO to improve water management planning and implementation at the national and regional levels.
- **Encourage Academia-Industry Collaboration:** Foster stronger collaboration between academia and industry to drive research and development of water-efficient technologies and practices.
- **Recognize the Right to Water:** Integrate the recognition of the right to water into water management policies and strategies.
- **Address the Impacts of Concretization:** Implement urban planning strategies that mitigate the impacts of concretization on water runoff and urban flooding.
- **Focus on Measurement and Reduction of Water Footprint:** Encourage industries to measure and reduce their water footprint through participation in government initiatives and the adoption of best practices

DAY 2 : 6th December, 2024

Plenary on Energy



India's Strides in the Water-Energy-Environment Nexus: A Model for the World?

This session spotlighted India's progressive strides in addressing the Water-Energy-Environment nexus and advancing sustainable development.

Mr. R.K. Pachnanda

Former Chairman of the Haryana Electricity Regulatory Commission and Chairman of the IWF Committee on the Water-Energy-Food Nexus



He highlighted India's transformative role in global energy transition and climate action. He referenced India's commitments at COP 26, including the goal to achieve 500 GW of non-fossil fuel energy by 2030, reduce carbon intensity by 45%, and reach net-zero emissions by 2070. He emphasized that India has already reduced its carbon emissions intensity by 24% and significantly increased forest cover. The country is on track to meet its Nationally Determined Contributions (NDCs), positioning itself as a leader in climate action within the G20. He also discussed the Indian government's policies to increase renewable energy, such as incentives for solar projects, biomass use in thermal plants, and FDI in clean energy. He also highlighted technological innovations like AI-driven asset management and renewable energy optimization tools. India's commitment to achieving energy self-sufficiency by 2047 and scaling up renewable energy was underscored by initiatives like the National Hydrogen Mission and 5,000 biogas plants.

Concluding, he stressed India's role in global climate solutions, noting its low carbon footprint relative to its population. India's leadership in the International Solar Alliance and its overall energy strategy makes it a global torchbearer for sustainable development and climate action.

Ms. Mikiko Tanaka

Head of the South and Southwest Asia Office of UNESCAP

She emphasized the importance of an interdisciplinary approach to achieving energy and water sustainability, recognizing the interconnectedness of these resources and the complex challenges posed by climate change, population growth, and urbanization. She highlighted five key areas essential for balancing energy and water security. First, she stressed the need for Integrated Resource Management (IRM), which recognizes that energy generation requires water, and water systems depend on energy for extraction, treatment, and distribution. A siloed approach leads to inefficiencies, making cross-



sectoral coordination vital. Second, she pointed out the critical role of Technological Innovation and Renewable Energy. Technologies such as solar, wind, and geothermal energy reduce reliance on water-intensive energy sources like coal-fired plants. Smart grids and advanced water monitoring systems also enhance efficiency in both sectors. Third, Ms. Tanaka discussed the need for Climate Resilience and Ecosystem Management. She called for infrastructure like multi-purpose dams and sustainable farming practices that can provide consistent access to water and energy while protecting ecosystems. Restoration projects like mangrove planting also contribute to resilience. Fourth, she emphasized the importance of Policy and Governance in creating effective frameworks that integrate energy and water management, ensuring equitable access and fostering collaboration. Lastly, she advocated for Regional Cooperation, especially in transboundary areas like the Indus and Ganges, to share resources and address conflicts. Through these approaches, she concluded, the region can develop sustainable solutions that ensure long-term environmental and socioeconomic development.



Padma Shri Dr. Shailesh Nayak,
Director,
National Institute of Advanced Studies

Key Takeaways:

- **India's Leadership in Climate Action:** India is recognized for its leadership in combating climate change through ambitious initiatives like renewable energy targets, the National Hydrogen Mission, land degradation neutrality efforts, and its net-zero commitment by 2070.
- **Need for Interdisciplinary Approach:** Addressing the Water-Energy-Environment (WEE) nexus requires an interdisciplinary approach that harmonizes the complex linkages between these three elements.
- **Five Essential Entry Points for WEE Balance:** Five key areas were identified for achieving balance within the WEE nexus: integrated resource management, technological innovations and renewable energy, enhanced climate resilience, strengthened policy and governance, and regional cooperation.

Recommendations:

- **Promote Integrated Resource Management:** Implement integrated resource management strategies that consider the interdependencies between water, energy, and the environment. This includes cross-sectoral planning and coordination.
- **Invest in Technological Innovations and Renewable Energy:** Prioritize investments in research, development, and deployment of innovative technologies and renewable energy solutions to improve resource efficiency and reduce environmental impacts.
- **Enhance Climate Resilience:** Strengthen climate resilience through adaptation measures that address the impacts of climate change on water resources, energy systems, and ecosystems.
- **Strengthen Policy and Governance Frameworks:** Develop and implement robust policy and governance frameworks that support sustainable resource management and promote inter-agency coordination.
- **Foster Regional Cooperation:** Enhance regional cooperation on transboundary water management, energy development, and climate change mitigation and adaptation efforts.
- **Promote Multi-Sectoral Collaboration:** Encourage and facilitate multi-sectoral collaboration among governments, businesses, research institutions, and civil society to address the complex challenges of the WEE nexus.

Interdisciplinary Approaches for achieving Energy and Water Sustainability



Energy and Water Sustainability: Can Regional and Inclusive Approaches Drive Progress?

Addressing energy and water sustainability necessitates interdisciplinary, inclusive, and regionally tailored approaches.

Dr. Smruti S. Pattanaik Research Fellow at MP-IDSA

Presented a nuanced discussion on the interconnections between water, energy, and regional cooperation, emphasizing the need for integrated approaches in South Asia. Highlighting that 50% of the region's population faces water-stressed conditions annually, she pointed out the overlooked issue of extensive groundwater extraction, which complicates bilateral river-sharing debates, such as those between India and Bangladesh over the Farakka Barrage and Teesta River. Ms. Pattnaik stressed the importance of considering upstream influences, like China, and adopting basin-wide management frameworks for sustainable water governance. She emphasized the growing role of regional energy cooperation, citing the BBIN (Bangladesh, Bhutan, India, Nepal) framework and cross-border electricity initiatives like the recent 40 MW transmission to Bangladesh. Hydropower investments, such as Bangladesh's \$1 billion pledge in Bhutan, highlight the sub-region's potential for green energy collaboration, even amid setbacks in broader agreements like the SAARC Energy Grid. Ms. Pattnaik urged a shift from viewing rivers as divisible resources to recognizing their ecological significance. She underscored the interconnected nature of water, energy, and the environment, emphasizing the need for joint management of fragile ecosystems like the Sundarbans. Concluding, she called for simultaneous progress at bilateral, sub-regional, and regional levels to ensure sustainable development and climate resilience.



Mr. Shawahiq Siddiqui Founding partner of the Indian Environment Law Organization

He addressed the practical challenges of implementing Nexus approaches like Integrated Water Resources Management (IWRM) and landscape frameworks in environmental governance. He emphasized the need for two critical enablers: a robust legal framework and empowered institutions. However, at the transboundary level, South Asia lacks these prerequisites, particularly in the Ganga-Brahmaputra-Meghna (GBM) basin. Existing agreements, such as the Kosi and Gandak treaties between India and Nepal or the Ganges Treaty between India and Bangladesh, are outdated and narrowly focused on water sharing, leaving no room for integrated approaches. In India, water and land are state

subjects, and policies remain siloed, with irrigation strategies dominating water governance. The persistence of irrigation acts and single-use water projects further stifles efforts toward integration. He also pointed out the existence of a "negative Nexus," where subsidies for electricity and groundwater extraction drive overexploitation. Despite these challenges, Mr. Siddiqui noted silver linings, such as Gujarat's energy-saving "double feeder" policy and advancements in drip irrigation. He concluded that pilot projects and policy reforms are vital to mainstream the Nexus approach in South Asia.



Dr. Kapil Narula
Senior Analyst, Breakthrough Agenda, Climate Champions Team

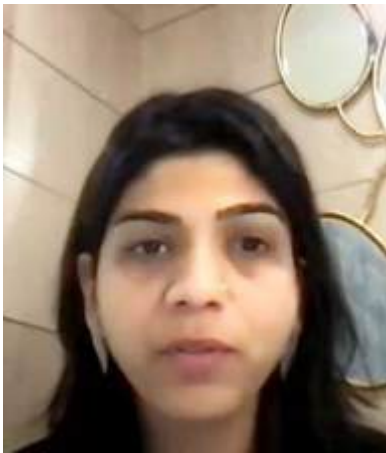
He illuminated the complex interplay between water, energy, and the transformative concept of virtual water trade, with a keen focus on addressing the challenges faced by water-stressed regions such as the Middle East, South Asia, and India. He reframed the global water crisis as not merely a resource scarcity issue but as a stark inequity in access and management, urging a paradigm shift in how we approach sustainable solutions. He began by shedding light on the sobering reality that, despite strides toward achieving the 2030 SDG targets, over a third of the global population still lacks access to clean drinking water and sanitation. His visualization of the global water-stress map revealed startling disparities, particularly in the Middle East, where many countries operate without surface water resources. India, where 75% of the land faces high water stress, highlighted the need for innovative resource stewardship and efficiency improvements. Dr. Kapil delved into the energy-water nexus, underscoring the MENA region's reliance on desalination, which is energy-intensive. Introducing the futuristic concept of virtual water trade, he illustrated how water embedded in exported goods like agricultural products creates hidden flows of this precious resource. While India remains one of the largest virtual water exporters, its water-stressed status adds urgency to rethinking trade policies. He called for groundbreaking frameworks that account for the embedded water in imports like hydrogen and biofuels. In conclusion, Dr. Kapil urged the adoption of visionary, integrated strategies for water, energy, and food security. By leveraging technological innovation, redefining virtual water trade metrics, and prioritizing water-efficient renewable energy systems, nations can forge resilient ecosystems that not only address resource challenges but also drive equitable and sustainable growth

Ms. Ying Zhang
Regional Energy Specialist at the UNDP

Ms. Ying Zang discussed the importance of a holistic approach to the water-energy nexus, emphasizing its critical role in sustainability and human development. Representing UNDP, she highlighted that their energy work is grounded in fostering development opportunities accessible to all, especially rural and vulnerable populations. UNDP's energy efforts in the Asia-Pacific region span energy access, energy transition, and energy finance, with a focus on leaving no one behind, enabling structural transformation, and building resilience against climate change. She elaborated on the intricate interconnection between energy and water systems, noting how hydropower contributes significantly to energy generation in the region, with some countries sourcing up to 70% of their electricity from it. Water is essential not only for energy generation but also for storage, supporting renewable sources like solar and wind. However, climate change, extreme weather events, and urbanization are placing immense stress on both water and energy systems. Rapid industrialization, particularly in the textile and mining sectors, further exacerbates water and energy demands. Textiles are water-intensive and contribute to pollution, while mining is driven by the growing need for critical minerals essential for the clean energy transition. Ms. Zang stressed the need for improving resource efficiency and adopting circular models to



reduce waste in water and energy systems. Access and security for water and energy must be reliable, stable, and affordable, especially for low-income households. This requires a shift to sustainable and resilient pathways, integrating water and energy systems in policy planning. She highlighted that governments must consider water impacts when modernizing infrastructure or developing strategies for biofuels and hydrogen, as these emerging energy sources are highly water-intensive. Ms. Zang advocated for integrated policymaking, where economic, trade, investment, and fiscal policies are aligned with sustainability goals. Policy tools like clean technology tariffs, market access rules, public procurement standards, and certifications can drive sustainable water and energy management. Governance and institutional capacity are also vital for implementing these changes. She concluded by emphasizing the role of partnerships and innovation, particularly with the private sector, in finding viable business models to sustain water-energy solutions. She provided examples of UNDP's efforts in Asia and Africa to build policy frameworks and engage diverse stakeholders in climate adaptation and resilience.



Ms. Ambika Vishwanath
Director of the Kubernein Initiative

She emphasized the significant challenges of water access, equity, and the need for a comprehensive approach in South Asia. She highlighted that the core issue is not merely water availability but inequity and access, particularly in India, where there are gaps in the institutional capacity to ensure reliable and clean water, despite the widespread development of infrastructure like the Jal Jeevan Mission. While about 70-80% of India is covered by piped water systems, the challenge remains in guaranteeing a consistent, clean, and 24/7 supply. Ms. Ambika proposed recalibrating water usage standards to better fit the regional context of South Asia, stressing that outdated assumptions about water availability need to be adjusted. She pointed to the critical need for innovation in water management that also considers the intersections with other sectors such as energy, food security, and industrial growth. She noted industries like textiles, automobiles, and paper as major water users, necessitating innovative solutions for their sustainable water consumption. She outlined three areas essential to addressing water challenges: innovation, ideas, and an inclusive approach. Innovation should not only improve water management but also integrate water's role in broader sectors. Ms. Ambika stressed that much innovation can come from local practices, especially women-led water-saving technologies and traditional water management methods, which are cost-effective and scalable. She emphasized the importance of building on these ideas to create new models for sustainable water management. Finally, Ms. Ambika called for an inclusive approach, both sectorally and regionally. This includes ensuring that voices from vulnerable communities are involved in decision-making and expanding regional cooperation. She cited data-sharing efforts between India and its neighbours, which have shown the potential for collaboration even amid political tensions. She concluded by advocating for a systemic and inclusive approach that integrates water management into broader development and security frameworks, including food, health, and climate.

Dr. Pech Sokhem
Executive Director of the Cambodia Development Resource Institute

He revisited a multidisciplinary study conducted on the water-food-energy-climate change nexus in the Mekong region, highlighted the challenges posed by increasing pressure on the Mekong River's resources due to rapid urbanization, rising energy demands, and large-scale developments such as hydropower projects, irrigation schemes, mining, rubber plantations, and biofuel crops. These challenges affect the livelihoods of 300 million people relying on the river. He



emphasized that the current governance framework, such as the 1995 Mekong Agreement, is outdated and insufficient to address the complexities of the nexus. Fragmented sectoral decision-making by different ministries and countries—focusing separately on hydropower, navigation, and irrigation—fails to address transboundary and cross-sectoral impacts. As a result, development projects disrupt sediment flows, affect downstream agriculture and fisheries (notably the Tonle Sap, a vital "fish factory"), and threaten the reverse flow crucial for sustaining fish populations. Dr. Sokhem warned of significant consequences if planned dams on the Mekong mainstream are completed, including a 30%-75% decline in fish catch, reduced food security, and a shift from rice cultivation to energy crops, which would exacerbate global food challenges. Uncoordinated dam operations, particularly in upstream China, have already led to dangerous "operational floods" and increased risks for communities. The cumulative impact includes rising energy prices, loss of livelihoods, and forced migration in search of better opportunities. Dr. Sokhem concluded that while the nexus concept is promising, its successful implementation requires more than political will. It demands legal and policy reforms to shift from project-based environmental assessments to comprehensive cross-sectoral evaluations, along with mindset changes to recognize the interconnected impacts of development. He called for action-oriented frameworks to achieve sustainable and equitable resource management in the region.

Mr. Sophearin Chea Planning Expert at the Mekong River Commission



He highlighted the application of the Mekong River Commission's (MRC) Notification, Prior Consultation, and Agreement (PNPCA) procedure in promoting sustainable hydropower development in the Mekong River Basin. The MRC operates through three entities: the Council (ministerial level), the Joint Committee (strategic and technical discussions), and the Secretariat (technical and operational support). The PNPCA procedure, a key mechanism under the MRC, facilitates cooperation among member countries to mitigate transboundary environmental and social impacts of water infrastructure projects. It comprises three processes: notification (informing member countries about projects), prior consultation (a six-month period to mitigate impacts without requiring unanimous

agreement), and agreement (addressing inter-basin water diversions during the dry season). So far, 60 projects have undergone the PNPCA process, including 50 through notification and 7 hydropower projects in Laos through prior consultation. During the consultation period, the MRC Secretariat prepares technical review reports based on feasibility studies and engages various stakeholders, including communities, NGOs, and development partners, to identify and address potential impacts. The process results in agreed statements and joint action plans that ensure continued dialogue and monitoring beyond the consultation period. This collaborative approach has led to tangible improvements in hydropower project designs, such as enhanced fish passages, sediment management, and navigation facilities. Additionally, the MRC is exploring renewable energy solutions like floating solar projects and pumped storage systems to complement hydropower development. Mr. Chea emphasized that the PNPCA procedure is critical for fostering transboundary cooperation, addressing cumulative impacts, and ensuring water sustainability in the region, while also promoting innovative renewable energy initiatives.

Key Takeaways:

- **Need for Regionally Tailored Approaches:** Addressing energy and water sustainability requires interdisciplinary, inclusive, and regionally tailored approaches, recognizing that one-size-fits-all solutions are ineffective.
- **Importance of Bilateral and Sub-Regional Cooperation:** Regional integration should be built upon bilateral and sub-regional cooperation, focusing on pragmatic, localized efforts where feasible.

- **Need for Enabling Frameworks and Institutions:** Strong enabling frameworks and dedicated institutions are crucial for environmental preservation and sustainable resource management.
- **Revisiting Water-Sharing Frameworks:** Global and national water-sharing frameworks need to be revisited and revamped to ensure sustainable and equitable management of interlinked resources within the water-energy-food nexus.
- **Circular Economy for Solar Energy:** A circular economy approach is essential for the long-term sustainability of solar energy, requiring a granular approach to technology adoption, financing, and economics.
- **Empowering Sustainable Energy Solutions:** Empowering sustainable energy solutions through innovative tools like digital intelligence, thought leadership, and market development is crucial for global development efforts.
- **Addressing Inequities in the WEE Nexus:** Inequities and inequalities within the water-energy-food nexus, particularly in South and Southwest Asia, need to be addressed through a recalibration of existing concepts and frameworks to promote inclusivity and equitable access.
- **Importance of Holistic and Transboundary Considerations:** Development strategies should integrate cross-sectoral and transboundary considerations to ensure food security, equitable water access, sustainable energy, and improved livelihoods, while also addressing socio-economic drivers of migration.
- **Unlocking Sustainable Hydropower:** Sustainable hydropower development requires a water-energy nexus perspective, including utilizing data and studies, promoting information sharing, addressing transboundary impacts, and coordinating cascade operations.

Recommendations:

- **Develop Regionally Tailored Strategies:** Develop regionally tailored strategies for energy and water sustainability that consider specific local contexts, needs, and challenges.
- **Strengthen Bilateral and Sub-Regional Cooperation:** Prioritize and strengthen bilateral and sub-regional cooperation on water and energy management to facilitate regional integration.
- **Establish Strong Enabling Frameworks and Institutions:** Establish robust enabling frameworks and dedicated institutions for environmental preservation and sustainable resource management.
- **Revise and Update Water-Sharing Frameworks:** Initiate a process to revisit and revamp global and national water-sharing frameworks to ensure equitable and sustainable allocation of water resources.
- **Implement Circular Economy Principles for Solar Energy:** Develop and implement a comprehensive circular economy strategy for solar energy, including recycling and reuse programs, and incorporate lifecycle considerations into financing and economic assessments.
- **Scale up Sustainable Energy Solutions:** Scale up successful sustainable energy solutions through targeted investments, policy support, and capacity building.
- **Promote Inclusivity and Equity in WEE Management:** Recalibrate existing concepts and frameworks within the water-energy-food nexus to promote inclusivity and equitable access to resources, particularly in vulnerable regions.
- **Integrate Cross-Sectoral and Transboundary Considerations:** Integrate cross-sectoral and transboundary considerations into development strategies to ensure holistic and sustainable outcomes.
- **Promote Sustainable Hydropower Development:** Promote sustainable hydropower development through data sharing, coordinated operations, and the mitigation of transboundary and social-environmental impacts.
- **Focus on Pragmatic, Localized Efforts:** Prioritize pragmatic, localized efforts to foster integration and address specific regional challenges related to water and energy.

The High-Level Policy Dialogue on Pathways to Decarbonisation and Net Zero Energy Sector through Water Circularity



Decarbonization Through Water Circularity: Can Innovation and Collaboration Lead the Way?

This session featured insightful contributions from experts on achieving sustainability through innovation and collaboration.

Dr. Uday Kelkar

MD of NJS Engineers India



His presentation highlighted the vital link between energy management and water resources, stressing the need to optimize both sectors to achieve Net Zero emissions. Drawing from his experience in India, the US, and other countries, he pointed out the significant energy consumption in water extraction and wastewater treatment, especially when water is sourced from long distances or treated to meet stringent standards. He advocated for viewing wastewater not just as waste but as a resource that can be reused for various purposes, such as irrigation or industrial applications, thus reducing the demand for freshwater and supporting a circular economy. Technologies like Membrane Aerated Bioreactors (MABR), which improve energy efficiency by optimizing oxygen transfer, were emphasized for their potential to reduce energy consumption in treatment plants. Dr. Uday also focused on bio-solid recovery and methane capture, which can be converted into usable energy, further reducing the carbon footprint of wastewater treatment plants.

He highlighted a major wastewater project in Delhi as a model for integrating energy recovery and resource reuse. Dr. Uday concluded by advocating for the adoption of new design practices, AI-driven optimization, and pilot projects to drive innovations that balance energy use and water management, ultimately contributing to Net Zero goals.

Mr. Anshuman

Director of the Water Resource Division
at the Energy and Resource Institute

He Highlighted The Role Of Empowering Local Communities By Demonstrating Sophisticated Technologies And Best Practices In The Water-Energy-Food Nexus, Underscoring That Community-Led Prioritization Ensures Effective On-Ground Implementation. With over 20 to 30 years of experience in the water and energy sectors, he shared insights drawn from his extensive work in understanding the interlinkages between these two critical resources. He highlighted the mutual dependence between water and energy,



noting that water is essential for energy production, while energy is required for water extraction, treatment, and transportation. Mr. Anshuman then provided practical examples from various sectors, starting with agriculture. One notable project he mentioned was Pani Bachao Pesa kamao in Punjab, which was implemented in collaboration with the World Bank. This initiative aimed to encourage farmers to adopt water-saving technologies such as drip irrigation, laser leveling, and short-duration rice varieties. Through demonstration farms, these technologies were shown to save both water and energy, with savings ranging from 10 to 30%. The project also contributed to increased agricultural productivity. Mr. Anshuman emphasized that the key to the project's success was engaging local farmers, demonstrating the technologies on-site, and building trust within the community. Additionally, Mr. Anshuman discussed a technology called Optiflow, which helps reduce transmission losses in water systems. By regulating pressure variations, this technology has been shown to save both water and energy, with savings ranging between 10 to 12%. The innovation has already been commercialized. Finally, Mr. Anshuman highlighted a benchmarking project focused on water use efficiency in thermal power plants, which are the largest consumers of water in the energy sector. Through these efforts, he noted that improving water-use practices in power plants is crucial to ensuring sustainable water management without compromising energy production.



Ms. Vandana Yadav **Advisor to the India-EU Water Initiative**

Ms. Vandana, representing GIZ at the India-EU Water Initiative, introduced the collaboration between India and the European Union, formed under an MOU to exchange technical expertise between the two countries. The focus of her presentation was on advancing water circularity, particularly through the safe use of treated water. She explained that, in collaboration with NMCG, GIZ helped develop a framework for the safe reuse of treated water (SRTW), which is available on the Ministry's portal. This framework provides a comprehensive guide for states to formulate their own SRTW policies, with an emphasis on public-private partnership (PPP) models for implementation. Additionally, the framework suggests differentiated pricing mechanisms for various water users. States like Uttarakhand and Uttar Pradesh are already in the process of developing their own SRTW policies. Ms. Vandana highlighted the strategic choice of Panipat for the pilot initiative, given its large sewage treatment capacity (125 MLD) and proximity to industrial clusters such as the textile industry in Sector 29. She presented a decision tree for feasibility assessments, which evaluates potential solutions for industries, textiles, agriculture, and urban use. This approach aims to optimize the reuse of treated water for various sectors, thereby promoting sustainability and resource efficiency.

Mr. Neeraj Gahlawat **Senior Water Specialist, Embassy of Israel**

Mr. Neeraj shared Israel's exemplary water security model, which effectively meets 120% of its water demand, with 70% sourced from desalination and the remaining 30% from natural water resources. He highlighted Israel's innovative approach to water management, which includes the development of a national water grid that ensures efficient distribution and equitable access across the country. This infrastructure allows Israel to manage and optimize its water supply, even in arid conditions, enabling it to meet both domestic needs and maintain agricultural productivity. Furthermore, Mr. Neeraj emphasized Israel's collaborative approach, noting that the country shares 20% of its water supply with neighboring Jordan. This cross-border cooperation is a testament to Israel's commitment to regional water security and peacebuilding. He attributed much of Israel's success in water management to active public participation. The government has fostered a culture of awareness and responsibility, with citizens playing a key role in conservation



efforts and efficient water use. Through policies, technological innovations, and community involvement, Israel has created a resilient, sustainable water system that can withstand future challenges. Mr. Neeraj's insights underscore the importance of infrastructure, collaboration, and public engagement in achieving water security.

Ms. Kavita Tiwari
Consultant, Strategic Alliances Division,
Office of the PSA, Government of India



She emphasized the critical role of fostering innovation to ensure a sustainable future, particularly in the fields of water management and energy. She highlighted the importance of Centres of Excellence like Manthan, which are leading the way in creating innovation hubs. These hubs provide platforms where academia and industry collaborate closely to develop cutting-edge solutions for pressing environmental challenges. Ms. Kavita pointed out that such collaborative efforts are pivotal in advancing integrated water reuse systems, renewable energy solutions, and clean energy technologies. Through research-industry partnerships, centres like Manthan are facilitating the development of scalable technologies that can address both water scarcity and the need for sustainable energy sources. These partnerships are key to accelerating the transition to a more sustainable and circular economy, where resources are efficiently used and waste is minimized. She stressed that the synergy between academic research and industrial expertise fosters a dynamic environment for innovation, enabling the creation of practical, impactful solutions. Ms. Kavita's insights underlined the importance of these collaborative efforts in driving technological advancements and sustainable practices, which are essential for achieving long-term environmental and energy goals.



Dr. Hitesh Vaidya
Chief Technical Advisor - Urban Development

He called for breaking down silos to achieve decarbonization, urging institutions and stakeholders to adopt a transversal approach. He emphasized the need to simplify technical jargon and foster collective action for a sustainable and inclusive future.

Key Takeaways:

- **Sustainable Decarbonization through Innovation:** Sustainable decarbonization requires new design and engineering capabilities, digital data analytics, process optimization, piloting innovative technologies, and effective sludge management with a focus on recycling and reuse.
- **Empowering Local Communities:** Empowering local communities by demonstrating sophisticated technologies and best practices in the water-energy-food nexus is crucial for effective on-ground implementation. Community-led prioritization ensures solutions are relevant and sustainable.
- **Boosting Water Security through Safe Reuse:** Safe reuse initiatives, supported by aggressive legislation, appropriate pricing mechanisms, robust enforcement, and reasonable monitoring, are effective in boosting water security.
- **Israel's Water Security Model:** Israel's successful water security model, achieving 120% of its water demand through desalination and natural resources, highlights the potential of national water grids and active public participation.
- **Fostering Innovation through Collaboration:** Centres of Excellence, like Manthan, play a vital role in fostering innovation by creating hubs for academia-industry collaboration to develop integrated water reuse

systems, renewable energy solutions, and clean energy technologies.

- **Breaking Down Silos for Decarbonization:** Achieving decarbonization requires breaking down silos between institutions and stakeholders and adopting a transversal approach. Simplifying technical jargon and fostering collective action are essential.

Recommendations:

- **Invest in Sustainable Decarbonization Technologies and Practices:** Invest in research, development, and implementation of sustainable decarbonization technologies and practices, including new design and engineering capabilities, digital data analytics, process optimization, and effective sludge management with a focus on recycling and reuse.
- **Prioritize Community Engagement and Empowerment:** Implement programs that empower local communities to participate in the planning, implementation, and management of water, energy, and food projects. Demonstrate sophisticated technologies and best practices to build local capacity and ownership.
- **Strengthen Legal and Regulatory Frameworks for Safe Reuse:** Strengthen legal and regulatory frameworks for safe water reuse initiatives, including aggressive legislation, appropriate pricing mechanisms, robust enforcement, and reasonable monitoring.
- **Explore and Adapt Israel's Water Management Strategies:** Study and adapt relevant aspects of Israel's water management model, such as the development of national water grids and public participation strategies, to other contexts.
- **Support and Expand Centres of Excellence:** Support and expand the role of Centres of Excellence in fostering innovation through academia-industry partnerships focused on developing integrated water reuse systems, renewable energy solutions, and clean energy technologies.
- **Promote Inter-Institutional and Cross-Sectoral Collaboration:** Encourage and facilitate collaboration between different institutions and stakeholders, including government agencies, research institutions, industry, and civil society, to break down silos and promote a transversal approach to decarbonization and sustainable development.
- **Simplify Technical Information and Promote Public Awareness:** Simplify technical jargon and promote public awareness and understanding of complex technical issues related to water, energy, and the environment to facilitate broader participation and collective action.



The Leadership Dialogue-2 - Nexus Governance: Multi-Sectoral Dialogues for a Sustainable Tomorrow



Multi-Dimensional Approaches to Sustainability: How Can We Achieve Effective Governance?

This session brought forth thought-provoking insights on fostering sustainability through multi-dimensional approaches.

Sh. Ram Mohan Mishra

Chairman of the Investment Promotion Board, Meghalaya

He asserted that sustainability is multifaceted, encompassing environmental, economic, and social dimensions, highlights the interconnected nature of this complex concept. This means that true sustainability cannot be achieved by focusing solely on one area, such as environmental protection, but requires a holistic approach that considers the interplay between ecological health, economic viability, and social equity. By emphasizing the interconnected roles of stakeholders and the importance of collaboration, Mishra underscores that achieving a sustainable future is a shared responsibility. Governments, businesses, communities, and individuals all have a crucial role to play in contributing their expertise, resources, and perspectives to develop and implement effective sustainable solutions. This collaborative approach fosters a sense of ownership and ensures that sustainability initiatives are both effective and equitable, leading to a more resilient and prosperous future for all.



Mr. Navneet Sehgal

Chairman of Prasar Bharti

He underscored the urgent need for water conservation, pointing to resource scarcity caused by excessive usage. He emphasised on the urgency of water conservation, driven by resource scarcity from overuse, underscores a critical global challenge. By highlighting the Indian government's HarGharJal scheme, which aims to provide piped water access to every household, Sehgal points to a practical, grassroots-level approach to addressing this scarcity. This initiative not only tackles the immediate issue of water accessibility, particularly in water-stressed regions, but also has broader implications. It reduces reliance on potentially unsustainable groundwater extraction, promotes better hygiene and sanitation, and

empowers communities by ensuring a reliable water supply. Furthermore, the scheme's focus on infrastructure development and community engagement can contribute to long-term water management strategies and raise awareness about the importance of water conservation at the household level, creating a more sustainable water future.

Sh. Shravan Goel

Vice President of Sewa Bharti Sansthan

He stressed the fundamental importance of water, quoting an ancient verse पृथिव्यां त्रीणि रत्नानि जलमन्नं सुभाषितम् | मूढैः पाषाणखण्डेषु रत्नसंज्ञा विधीयते || which means the gems on earth without a price are water, food and wise words. And yet this world has priceless fools who think that scraps of stones are jewels. He emphasized the need for this value to resonate deeply with the common people. He advocated for a return to fundamental values, urging society to recognize and prioritize the truly essential elements for human well-being and a sustainable future. He calls for a collective shift in perspective, moving away from the pursuit of material possessions and towards a greater appreciation for the resources that sustain life and the wisdom that guides it.



His Holiness Acharya Shri Lokesh Muni Ji, Founder, Ahimsa Vishwa Bharti

He emphasized the crucial balance between spirituality and materialism for achieving true sustainable development. He argued that societal problems like climate change stem from a disruption of this balance, with an overemphasis on material pursuits leading to unsustainable practices. Integrating spirituality, understood as ethical principles, compassion, and a sense of interconnectedness, provides a moral compass for material endeavours, fostering responsible behaviour and a holistic approach to sustainability. This integration, he suggests, is key to achieving not just material prosperity but also true victory, harmony, and a fulfilling existence in balance with the world around us.

Key Takeaways:

- **Multifaceted Nature of Sustainability:** Sustainability encompasses environmental, economic, and social dimensions, requiring a holistic approach that considers the interplay between ecological health, economic viability, and social equity. Collaboration among all stakeholders is crucial.
- **Urgency of Water Conservation and Grassroots Solutions:** Water conservation is urgently needed due to resource scarcity from overuse. Grassroots initiatives like the HarGharJal scheme, focusing on water access and community empowerment, are vital.
- **Intrinsic Value of Essential Resources:** Water, food, and wisdom are invaluable resources, often overlooked in favor of material possessions. A shift in societal values is needed to prioritize these essentials.
- **Balance between Spirituality and Materialism:** A balance between spirituality (ethical principles, compassion) and materialism is crucial for sustainable development. Overemphasis on materialism leads to unsustainable practices.

Recommendations:

- **Promote Holistic Sustainability Strategies:** Develop and implement holistic sustainability strategies that integrate environmental, economic, and social considerations. Foster collaboration among governments, businesses, communities, and individuals.
- **Prioritize Water Conservation and Access:** Implement comprehensive water conservation strategies and support grassroots initiatives like HarGharJal to improve water access, reduce groundwater extraction, and promote community empowerment.

- **Promote a Shift in Societal Values:** Encourage a shift in societal values towards recognizing the intrinsic value of essential resources like water, food, and wisdom, moving away from excessive materialism. Public awareness campaigns and educational initiatives can play a key role.
- **Integrate Spirituality into Development Planning:** Integrate ethical principles, compassion, and a sense of interconnectedness (spirituality) into development planning and policy-making to guide material pursuits and promote responsible behavior towards the environment and society.
- **Strengthen Community Engagement in Water Management:** Further strengthen community engagement in water management programs to ensure local ownership and sustainability of water resources.
- **Invest in Water Infrastructure and Technology:** Continue investment in water infrastructure development and water-efficient technologies to improve water access and reduce wastage.
- **Develop Educational Programs on Sustainable Resource Use:** Develop educational programs that promote understanding of sustainable resource use and the importance of balancing material needs with environmental and social well-being.

As the session concluded, a passionate audience member rose to their feet, filling the conference hall with a heartfelt song: Jal hi Jeevan, Vaayu Jeevan "Water is life, air is life. Life depends on water and air. Let's join hands to protect them - it's our duty, our promise to ourselves!"





Holistic Thinking for Sustainability: Can It Address Complex Environmental Challenges?

This session focused on the urgent need for mindset shifts, innovation, and sustainable practices to address environmental challenges.



Mr. Atul Bagai Former Head, UNEP

Mr. Bagai reflected on their past collaborations at UNEP India, highlighting Dr. Kumar's dedication to water-related issues, a critical yet frequently neglected aspect in broader discussions on climate change, energy, and environmental challenges. He emphasized that water issues are resource-intensive, requiring human, financial, and knowledge capital to tackle comprehensively. He commended the two-day conference for its focus on water challenges and its interconnectedness with broader environmental, energy, and health concerns. He pointed out that while the world faces three intertwined crises—climate change, pollution, and biodiversity loss—there is a lack of effective collaboration among organizations and governments,

leading to fragmented efforts. Water-related organizations, for example, often fail to coordinate with climate change bodies, creating silos that hinder the development of integrated solutions. Mr. Bagai further underscored the missed opportunities for synergy, particularly after recent international conferences on biodiversity, desertification, and plastics, where financial and resource gaps prevented meaningful resolutions. He concluded by advocating for a shift in mindset, suggesting that adopting a "Nature as a Guest" philosophy, where nature is revered as sacred, could be the key to overcoming these global challenges.

Dr. Arvind Kumar President of IWF

He highlighted the critical interdependence between water and energy, emphasizing that water is essential for energy production, from hydropower and thermal plants to emerging technologies like green hydrogen. He also pointed out that energy is crucial for water management, particularly for distribution and treatment, creating a complex and vital relationship between the two resources. Mismanagement of this relationship exacerbates global water scarcity, which currently affects over 2 billion people. Dr. Kumar specifically addressed India's challenges, where the country holds 18% of the global population but only 4% of the world's water resources. The growing demands of agriculture, with its reliance on water-intensive crops, coupled with rapidly increasing energy needs, are placing immense pressure on



India's already strained water resources. Climate change further exacerbates these challenges by reducing hydropower potential and depleting groundwater levels. To address these issues, Dr. Kumar stressed the need for integrated policies and innovative solutions. He recommended promoting renewable energy, such as solar and wind power, alongside water-efficient technologies. For instance, solar farms on reservoirs could mitigate land use concerns and reduce water evaporation. He also advocated for the adoption of advanced wastewater treatment technologies that enable water reuse, which would close the loop between water and energy use, conserve resources, and create green jobs. Finally, Dr. Kumar called for strengthened governance to ensure alignment between initiatives like the Jal Shakti Abhiyan and the National Hydrogen Mission, fostering synergy between water, energy, and sustainability objectives to prevent cascading environmental and economic crises.



Dr. Nagesh Kumar **Director of ISID**

Dr. Kumar discussed the need for a green industrial strategy as India transitions toward sustainability. Industrialization must integrate ecological considerations from the outset. India has ambitious targets, including generating 50% of its energy from renewable sources by 2030. However, achieving self-reliance in solar equipment manufacturing is critical, as 81% of global production currently originates in China. Public-private partnerships and policy incentives like production-linked schemes are vital for this transformation. He also emphasized leveraging green hydrogen to decarbonize heavy industries, such as steel and fertilizers, while advocating for global collaboration in technology sharing to facilitate sustainable growth in developing nations. He advocated for embracing the concept of LiFE (Lifestyle for Environment), calling for a transformation in consumption, production, and behavioural patterns to achieve sustainability. He emphasized responsible industrialization as a pathway to growth and prosperity, while urging a balance between prioritizing the planet, people, and economic advancement.

Key Takeaways:

- **Treating Nature as Divine:** Viewing nature as a divine entity ("Atithi Devo Bhavah") promotes a shift from exploitation to respect and reverence, fostering sustainable practices and harmonious coexistence.
- **Integrating Policy and Technological Innovations:** Combining policy and technological innovations, including synergizing water and energy systems, prioritizing renewable energy, adopting water-smart strategies, and enhancing wastewater treatment, is crucial for unlocking a sustainable future.
- **Adopting the LiFE (Lifestyle for Environment) Concept:** Transforming consumption, production, and behavioral patterns through the LiFE concept is essential for achieving sustainability. Responsible industrialization, balancing planet, people, and prosperity, is key.

Recommendations:

- **Promote a Culture of Respect for Nature:** Encourage a societal shift towards respecting and valuing nature by promoting the concept of "Atithi Devo Bhavah" and other similar cultural values that emphasize reverence for the natural world. This could involve educational campaigns, community engagement programs, and incorporating these values into policy and decision-making.
- **Develop and Implement Integrated Policies:** Develop and implement integrated policies that synergize water and energy systems, prioritize renewable energy sources, and promote water-smart strategies across all sectors.
- **Invest in Water and Wastewater Treatment Technologies:** Invest in research, development, and deployment of advanced water and wastewater treatment technologies to enhance efficiency and promote water reuse.
- **Promote the LiFE Movement:** Actively promote the adoption of the LiFE (Lifestyle for Environment) concept through public awareness campaigns, educational programs, and incentives for sustainable consumption and production practices.

- **Encourage Responsible Industrialization:** Promote responsible industrialization practices that prioritize environmental protection and social equity alongside economic growth. This includes encouraging businesses to adopt sustainable production processes, reduce their environmental footprint, and invest in clean technologies.

Foster Inter-Sectoral Collaboration: Encourage collaboration between government agencies, research institutions, industry, and civil society to develop and implement integrated solutions for environmental challenges.

Incentivize Sustainable Practices: Implement economic incentives and regulatory mechanisms that encourage sustainable practices in all sectors, including water management, energy production, and industrial development.



High Level Policy Dialogue – Environment, Water, and Health Trilemma: Sustainable Strategies for the Future



The Environment, Water, and Health Trilemma: Can Sustainable Strategies Break the Cycle?

This session highlighted the interconnected challenges of water, health, and environmental sustainability while emphasizing community-driven and inclusive solutions.

Mr. Vinod Mishra

Country Manager at UNOPS

He shared his journey starting with the Swajal project in Uttar Pradesh and Uttarakhand, where he served as project manager for five years. The Swajal project, a World Bank initiative, is considered one of India's most successful participatory water management projects. He later contributed to the Swachh Bharat Mission and continues his involvement with the Jal Jeevan Mission, partnering with the Ministry of Jal Shakti's Department of Drinking Water Supply. Mr. Vinod emphasized the critical connection between environment, health, and water security, especially in the context of India's Har Ghar Jal mission. He outlined three key pillars of water security: coverage (universal access), access (equitable distribution), and quality (ensuring clean water). He pointed out challenges like the depletion of groundwater and the loss of natural water storage due to urbanization, which severely affect water availability.

Vinod also highlighted the health risks linked to water contamination, both biological (e.g., diarrhea, cholera) and chemical (e.g., fluoride, iron, and fertilizer runoff), which can lead to chronic diseases like cancer and bone damage. He stressed the urgent need for effective water management, recharging systems, and addressing contamination to safeguard both health and water resources for future generations.



Ms. Kavita Prasad

Consultant at IWF

She in her presentation, emphasized the vital role of gender participation in achieving sustainable development, particularly in the context of the water-energy-environment nexus. She thanked Dr. Arvind and Ms. Shweta for organizing the conclave and shared her thoughts on the conference's theme, noting the significance of sustainability and its connection to ecological balance. She explained that sustainability can only be achieved through a holistic, transversal approach, where all sectors work together horizontally rather than vertically. She highlighted the crucial need for gender inclusion in disaster management, noting that women face unique challenges, especially in disaster situations. She discussed the socio-economic, cultural, and systemic barriers that exacerbate the

vulnerabilities of women, particularly in water security and health. Waterborne diseases, such as cholera and dysentery, disproportionately affect women, who are also burdened with reproductive health challenges. She stressed the importance of empowering women as agents of change, advocating for their involvement in leadership roles and policy integration. She proposed several policy recommendations, including integrating gender responses into disaster management, supporting women-led initiatives, and encouraging women's participation in STEM fields. She concluded by urging the development of gender-sensitive policies to build resilient communities, urging society to recognize women as critical stakeholders in achieving sustainable growth.



Mr. Shawahiq Siddiqui

Founder, Indian Environment Law Organization (IELO)

He began by explaining the constitutional basis for the right to environment, emphasizing that it is not directly mentioned in the Constitution but has evolved through judicial interpretations. He illustrated this with the landmark case of *Subhash Kumar v. State of Bihar* (1996), where the Supreme Court declared that the right to drinking water is part of the fundamental right to life. He further explained that water, as a fundamental human right, must be free from contamination, as polluted water endangers life. He discussed another important case, *Jacob Koshy v. National Green Tribunal*, which dealt with the pollution of rivers and the neglect of smaller rivers, which are critical to rural communities.

Mr. Shawahiq highlighted that India's water policies often focus on large rivers and big projects, while smaller, marginalized rivers—which are crucial for local populations—are ignored. He advocated for a broader focus on these smaller rivers to improve water quality and health for millions. He concluded by addressing the challenge of convergence in implementing water and environmental policies, especially at the grassroots level. Despite clear policy frameworks, implementation gaps remain. Mr. Shawahiq stressed the need for capacity-building at the local and district levels to improve coordination across sectors, particularly between ministries, to achieve effective water management and environmental protection.

Key Takeaways:

- **Interconnectedness:** The session highlighted the interconnectedness of water, health, and environmental sustainability, emphasizing that solutions must address these areas holistically.
- **Community-Driven Solutions:** The Swajal Project exemplifies the success of community-led initiatives in the WASH sector, demonstrating the effectiveness of prioritizing local needs and participation.
- **Gendered Impacts:** Water-energy-environment imbalances disproportionately affect women, exacerbating existing inequalities in unpaid care work, healthcare access, and economic opportunities.
- **Judicial Role in Environmental Protection:** The Indian judiciary has played a crucial role in integrating environmental concerns into governance, interpreting the Right to Life as encompassing the right to a healthy environment.

Recommendations:

- **Promote Community Participation:** Prioritize community-driven approaches in water, sanitation, and hygiene projects, empowering local communities to manage and sustain their resources.
- **Address Gender Inequalities:** Integrate a gender lens into environmental and water management policies to address the disproportionate impacts on women and promote their empowerment.
- **Strengthen Legal Frameworks:** Continue to strengthen legal and policy frameworks that protect the environment and ensure its integration into governance, building upon existing judicial interpretations.
- **Promote Innovative Solutions:** Encourage the development and implementation of innovative solutions for water security, accessibility, and reuse, such as those demonstrated by the Swajal Project.
- **Rethink Human-Nature Relationship:** Promote a shift in mindset towards a more harmonious relationship with nature, recognizing its intrinsic value and the need for sustainable practices.

Environmental Co-benefits of Ecosystem Restoration



Ecosystem Restoration: Can It Deliver Both Environmental and Economic Gains?

This session brought forward a rich discussion on the need for integrated and innovative approaches to restoring ecosystems for environmental and economic gains.

Mr. U.P. Singh

Former Secretary, Ministry of Textile & Jal Shakti, GOI

He highlighted the critical need for sustainable water management in the face of increasing climate variability and rapid urbanization. He emphasized that while total rainfall levels have remained relatively stable, the distribution has become more erratic, with fewer rainy days but more intense downpours. This shift places immense pressure on existing water infrastructure, which was not designed to handle extreme rainfall events of 200-400 mm in just a few hours. He expressed concern over rampant encroachments and over-concretization, which have disrupted natural drainage systems and diminished the capacity of cities to absorb and store water. Mr. Singh underscored the importance of preserving traditional water bodies, citing examples from Delhi and Bangalore, where unchecked urban expansion has led to the loss of vital lakes and reservoirs. He pointed out that India's groundwater reserves hold more water than all its reservoirs combined, making it essential to prioritize their conservation and recharge. He also highlighted the transformative potential of the National Mission for Clean Ganga (NMCG), emphasizing the need to move beyond mere infrastructure construction, such as sewage treatment plants, and focus on revitalizing rivers by restoring their natural flow. He advocated for a performance-driven approach to ensure lasting impact. Mr. Singh called for a paradigm shift in urban planning, one that respects the right of water and integrates sustainable drainage solutions. He urged for better governance, community participation, and stricter regulations to protect water resources, emphasizing that without immediate action, water security would remain a growing challenge for India's future.



Mr. Vishwa Ranjan

Programme Officer at IUCN

He clarified that ecosystem restoration is not a choice but a financial and ecological imperative. Citing studies, he emphasized that every dollar invested in restoration yields annual returns of \$70 to \$30, making it a strategic investment rather than a cost. However, he stressed the urgency of action, highlighting that between 2015 and 2019, India's degraded land doubled to 9.45%, affecting 30 million hectares. Climate change, he warned, is exacerbating this crisis, particularly threatening rain-fed agriculture, which

sustains millions of livelihoods. He further explained that restoration efforts can rejuvenate soil, water systems, and climate resilience, directly contributing to food security and sustainable development. For India, he asserted, this is a non-negotiable pathway to sustainable growth. He urged stakeholders to prioritize scalable financing, policy integration, and community-driven action to transform land degradation into an opportunity. Referring to the UN Decade on Ecosystem Restoration, he called it a critical moment for decisive action, warning that delays will only burden future generations with an ecological and economic debt.



Dr. N.P. Singh
Assistant Professor at SBSC, DU

He emphasized that addressing water scarcity requires a strong focus on restoration, starting at the policy level. He highlighted the challenges of urban development, particularly in cities like Delhi, where planned colonies, unauthorized settlements, slums, and industrial zones operate under different regulations, making restoration efforts complex. He pointed out that rapid vertical development has led to shrinking open spaces, congestion, and increasing urban stress. While earlier households had open areas, real estate trends now prioritize high-rises, reducing natural spaces and impacting environmental sustainability. He also stressed the social aspect of restoration, noting that urbanization has fostered individualism over

collective responsibility, where people expect clean surroundings but hesitate to contribute. Dr. Singh underscored the economic and environmental benefits of ecosystem restoration, citing the East Kolkata Wetlands, which naturally treat 910 million litres of wastewater daily while supporting fisheries, irrigation, and flood mitigation. He urged a holistic approach, integrating policy, urban planning, and community participation to ensure sustainable cities. Restoration, he concluded, should not be seen as a cost but as an opportunity for improving air and water quality, enhancing biodiversity, and strengthening climate resilience for future generations.



Mr. Sridhar Paladugu
Founder of Channel 5 media

He emphasized the pressing need to address the environmental impact of energy consumption driven by technological advancements, particularly artificial intelligence systems like Google's Generative AI. He raised concerns about the significant energy demands of AI data centers, which consume vast amounts of electricity, often derived from non-renewable sources. Mr. Sridhar called for urgent action to develop sustainable and renewable energy solutions that align with technological progress while ensuring minimal harm to the environment. He highlighted two key themes: sustainability and resilience. Sustainability, he noted, must be at the core of technological innovation, ensuring that growth does not come at the cost of

environmental degradation. Resilience, on the other hand, is crucial in building systems that can withstand disasters and disruptions caused by climate change and resource scarcity. Mr. Sridhar stressed the importance of integrating energy efficiency into AI development and data center operations. He advocated for businesses and policymakers to work together to establish frameworks that promote responsible energy consumption. In conclusion, he urged stakeholders to take proactive measures in balancing innovation with ecological responsibility, ensuring that technological progress supports a sustainable future rather than exacerbating environmental challenges.

Key Takeaways:

- **Transformative Potential of NMCG:** The National Mission for Clean Ganga (NMCG) has the potential to transform river health, but needs to shift focus from infrastructure construction to restoring natural river flow and adopting a performance-driven approach.

- **Economic Value of Ecosystem Restoration:** Ecosystem restoration offers significant economic returns, with every dollar invested yielding \$30 to \$70. However, land degradation is accelerating in India, necessitating urgent action.
- **Impact of Unplanned Urban Growth:** Unplanned urban growth, exemplified by Delhi, demonstrates the negative consequences of unchecked development on natural resources, highlighting the need for sustainable urban planning.
- **Environmental Impact of Emerging Technologies:** The energy demands of technologies like Generative AI raise concerns about their environmental impact, necessitating the development of sustainable and renewable energy solutions.

Recommendations:

- **Refocus NMCG on River Revitalization:** Refocus the NMCG on restoring the natural flow of the Ganga and other rivers, moving beyond solely infrastructure-based solutions. Implement a performance-driven approach with clear targets and monitoring mechanisms.
- **Prioritize Ecosystem Restoration Initiatives:** Prioritize and significantly increase investment in ecosystem restoration initiatives to address land degradation and realize the substantial economic and environmental benefits. Implement strategies for land restoration and prevent further land degradation.
- **Promote Sustainable Urban Planning:** Implement sustainable urban planning policies that prioritize the protection of natural resources, promote green infrastructure, and manage urban growth effectively. Integrate environmental considerations into all urban development plans.
- **Develop Sustainable Energy Solutions for Emerging Technologies:** Invest in research, development, and deployment of sustainable and renewable energy solutions to meet the growing energy demands of emerging technologies like AI while minimizing environmental impact. Promote energy efficiency in data centers and other technology infrastructure.
- **Incorporate Economic Valuation of Ecosystem Services:** Incorporate the economic valuation of ecosystem services into decision-making processes to better reflect the true value of natural resources and the benefits of restoration.
- **Promote Public Awareness and Education:** Raise public awareness about the importance of ecosystem restoration, sustainable urban planning, and the environmental impact of technology.
- **Strengthen Regulatory Frameworks:** Strengthen regulatory frameworks for environmental protection and ensure effective enforcement of environmental regulations.
- **Encourage Collaboration and Knowledge Sharing:** Foster collaboration and knowledge sharing among government agencies, research institutions, businesses, and civil society to promote integrated approaches to ecosystem restoration and sustainable development.

In addition to the core conference program, several side events were organized on both days to further enrich the discussions:

Side Event 1: Streams of Change: Collaborative Action Against Ecosystem Contamination

India Water Foundation hosted a side event at Nalanda Hall titled "Streams of Change: Collaborative Action Against Ecosystem Contamination", focusing on the urgent need for collective action to combat ecosystem contamination and its impact on water resources.



SESSION OVERVIEW

The conference session explored the critical intersections of water accessibility, sanitation, and sustainability. It brought together key stakeholders and experts to discuss inclusive solutions and innovative approaches for addressing pressing challenges in water management, conservation, and ecosystem restoration.

Chair and Moderators

Session Chair: Ms. Stuti Kacker, Former Secretary, Ministry of Disability, Government of India

Session Moderator: Professor A.K. Keshari, IIT Delhi

Co-Chair: Mr. T.S. Bisht, Chief Technical Advisor, India Water Foundation

Key Messages from Chairs and Moderators

Ms. Stuti Kacker:

Ms. Stuti Kacker emphasized the intersection of water and human rights, particularly for persons with disabilities. She highlighted the lack of accessibility in sanitation infrastructure and the dire consequences of natural disasters such as the Sikkim power plant



destruction, underscoring the vulnerability of infrastructure to climate-induced calamities.



Professor A.K. Keshari:

He discussed the essential role of water in economic growth, biodiversity preservation, and hydropower development. He pointed to the increasing challenges posed by climate change, including unpredictable water availability, pollution, and the decline of river health, with a specific focus on the Yamuna River in Delhi.

Mr. T.S. Bisht:

He outlined the paradox of industrial growth and environmental sustainability. He



introduced the concept of "economics of degrowth" as a counterbalance to unchecked industrial expansion, urging for sustainable industrial practices that prioritize environmental conservation.

Key Highlights:

1. Unlocking the Blue Economy (Himanshu Arora, Indian Oil Corporation Limited)



Dr. Himanshu Arora provided an in-depth analysis of the blue economy and its nexus with climate change. He illustrated how refineries and other hard-to-abate sectors could mitigate their environmental impact through nature-based solutions, carbon sequestration, and corporate

social responsibility (CSR) initiatives.

2. Ecosystem Restoration (Ms. Aswina Sreekumar, University of Wollongong)

She examined ecosystem restoration policies in Bolivia, Vietnam, and the Democratic Republic of Congo, identifying gaps in governance, stakeholder engagement, and legal enforcement. She stressed the need for multi-stakeholder collaboration, policy integration, and financial investment in restoration efforts.



3. Sociology of Water (Ms. Ankita Menon, Consultant, India-Nordic Water Forum)



Access to drinking water has profoundly influenced India's: Social hierarchies, Cultural practices, Economic opportunities, Gender roles. She highlighted the energy consumption involved in providing clean drinking water, emphasizing the need for improved efficiency in

water treatment and distribution. She critiqued the widespread reliance on bottled water, calling attention to the associated environmental and economic costs. She urged greater public engagement and institutional accountability in addressing water security challenges.

4. Innovative Water Purification (Ms. Sonam Singh, UPES, Dehradun, India)



Ms. Sonam Singh presented her research on nanotechnology-based solutions for removing contaminants such as Ciprofloxacin from water. She proposed a sustainable approach using biomass-based materials, offering a cost-effective and scalable solution for water purification. She introduced Pine-Mxene composite, an innovative biomass-based technology for removing antibiotics from water.

OUTCOMES

- Emphasis on inclusive sanitation and water accessibility as a fundamental right for all.
- Innovative solutions like biomass-based water purification to address contamination challenges.
- Opportunities to leverage the Blue Economy through collaborative and community-driven efforts.
- The need for strong multi-stakeholder partnerships and increased funding to support restoration and conservation initiatives.
- Recognition of water's pivotal role in shaping societal and economic dynamics.

Side Event 2: Capacity Building for Indian Water Professionals

IHE Delft conducted a session at Nalanda Hall on "Capacity Building for Indian Water Professionals", emphasizing the importance of strengthening local expertise and developing a skilled workforce to tackle water challenges in India. The session focused on strengthening the skills and knowledge of Indian water professionals to address the pressing challenges posed by water disparities, climate change, and resource management. Experts shared insights and actionable strategies for effective water governance and sustainability.



KEY TAKEAWAYS

Urban-Rural Water Disparities

Eddy Moors, Rector IHE DELFT highlighted the need to mitigate the impact of heavy rainfall in urban areas and droughts in rural regions. He also stressed the importance of preventive measures, advanced technology, and inclusive strategies to bridge these disparities.

Capacity Building and Urban Planning

- Also underscored the challenges of managing population growth in urban areas.
- Advocated for capacity building programs, rainwater harvesting, and enhanced governance systems to address urban water challenges.

Multidisciplinary Approaches

- Ms. Ankita Menon, Consultant, India-Nordic Water Forum called for innovative solutions like portable water purifier machines and modelling agro-climatic zones.
- Emphasized the importance of understanding groundwater systems and adopting multidisciplinary perspectives that combine engineering, environment, and social sciences.

WASH Education and Youth Participation

- Ms. Nikita highlighted the importance of WASH (Water, Sanitation, and Hygiene) education in

ensuring sustainable water usage and maintenance.

- Encouraged youth involvement in conservation efforts to foster long-term community engagement.
- Actionable Recommendations

Address Urban-Rural Water Disparities

Implement preventive measures and advanced technology to address localized water challenges in urban and rural settings.

- Enhance Capacity Building
- Develop targeted capacity building programs for water professionals, particularly in urban planning and management.
- Adopt Multidisciplinary Water Management
- Promote approaches that integrate insights from engineering, environmental science, and social sciences for comprehensive water management solutions.

Integrate WASH Education

- Include WASH education in school curricula and create platforms for increased youth participation in water conservation initiatives.
- Decentralized Treatment and Collaboration
- Support decentralized water treatment systems in rural areas.
- Foster international collaborations for sharing knowledge and adopting best practices.

Side Event 3: Identifying India's Priorities and Opportunities for Conserving Freshwater Ecosystems and Biodiversity

The International Union for Conservation of Nature (IUCN) organized a national consultation titled "Identifying India's Priorities and Opportunities for Conserving Freshwater Ecosystems and Biodiversity" on 6th December 2024.



Objectives and Key Focus Areas

The consultation aimed to explore India's priorities in conserving freshwater ecosystems and biodiversity while identifying actionable pathways to accelerate conservation efforts. Discussions were aligned with the Global Freshwater Challenge, which targets restoring 300,000 km of degraded rivers and 350 million hectares of degraded wetlands globally, and conserving intact ecosystems. This initiative has seen participation from 47 countries, including major global players such as the USA, UK, Germany, and France.

Participants

The event brought together leading institutions, including Wetlands International South Asia, INTACH, NIUA, TERI, The Nature Conservancy, USAID, ASSOCHAM, NITI Aayog, IORA Ecological Solutions, CEEW, Development Alternatives Group.

Special Address



Dr. Valentine Foltescu, Deputy Head, UNEP India, emphasized the triple planetary crisis—climate change, biodiversity loss, and pollution—and highlighted the role of frameworks such as the SDGs and the Kunming-Montreal Global Biodiversity Framework in mainstreaming

freshwater conservation.

KEY THEMES DISCUSSED

1. Global and National Commitments

The event emphasized the importance of adhering to Sustainable Development Goals (SDGs), particularly SDG 6 on clean water and sanitation.

- The Kunming-Montreal Global Biodiversity Framework has set ambitious targets, including restoring 30% of the world's degraded inland waters and ensuring effective conservation of 30% of inland water areas by 2030.
- Countries, including India, have stepped up their commitments through national biodiversity strategies and water conservation initiatives.
- The 2023 UN Water Conference and the 6th UN Environment Assembly saw significant discussions on scaling up water conservation efforts and strengthening integrated water resource management.
- Over 90% of Nationally Determined Contributions (NDCs) and national adaptation plans now incorporate a significant water component, reflecting a positive trend in global and national policy frameworks.

2. Challenges Facing Freshwater Ecosystems

Several pressing challenges to freshwater ecosystems were discussed, including:

- Degradation and Pollution: Over-extraction, pollution from industries and agriculture, climate

change impacts, and the presence of invasive species are leading to severe degradation of freshwater ecosystems.

- **Financial Constraints:** While commitments exist, the financial resources required to implement large-scale restoration efforts are insufficient.
- **Lack of Integrated Approaches:** A sectoral approach to water resource management has often led to fragmented conservation efforts, underscoring the need for a holistic, economy-wide perspective.
- **Climate Change:** Intensifying climate change effects, including erratic rainfall and prolonged droughts, are exacerbating freshwater resource challenges.

3. Initiatives and Case Studies

a. Freshwater Challenge

- The Freshwater Challenge is a global initiative aiming to:
 - Restore 300,000 km of degraded river lands.
 - Rehabilitate 350 million hectares of degraded wetlands.
 - Focus on the conservation of intact freshwater ecosystems to prevent further degradation.
 - Mobilize collective action by engaging multiple stakeholders and securing financial support.

b. India's Efforts in Freshwater Conservation

- **Namami Gange Program:** This flagship initiative focuses on river rejuvenation, waste treatment, and biodiversity conservation along the Ganga River.
- **River Rejuvenation Plans:** India has developed detailed project reports (DPRs) for the rejuvenation of 13 major rivers, emphasizing afforestation, soil conservation, and sustainable water management.
- **National Biodiversity Strategy:** India's national biodiversity targets integrate freshwater conservation efforts, ensuring alignment with global sustainability goals.
- **Community Engagement Programs:** Local communities are increasingly being involved in water conservation initiatives to ensure long-term sustainability.

c. Institutional Contributions

IUCN's Role: Leading transboundary water governance initiatives and wetland conservation programs.

- **Wildlife Institute of India:** Conducting research on freshwater biodiversity and identifying critical conservation areas.
- **Indian Council of Forestry Research and Education (ICFRE):** Implementing river rejuvenation projects

through afforestation and land restoration.

- **GIZ's Water Security Initiatives:** Leveraging GIS and remote sensing for water resource management and decision-making.

4. Technological Innovations for Water Conservation

- The event showcased advancements in technology that are playing a crucial role in water conservation:
- **Nature-Based Solutions:** Incorporating wetland restoration, riverbank stabilization, and afforestation as sustainable conservation strategies.
- **Advanced Wastewater Treatment:** The introduction of nano-material-based water treatment technologies to remove pollutants and improve water quality.
- **GIS and Remote Sensing Tools:** Using spatial data and digital platforms for water monitoring, watershed management, and early warning systems.
- **Decentralized Water Treatment Systems:** Encouraging small-scale water recycling plants to promote local water conservation and reuse.

5. Action Pathways

- To accelerate freshwater ecosystem conservation, the following action pathways were proposed:
- **Strengthening Institutional Collaboration:** Encouraging cross-sectoral coordination among government agencies, NGOs, and research institutions.
- **Enhancing Financial Mechanisms:** Increasing investment in conservation initiatives through public-private partnerships and international funding sources.
- **Promoting Policy Alignment:** Ensuring freshwater conservation is embedded in national development plans and climate adaptation strategies.
- **Localized Strategies:** Implementing region-specific conservation measures based on hydrological and ecological assessments.
- **Capacity Building and Awareness:** Engaging local communities and stakeholders through education programs, workshops, and knowledge-sharing platforms.

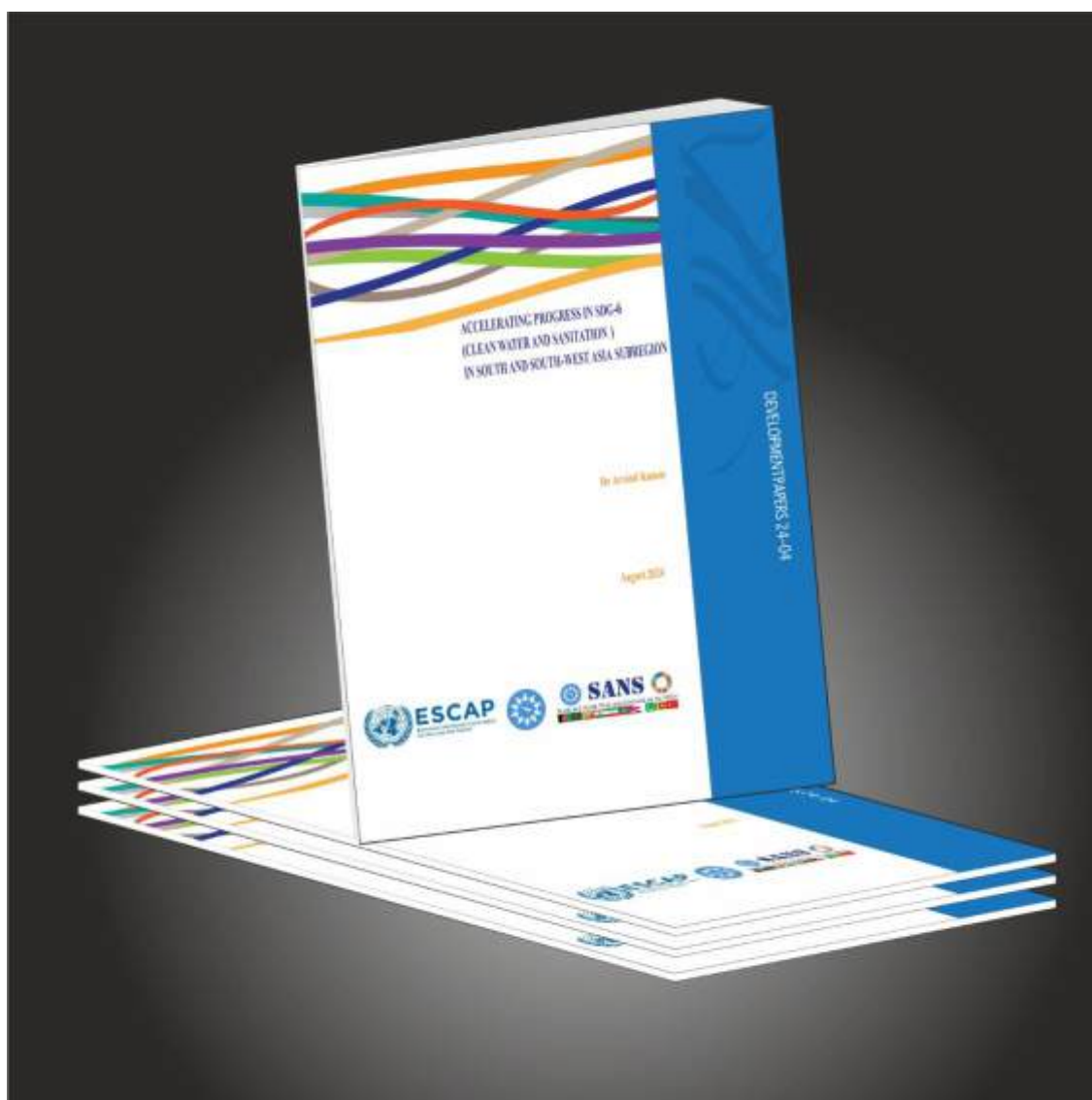
Conclusion

The side event reinforced the urgency of accelerating conservation efforts for freshwater ecosystems. Achieving global targets for freshwater restoration requires multi-stakeholder collaboration, innovative financing mechanisms, and an integrated approach to water resource management. The discussions provided a clear roadmap for aligning national policies with

global sustainability goals and ensuring the resilience of water ecosystems.

Recommendations

- Encourage more countries to sign up for the Freshwater Challenge and commit to tangible restoration goals.
- Increase investments in innovative water conservation technologies and nature-based solutions.
- Establish cross-sectoral coordination frameworks to integrate biodiversity conservation with water resource management.
- Strengthen data-driven decision-making by enhancing monitoring, research, and adaptive management strategies.
- Enhance community participation by providing incentives for local water conservation initiatives.



Side Event 4: Water of Change: Building Resilience Amidst Climate Crisis

UNOPS presented a session at Nalanda Hall on "Water of Change: Building Resilience Amidst Climate Crisis", focusing on strategies to enhance water resilience in the context of climate change and extreme weather events. The session concluded with a renewed commitment to tackling the intertwined challenges of water security, climate change, and sustainable development. The event brought together diverse stakeholders to share insights and explore actionable pathways toward a climate-resilient future.



Opening Remarks

Mr. Vinod Mishra, Country Manager, UNOPS, India, said Climate change is exacerbating the water crisis in India, particularly in Delhi, where deteriorating water and air quality pose significant concerns. Currently, 2.6 million people reside in water-stressed areas, with 1.6 million facing acute scarcity globally. Western India and Karnataka are among the regions severely affected by water scarcity and quality issues. In contrast, the eastern region has sufficient water resources, but climate change is increasingly threatening this balance. As we cannot create new water sources, conservation and protection are crucial. While investing in infrastructure is essential, it is not a substitute for water itself. Therefore, it is imperative that we develop climate-resilient infrastructure to safeguard our water resources for future generations and also stressed the importance of embedding water management into broader climate strategies.



Smt. Archana Varma, Additional Secretary and Mission Director, Jal Shakti Abhiyan, challenged conventional thinking by asking, "Is climate change really new?" She emphasized that evolving water risks, such as shifting rainfall patterns, call for innovative approaches, referencing key initiatives like:

- Jal Shakti Abhiyan
- National Water Mission
- Atal Bhujal Yojana

PANEL DISCUSSION

Moderated by Prof. Santosh Mehrotra, the panel featured thought leaders who addressed diverse dimensions of water security and climate resilience:

Dr. Rajiv Ranjan Mishra

- Spoke on the critical role of sustainable river basin management in mitigating climate risks.
- Mr. Kalimuthu Arumugam (WASH Institute)
- Highlighted community-led WASH practices and emphasized sustainable water use amidst visible climate impacts.

Dr. Girija Bharat

Provided insights into climate-resilient water resources, focusing on adaptability in water management practices.

Ms. Suparna Katyani

Discussed the potential of micro-irrigation and drip irrigation for water efficiency, especially in arid and semi-arid regions.

- Key Challenges Highlighted
- Sea-level rise
- Water stress
- Decreasing cultivable land
- Opportunities for Action
- Despite the challenges, the discussions illuminated opportunities for immediate and meaningful action, with water security recognized as the foundation of climate resilience.

Closing Remarks

In his closing statement, Mr. Saraswati Prasad emphasized the urgency of translating insights into action to secure a sustainable future. The event concluded with a collective resolve to address these critical issues.

Side Event 5: Water-Energy-Food (WEF) Nexus: An Integrated Approach to Create Sustainable Ecosystems in Agriculture and Allied Sectors

The side event titled “Water-Energy-Food (WEF) Nexus: An Integrated Approach to Create Sustainable Ecosystems in Agriculture and Allied Sectors” was organized by GIZ on 6th December 2024, from 12:00 PM to 1:30 PM at Conference Hall 1. The session focused on leveraging integrated approaches for sustainable ecosystems in agriculture and allied sectors, drawing from the experiences of GIZ India's Promotion of Solar Water Pumps Project.



Objectives

The session aimed to:

- Explore sustainable business models for the adoption of solar irrigation pumps.
- Highlight learnings from the deployment of solar pumps in diverse geographic and regional contexts.
- Discuss the interplay of gender and energy access within the framework of the Leave No One Behind (LNOB) principle.
- Analyse how solar irrigation technologies can be applied in agriculture, fisheries, and aquaculture.

Key Highlights

Presentations and Discussions

- GIZ India, India Water Management Institute, and PwC shared their expertise and insights, leading to an engaging exchange with participants.
- Focus was placed on innovative business models such as community-based approaches to tackle the high capital expenditure (CAPEX) of off-grid solar pumps.
- Gender-inclusive strategies and the potential of micro-solar irrigation pumps for regions like eastern and northeastern India were emphasized.

Policy and Framework Integration

- Speakers discussed leveraging existing state and central government frameworks to scale the deployment of solar irrigation pumps.

- The importance of convergence of schemes was underscored to ensure efficient use of resources, reduce redundancy, and enhance affordability.

Technological Insights

- The session highlighted the relevance of decentralized renewable energy (DRE) technologies in aquaculture, including replacing diesel-based aerators with solar-powered systems to reduce labour intensity and environmental impact.

Outcomes

- The discussions and insights led to the following key outcomes:
- Business Models: Recommendations for maximizing solar pump utilization periods through innovative models like community-based approaches.
- Regional Focus: Recognition of the potential for micro-solar water pumps in eastern and northeastern states.
- Aquaculture Integration: Understanding the role of DRE technologies in reducing labour and diesel dependency in fisheries and aquaculture.
- Scheme Convergence: Acknowledgment of the need for integrating efforts under multiple schemes to achieve common objectives and improve overall efficiency and affordability.

Side Event 6: Pathways to Green Industrialization in India: Challenges, Opportunities, and Policy Lessons

The Institute for Studies in Industrial Development (ISID) held a policy roundtable at Conference Room 3 on "Pathways to Green Industrialization in India: Challenges, Opportunities, and Policy Lessons", exploring how India can transition towards a green industrial economy through policy innovation and sustainable industrial practices. The session brought together experts and policymakers to explore strategies for advancing green industrialization. Discussions highlighted the opportunities, challenges, and actionable policy recommendations to position India as a leader in the global green economy.



KEY INSIGHTS

Dr. Nagesh Kumar, Director, ISID

- **Green Economy Transition:** Stressed the pivotal role of green energy solutions such as electric vehicles and solar systems, supported by government subsidies, in fostering sustainable industrial growth.
- **Value Chain Development:** Highlighted the importance of advancing the green hydrogen value chain and improving appliance efficiency.
- **Strategic Manufacturing:** Emphasized opportunities in clean energy value chains to promote green industrialization.

ESG and Policy Adaptations

- Underlined the necessity of incorporating Environmental, Social, and Governance (ESG) principles in industrial practices.
- Focused on supply chain management and policy adaptations to align with global standards.
- Stressed the urgent need to address electronic waste management while promoting smart, green investments.

Support for MSMEs (Micro, Small, and Medium Enterprises)

- Shared insights from UNIDO's experience with Indian MSMEs, including:
- Financial and technical assistance for sustainability transitions.
- Grant support programs to empower MSMEs and

scale up their contribution to green industrialization.

Learning from International Best Practices

- Advocated for fostering international collaboration and leveraging experiences from other nations to adopt proven strategies and avoid common pitfalls.

Actionable Recommendations

- Green Energy Adoption
- Promote the adoption of electric vehicles and solar systems through targeted government subsidies.
- Strategic Manufacturing in Clean Energy
- Develop robust manufacturing capabilities within clean energy value chains, particularly in the green hydrogen sector.
- ESG Integration and Waste Management
- Mandate ESG compliance in industrial operations and implement effective strategies for electronic waste management.
- Support for MSMEs
- Expand financial and technical assistance programs to enable MSMEs to transition to sustainable practices and participate in the green economy.
- Smart, Green Investments
- Facilitate investments in innovative technologies and projects that align with sustainable development goals.

International Collaboration

- Strengthen partnerships and knowledge exchange with global leaders in green industrialization to accelerate progress.

Valedictory & Awards Ceremony

It marked a fitting conclusion to the two-day conference, highlighting the key takeaways and reaffirming the commitment to addressing the intricate nexus of energy, water, and the environment.



Ms. Shweta Tyagi, Chief Functionary, IWF, initiated the proceedings, her words resonating with the urgency of the issues at hand. She painted a picture of the interconnectedness of energy, water, and the environment, emphasizing that solutions could only be found by acknowledging and addressing these interdependencies. Her call for sustainable and innovative approaches set the tone for the remainder of the session.



Dr. Raj Bhushan Chaudhary, Hon'ble Minister of State, Ministry of Jal Shakti, then took the stage, bringing a grounded perspective to the discussion. He spoke passionately about the realities of water scarcity and its devastating impacts, drawing from his own experiences in Muzaffarpur, Bihar. His narrative vividly depicted the cyclical struggles with floods, droughts, and the constant threat of water insecurity. He presented stark statistics about India's water resources in relation

to its population, highlighting the immense challenge of providing safe drinking water to such a large nation. He then outlined the Indian government's multi-pronged approach, detailing the Integrated Water Resource Management strategy, which aims to manage water resources holistically, ensuring equitable distribution and fostering community participation. He also addressed the looming threat of climate change, explaining the government's focus on building resilient infrastructure and promoting climate-resilient agriculture. He spoke with conviction about programs like Namami Gange, painting a picture of the efforts to revitalize the sacred river and improve its water quality. He also shed light on the less visible but equally crucial work of groundwater management, explaining the efforts to combat over-extraction and promote recharge. His address was a powerful blend of personal experience, factual data, and a clear articulation of the government's commitment to water security.



The session then transitioned to the celebratory segment, with **Dr. Arvind Kumar, President of the India Water Foundation**, presiding over the Water Transversality Awards. A sense of pride and admiration filled the room as he congratulated the award recipients, acknowledging their remarkable contributions to the field. He spoke of their work as transformative, highlighting their ability to turn challenges into opportunities and ideas into tangible solutions. He then shifted the focus back to the conference itself, describing it as a vibrant exchange of ideas and a testament to the collective commitment to sustainable

water management. He eloquently summarized the key takeaways, emphasizing the crucial need for collaboration across all sectors, the power of innovation to drive change, and the absolute necessity of translating discussions into concrete action. His closing remarks served as a powerful reminder that the work begun at the conference must continue beyond its conclusion, with each participant carrying the responsibility of contributing to a water-secure future. The session concluded not with a sense of finality, but with a renewed sense of purpose and a shared commitment to addressing the complex challenges at the nexus of water, energy, and the environment.

A key highlight of the event was the Water Transversality Global Awards, which recognized ground-breaking contributions to the field, celebrating innovation, collaboration, and impact. The prestigious awards ceremony recognized exceptional contributions to water conservation, honouring outstanding individuals and organizations. Lifetime Achievement Awards were bestowed upon renowned personalities, including Prof. Eddy Moors, Rector of IHE Delft, Mr. Loic Fauchon, President of the World Water Council, Mr. Satya Tripathi, and Dr. Nagesh Kumar, Director of ISID.

Notable organizations demonstrating commitment to water conservation were also acknowledged, including WAPCOS, GAIL India Ltd., G A Infra Pvt. Ltd., Haldia Energy Ltd., Aga Khan Agency for Habitat, and NJS Engineers India Ltd. Additionally, schools showcasing exceptional water conservation efforts, such as Amity International School, Vasundhara, and Ryan International School, Sector 31, Gurugram, were honoured.

Mr. Dhananjay Kumar was recognized as Junior Ambassador, while Channel 5 Media received the award for Excellence in Water Conservation Communications. Dedicated Freight Corridor Corporation of India was honoured as the Leading Company in Sustainable Practices. This ceremony celebrated dedication, innovation, and collaboration in water conservation, inspiring continued efforts towards a sustainable future.

The conclave also served as a networking hub for stakeholders to exchange knowledge, foster partnerships, and drive forward global commitments to sustainable water, energy, and environmental solutions.





Key Outcomes & Recommendations

Based on the comprehensive report of the Water Transversality Global Awards and Conclave 2024, here are the key outcomes, recommendations, and way forward:

1. Integrated Nexus Approach

- Consensus on the critical importance of adopting a holistic, multi-sectoral approach to water, energy, and environmental challenges
- Recognition that siloed thinking is no longer viable in addressing complex sustainability issues

2. Technological and Policy Innovation

- Highlighted innovative solutions such as:
- Biomass-based water purification technologies
- Solar water pumps for agricultural sustainability
- Green hydrogen and renewable energy developments
- Emphasis on integrating technological innovations with policy frameworks

3. Climate Resilience and Adaptation

- Identified urgent need for climate-resilient water management strategies
- Stressed the importance of adaptive approaches to address changing environmental conditions

Key Recommendations:

1. Institutional and Policy Recommendations

- Establish a national body for policy convergence similar to Germany's Advisory Council on Global Change
- Develop integrated water resource management frameworks
- Create robust institutional mechanisms for cross-sectoral collaboration

2. Technological and Innovation Strategies

Invest in:

- Decentralized renewable energy technologies

- Advanced water treatment and conservation technologies
- Circular economy principles in industrial water and energy use
- Support R&D in water-smart technologies and sustainable infrastructure

3. Capacity Building and Education

- Develop comprehensive capacity-building programs for water professionals
- Integrate Water, Sanitation, and Hygiene (WASH) education in school curricula
- Promote youth engagement in conservation and sustainability efforts

4. Stakeholder Collaboration

- Foster multi-stakeholder partnerships across: Government agencies, Academic institutions, Private sector, international organizations,
- Encourage knowledge sharing and collaborative research initiatives

Way Forward:

1. Strategic Implementation

- Develop a comprehensive International/ Regional/ and National action plan that translates conference insights into concrete strategies
- Create a monitoring and evaluation framework to track progress on key recommendations
- Establish a dedicated task force to follow up on conference outcomes

2. Policy Advocacy

- Engage with policymakers to integrate conference recommendations into national and regional development plans
- Advocate for legislative support for sustainable water, energy, and environmental practices
- Push for increased funding and incentives for innovative solutions

3. Knowledge Dissemination

- Publish a comprehensive report and policy briefs
- Organize regional workshops to share learnings
- Develop an open-access knowledge platform for continuous dialogue and information sharing.

4. Global Collaboration

- Strengthen international partnerships for knowledge exchange
- Align efforts with global frameworks like: Sustainable Development Goals (SDGs), Kunming-Montreal Global Biodiversity Framework, Paris Climate Agreement etc

5. Continuous Innovation

- Establish an annual conference to track progress and discuss emerging challenges
- Create an innovation fund to support promising technologies and approaches

- Develop a global network of experts and practitioners in water, energy, and environmental sustainability

This vibrant exchange of ideas through the main conference sessions and side events highlighted the need for interdisciplinary, collaborative approaches to water, energy, and environmental challenges. The event also underscored the importance of building capacity, sharing knowledge, and developing inclusive and resilient strategies to achieve long-term sustainability goals. The conference demonstrated that addressing water, energy, and environmental challenges requires a holistic, collaborative, and innovative approach. The recommendations provide a strategic roadmap for transformative action, emphasizing the transversality of these critical domains.



Annexures

Annexure-1:Agenda

Water Transversality Global Awards and Conclave 2024 International Conference

ON

Deciphering Transversality of Water-Energy-Environment Nexus

5th -6th December 2024,

Dr Ambedkar International Centre, 15, Janpath Road, Windsor Place New Delhi

Time	Session/Activity	Details
DAY - 1		
08:30 – 10:00	Registration	
10:00 - 10:45	Plenary-I (BHIM Hall)	Sh. Amit Ghosh, Additional Secretary, Ministry of Social Justice & Empowerment Mr. Shombi Sharp, UN Resident Coordinator India; Sh. Sachin Chaturvedi, Director General, RIS; Dr. Arvind Kumar, President, India Water Foundation; Ms. Mikiko Tanaka, Director SSWA Office, UNESCAP
10:45 – 11:10	Tea Break	
11:10 – 12:10	Leaders Forum (BHIM Hall) - Deciphering Water-Energy- Environment Nexus Through Multi-sectoral Dialogues	Moderator- Ms. Shweta Tyagi, Chief Functionary, India Water Foundation Speakers Dr. Eddy Moors, Rector, IHE Delft Institute of Water Education; Mr. Saraswati Prasad, Senior Advisor, UNOPS; Mr. Anshul Jain, Convenor, Indo-Nordic Water Forum; Dr. Kapil Narula, Senior Analyst, Breakthrough Agenda
12:10 – 12:40	Plenary II (Water) (BHIM Hall)	Ms. Archana Varma, Additional Secretary & MD, National Water Mission; Ms. Noa Amsalem, Water Attaché, Embassy of Israel; Sh. U. P. Singh, Former Secretary, Ministry of Textiles & Jal Shakti; Sh. Ashwin B Pandya, Secretary General, ICID

Time	Session/Activity	Details
12:40 – 14:00	Session II (BHIM Hall) – High Level Policy Dialogue on Renewable Energy, Green Hydrogen and its impact on Water and Environment	Chair -Ms. Archana Varma Moderator- Dr. Eddy Moors Speakers- Dr. Rabi Mohtar, Governor, World Water Council; Dr. S. K. Sharma, Principal Advisor, India Water Foundation; Mr. Rajan Ratna, Deputy Head, South and South West Asia Office, UN ESCAP Dr. Amitabh Tripathi, Senior Executive Director- WAPCOS Dr. Kapil Narula, Senior Analyst, Breakthrough Agenda
14:00 – 14:45	Lunch	Moderator- Dr. Ajeet Tyagi, Former DG, India Meteorological Department
14:45 – 15:45	Session III (BHIM Hall) Multi-stakeholder partnerships for inclusive Disaster Risk Management	Speakers- Ms. Parul Agarwala, Head, UN Habitat-India; Dr. Sandeep Tripathi, Principal Advisor, Mining Corporation, Odisha; Prof. Bose, Founding Director, DDF Consultants Mr. Rajnish Ranjan, Executive Director, Disaster Management DDF Consultants
15:45 – 17:00	Session IV (BHIM Hall) Water use Efficiency in Industrial sector amidst Climate Emergency	Chair- Mr. U. P. Singh, Former Secretary, Ministry of Textiles & Jal Shakti; Moderator- Ms. Noa Amsalem, Water Attaché, Embassy of Israel Speakers- Dr. S. K. Sharma, Principal Advisor, IWF Ms. Laura Sustersic, Project Manager, GIZ India Prof. A.K. Keshari, IIT Delhi Mr. Devendra Singh Fonia, Chief Marketing Officer, BioPetro clean
17:00 – 17:30	Tea Break	
17:30 Onwards	Inauguration Ceremony	Sh. Harsh Malhotra, Minister of State, Ministry of Corporate Affairs Col. Akhilesh Kumar Pandey, Chief Post Master General, Delhi Circle Dr. Arvind Kumar, President, India Water Foundation; Ms. Mikiko Tanaka, Head, South & South West Asia Office, UN ESCAP;

Time	Session/Activity	Details
DAY - 2		
09:00 – 09:30	Tea Break	
09:30 – 10:00	Plenary III (Energy) (BHIM Hall)	<ul style="list-style-type: none"> • Mr. R. K. Pachnanda, Former Chairman, Haryana Electricity Regulatory Commission; • Sh. Shailesh Nayak, Director, National Institute of Advanced Studies; • Ms. Mikiko Tanaka, Head, South & South West Asia Office, UN ESCAP
10:00 – 12:00	Session I (BHIM Hall) Interdisciplinary Approaches for achieving Energy and Water Sustainability	<p>Chair & Moderator-Ms. Mikiko Tanaka, Head, SSWA Office, UN ESCAP</p> <p>Speakers-</p> <ul style="list-style-type: none"> · Mr. Sophearin Chea, Regional Water Policy Expert, Mekong River Commission (online); · Dr. Pech Sokhem, Executive Director, Cambodia Development Resource Institute (online) · Ms. Ying Yang, Regional Energy Specialist, Asia and the Pacific, Bureau for policy and programme support, UNDP · Dr. Kapil Narula, Senior Analyst, Breakthrough Agenda, Climate Champions Team · Dr. Smruti S. Pattanaik, Research Fellow, MP IDSA · Ms. Ambika Vishwanath, Co-founder, Kubermein Initiative, Mumbai · Mr. Shawahiq Siddiqui, Founding Partner, Indian Environment Law Organisation
12:00 – 13:30	Session II (BHIM Hall) High Level Policy Dialogue on Pathways to Decarbonization and Net Zero Energy sector through Water Circularity	<p>Chair- Dr. Akhilesh Gupta, Former Secretary, SERB</p> <p>Moderator- Dr. Hitesh Vaidya, Principal Advisor-IWF</p> <p>Speakers-</p> <ul style="list-style-type: none"> • Mr. Anshuman, Director, TERI; • Ms. Kavita Tewari, Strategic Alliances, Principal Scientific Adviser to GOI • Dr. Uday Kelkar, Managing Director and CEO, NJS Engineers • Ms. Vandana Yadav, Advisor, India-EU Water Initiative, GIZ • Mr. Neeraj Gahlawat, Senior water resources specialist, Embassy of Israel in India • Mr. Shashank Adlakha, Chief Operating Officer, Renergy Dynamics
13:30 – 14:15	Lunch	
14:15 – 15:15	Leadership Dialogue-II (BHIM Hall) Nexus Governance: Multi-sectoral Dialogues for a sustainable tomorrow	<p>Chair-His Holiness Acharyashri Lokesh Muni Ji, Founder, Ahimsa Vishwa Bharati</p> <p>Moderator- Sh. Ram Mohan Mishra, Chairman, Investment Promotion Board, Meghalaya</p> <p>Speakers</p> <ul style="list-style-type: none"> • Sh. Navneet Sehgal, Chairman, Prasar Bharti • Sh. Shravan Goel, VP, Sewa Bharati Sansthan

Time	Session/Activity	Details
15:15 – 15:40	Plenary IV (Environment) (BHIM Hall)	<ul style="list-style-type: none"> • Mr. Atul Bagai, Former Head, UNEP India; • Dr. Nagesh Kumar, Director, Institute for Studies in Industrial Development • Dr. Arvind Kumar, President, India Water Foundation
15:40 – 16:25	Session III (BHIM Hall) High Level Policy Dialogue on Environment, Water, and Health Trilemma: Sustainable strategies for the future	<p>Chair & Moderator- Mr. Atul Bagai</p> <p>Speakers</p> <ul style="list-style-type: none"> • Mr. Vinod Mishra, Country Manager, UNOPS; • Ms. Kaveeta Prasad, Senior Consultant, Gender Issues • Mr. Shawahiq Siddiqui, Founding Partner, Indian Environment Law Organisation
16:25 – 17:30	Session IV (BHIM Hall) Environmental Co-benefits of Ecosystem Restoration	<p>Chair-Mr. U. P. Singh</p> <p>Speakers-</p> <ul style="list-style-type: none"> • Mr. Vishwa Ranjan, Programme Officer, Water and Wetlands, South Asia Regional Office, IUCN • Mr. Sridhar Paladugu, Founder & Talk Show Host Channel 5 media • Dr. N P Singh, Asst. Professor, Dept. of geography, SBSC, DU
17:30 – 18:00	Tea Break	
18:00 Onwards	Valedictory and Awards	<ul style="list-style-type: none"> • Sh. Raj Bhushan Chaudhary, Hon'ble Minister of State, Ministry of Jal Shakti, GOI • Dr. Arvind Kumar, President, India Water Foundation; • Ms. Mikiko Tanaka, Head, South & South West Asia Office, UN ESCAP
SIDE EVENTS		
Day 1 – 5th Dec. 2024	India Water Foundation (NALANDA HALL)	Against Ecosystem Contamination
14:00 – 15:00	Lunch	
15:00 – 17:00	IHE DELFT (NALANDA HALL)	Capacity building for the Indian water professionals
Day 2 – 6th Dec. 2024	IUCN (Conference Room - 3)	India's Priorities and Opportunities for Conserving Freshwater Biodiversity & Ecosystems
10:00 – 13:30	UNOPS (NALANDA HALL)	Waters of Change: Building Resilience Amidst Climate Crisis
12:00 – 13:30	GIZ (Conference Room - 1)	Water-Energy-Food (WEF) Nexus: Integrated Approach for Sustainable Ecosystems
13:30 – 14:30	Lunch	
15:30 – 17:00	ISID (Conference Room-3)	Policy Roundtable on Pathways to Green Industrialization in India: Challenges and Opportunities

Annexures

Annexure-2: Participants

Sr.	Name	Company
1	Sh. Kamlesh Paswan	Ministry of Rural Development GOI
2	Sh. Harsh Malhotra	Ministry of Corporate Affairs, Government of India
3	Sh. Raj Bhushan Chaudhary	Ministry of Jal Shakti, Government of India
4	Mr. Shombi Sharp	United Nations India
5	Ms. Mikiko Tanaka	SSWA OFFICE UNESCAP
6	H.H. Acharyashri Lokesh Ji	Ahimsa Vishwa Bharti
7	H.E. Mrs. Harisoa Lalatiana Accouche	Embassy of Seychelles
8	H.E. Mr. Reuven Azar	Embassy of Israel in India
9	Sh. Navneet Sehgal	Prasar Bharti
10	Dr. Amit Kumar Ghosh	Ministry of Social Justice and Empowerment
11	Smt. Archana Verma	National Water Mission, Ministry of Jal Shakti
12	Archana Chatterjee	IUCN
13	Comdt. Rajan B.	ICG
14	Dr Daniel J	USI
15	Dr Jagadish Prasad Patra	National Institute of Hydrology, Roorkee
16	Dr Kriti Akansha	Mu Gamma Consultants Pvt Ltd
17	Dr Neha	Freelancer
18	Dr Praveen Gautam	OP Jindal University
19	Dr. Ajit Tyagi	India Water Foundation
20	Dr. Akhilesh Gupta	Former Secretary, SERB
21	Dr. Anil Kumar Lohani	National Institute of Hydrology, Roorkee
22	Dr. Anjali Tandon	ISID
23	Dr. Arvind Kumar	India Water Foundation
24	Dr. Ashutosh Mishra	Dr, B R Ambedkar National Law University
25	Dr. Baban Kumar	CSIR
26	Dr. Daniel J.	United Service Institution of India
27	Dr. Devender Bhardwaj	Delhi University
28	Dr. Devideen Yadav	ICAR-IISWC, Uttarakhand
29	Dr. Dhananjay Pati Tripathi	D/o Agriculture, Govt of Bihar
30	Dr. Eshita Gupta	KPMG, Gurugram
31	Dr. G. SHANMUGA SUNDAR	Sri Sai Ram Institute of Technology
32	Dr. Girija Bharat	Mu Gamma Pvt. Ltd.
33	Dr. Himanshu Arora	Indian Oil Corporation Limited
34	Dr. J Harsha	Government of India
35	Dr. K S R Murthy	APFERWAS
36	Dr. Kapil K. Narula	CII
37	Dr. Kapil NARULA, Ph.D.	Climate Champions Team Dubai, UAE
38	Dr. N P Singh	Shaheed Bhagat Singh (Eve.) College, DU
39	Dr. Nagesh Kumar	ISID
40	Dr. Neha	UNOPS India
41	Dr. Rajeev Ranjan Mishra	CII
42	Dr. S. K. Sharma	India Water Foundation
43	Dr. Sabita Madhvi Singh	Ministry of Jal Shakti
44	Dr. Sachin Chaturvedi	RIS
45	Dr. Sandeep K Mukhopadhyay	Ministry of Earth Sciences

Sr.	Name	Company
46	Dr. Sandeep Tripathi	India Water Foundation
47	Dr. Sangeet Tiwari	MP
48	Dr. Sanjay Sengupta	CSIR
49	Dr. Sarvjit Dudeja	Science
50	Dr. Satendra K Jain	NTPC
51	Dr. Smruti S. Pattanaik	MP-IDSA
52	Dr. Soubik Bhattacharjya	TERI
53	Dr. Subrata Halder	WRI&DD, Govt. West Bengal
54	Dr. Sumanta Bhattacharya	UNESCO
55	Dr. Suresh Nayan	ClearMedi Hospital and Cancer Centre
56	Dr. Syed Ainul Hussain	Wildlife Institute of India
57	Dr. Syed Alnul Hussain	Wild Life Institute of India
58	Dr. T. S. Bisht	India Water Foundation
59	Dr. Uday Kelkar	NJS Engineers India Pvt. Ltd.
60	Dr. V. M. Bhandari	CSIR-NCL
61	Dr. Victor Shinde	NIUA
62	Dr. Yashveer Bhatnagar	IUCN
63	Dr.Dinesgwar Prasad Singh	IWWA
64	Dr.K.PALANIKUMAR	Sri Sai Ram Institute of Technology
65	Er. Vishal Kumar Saxena	Circle Haldwani District Nainital
66	Mr Asad Umar	Aga Khan Foundation
67	Mr Casper Mayland	Denmark Embassy
68	Mr Debajit Das	National Project Coordinator, UNIDO India
69	Mr Emil Stovring Lauritsen,	Denmark Embassy
70	Mr Jatin Mathur	CLASP (Collaborative Labeling and Appliance Standards Program) and E4A (Efficiency for Access)
71	Mr Manisha Choudhary	UNEP
72	Mr Nathaniel B Dkhar	Mu Gamma Consultants Pvt Ltd
73	Mr Trilok Singh	UNOPS
74	Mr. A B Pandya	ICID
75	Mr. A K Singh	ACM
76	Mr. Aayush Mahajan	PwC
77	Mr. Abhinish Boora	TERI
78	Mr. Abhishek	Shyam Lal College
79	Mr. Abhishek Jain	CEEW
80	Mr. Aditya Vikram Jain	WELL labs
81	Mr. Adnaan Noori	Water Digest
82	Mr. Ajit Savadi	NJS Engineers India Pvt. Ltd.
83	Mr. Akshendra	DFCCIL
84	Mr. Aman Tiwari	Shyam Lal College
85	Mr. Aman Tyagi	India Water Foundation
86	Mr. Amit Parihar	Shakti Foundation
87	Mr. Amitabh Tripathi	WAPCOS
88	Mr. Amittosh Pandey	WRI
89	Mr. Anant Joshi	IIEC
90	Mr. Anas Rahman	IISD
91	Mr. Angshukana Datta	INRM Consultant Pvt. Ltd
92	Mr. Anil Sharma	RIS
93	Mr. Ankit	Sustain Plus
94	Mr. Ankit Mudgal	Sustain Plus
95	Mr. Anshul Jain	Indo Nordic Water Forum
96	Mr. Anuj	GIZ

Sr.	Name	Company
97	Mr. Anupam Ghosh	Anondita Medicare Limited
98	Mr. Anupam Ray	KPMG
99	Mr. Anurag	Bain
100	Mr. Archisman Mitra	IWMI
101	Mr. Ardip Rathod	Greenzup
102	Mr. Arjun Mehta	Green Hydrogen Organisation
103	Mr. Arnab Saxena	Dayalsingh College
104	Mr. Arnav Singh Parihar	Amity International School, Vasundhara
105	Mr. Arora	DFCCIL
106	Mr. Arul Kumaran	Ministry of Electronics
107	Mr. Arumugam Sankar	Empower India
108	Mr. Arun Jain	JPMG and Associates LLP
109	Mr. Asad Umar	Agakhan Foundation
110	Mr. Aseem Goyal	GA Infra Pvt. Ltd
111	Mr. Ashim Chakraborty	DFCCIL
112	Mr. Ashish Agarwal	SEROS shipping & Logistics
113	Mr. Ashish Chaturvedi	UNDP India
114	Mr. Ashish Dobhal	IIT Delhi
115	Mr. Ashish Kumar	Agra College
116	Mr. Ashish Sharma	India Water Foundation
117	Mr. Ashok Kumar Tyagi	Delhi Urban Shelter Improvement board
118	Mr. Atanu Pradhaan	SMRF
119	Mr. Atharv Sharma	Darbari Lal DAV Model School
120	Mr. Atul Dheer	USAID's SAREP Program
121	Mr. Avi Sharma	India Water Foundation
122	Mr. Ayan K Deb	Tata Trust
123	Mr. B. N. Shaha	Indo Global
124	Mr. Baidnath Pandey	RIS
125	Mr. Barhm Dutt Sharma	BJP
126	Mr. Bharat Bhushan Tyagi	Farmer
127	Mr. Bilal Salim	GIZ
128	Mr. Bishop Thapa	CLASP
129	Mr. Biswarup	IKEA Foundation
130	Mr. C S Shivhare	WRD, Bemetra
131	Mr. C. S. Shivhare	EE Water Resources Division, Bemetara
132	Mr. Casper Mayland	Royal Danish Embassy
133	Mr. Chandrashekhar	DFCCIL
134	Mr. Debajit Palit	NTPC School of Business
135	Mr. Debashish Jana	Gail
136	Mr. Deepak Parashar	Delhi Circle
137	Mr. Deepanshu Dev Rana	Dayalsingh College
138	Mr. Deepto Roy	Shardul Amarchand Mangaldas & Co.
139	Mr. Devarnav Sharma	NCPEDP
140	Mr. Devendra Singh Fonia	Bio-Petro Clean
141	Mr. Dhananjay Kumar	India Water Foundation
142	Mr. Dharmendra Pratap Singh	Gail
143	Mr. Dhaval Pandya	Shree Someshwar Education Trust
144	Mr. Dinesh Chand	DDWS
145	Mr. Dinesh Soni	DFCCIL
146	Mr. Dipankar Bishnoi	USAID's SAREP Program
147	Mr. DK Saxena	OSD
148	Mr. Dushyant Singh	TERI

Sr.	Name	Company
149	Mr. Emil Stovring Lauritsen	Royal Danish Embassy
150	Mr. Gajendra Agarwal	GA Infra Pvt. Ltd
151	Mr. Ganesh Neelam	Tata Trust
152	Mr. Ganesh Pillai	Sustain Plus
153	Mr. Gaurav Singh	DFCCIL
154	Mr. Gopal	IIT Delhi
155	Mr. Gulshan Kumar	Anondita Medicare Limited
156	Mr. H. K. Garg	Gail
157	Mr. Hardik	EXCOVENTS
158	Mr. Hari Natarajan	UNDP
159	Mr. Harish Kumar Hingorani	Watsancad Solution, Bhopal
160	Mr. Harpreet Ubhi	Edmonton, Canada
161	Mr. Himanshu Mishra	KHETHWORKS
162	Mr. Himanshu Tyagi	INRM Consultant Pvt. Ltd
163	Mr. Hitesh Vaidya	India Water Foundation
164	Mr. Isaac Mthaphwi	Malawi High Commission
165	Mr. Ishan Purohit	IFC
166	Mr. J Harsha	IHE Delft Institute of Water Education
167	Mr. Jagdish K Bassin	India Water Foundation
168	Mr. Jaidev Joshi	IUCN
169	Mr. Jatin Mathur	IIT delhi
170	Mr. Jawed	Ahima Vishwa Bharti
171	Mr. Jawed Alam Khan	Institute of Policy Studies A
172	Mr. JING HUANG	UNESCAP SSWA Office India
173	Mr. Jitender Singh Sehrawat	Futura Travels Limited, ESSAR
174	Mr. Jitendra Gupta	GAIL CO New Delhi
175	Mr. Joshua Johnson	India Water Foundation
176	Mr. Jyotish Talukdar	Kalong Kapili
177	Mr. K Ravi Chandra	The Mann School
178	Mr. Kanwal Singh Chauhan	Farmer
179	Mr. Karan	Shyam Lal College
180	Mr. Karthik Ganesan	CEEW
181	Mr. Kishor Patel	Hazira Compressor Gail India Limited
182	Mr. Krishan Tyagi	GIZ
183	Mr. Krishnav Gupta	Student
184	Mr. Krishnendu Mukherjee	Ryan International School
185	Mr. Kuldeep Singh	UIS
186	Mr. Kumar Achhitanand	Bharat NaturSol Pvt. Ltd
187	Mr. Lakshay Mohan	Sociallery Media
188	Mr. Lalit Yadav	Bharat NaturSol Pvt. Ltd
189	Mr. Lav Kumar	ESSAR Group
190	Mr. Lupinder Kumar	Dept. Soil & Water Conservation, Jalandhar
191	Mr. M. Durga Prasad	APFERWAS
192	Mr. M. P. Singh	India Water Foundation
193	Mr. Mahdiya Chouhan	Bluebells School International
194	Mr. Mahendra Priya	Water Digest
195	Mr. Mange Ram Adhana	Association for Promotion Sustainable Develpmnt
196	Mr. Manish Kumar	Patna
197	Mr. Manish Kumar Singh	India Water Foundation
198	Mr. Manoj Malik	DFCCIL
199	Mr. Mayank Agarwal	GA Infra Pvt. Ltd
200	Mr. Mibin Mammen	India Water Foundation

Sr.	Name	Company
201	Mr. Mohan Gasiganti	Ground water department, Telangana
202	Mr. Mukesh	RSS
203	Mr. Mukul Gupta	Gail
204	Mr. Mukund Kumar	Probe Intelligence Services
205	Mr. Nagasreenivas K	DFAT, Australian High Commission
206	Mr. Nand Kishore Tyagi	Bharat NaturSol Pvt. Ltd
207	Mr. Narendra Tailor	Hazira Compressor Station, Gail (India) Limited
208	Mr. Naveen Gulati	Railway Board
209	Mr. Navneet Gulati	Member (Infra) Railway Board
210	Mr. Neeraj Gahlawat	Embassy of Israel in India
211	Mr. Neeraj Kumar Jha	Delhi Circle
212	Mr. Neeraj Malhotra	Sanjay Agarrwal ji ke reference
213	Mr. Nikunj Usadadia	CGIAR
214	Mr. Nilanjan Ghose	GIZ
215	Mr. Nimish Vora	PWC
216	Mr. Nitin Bassi	CEEW
217	Mr. Nitin Mohindru	DFCCIL
218	Mr. Nitin Tyagi	India Water Foundation
219	Mr. NS Bisht	DFCCIL
220	Mr. OM PRAKASH	Gail
221	Mr. Omkar Singh	RSS
222	Mr. P C Sharma	ISA
223	Mr. P. Halder	GAIL NOIDA
224	Mr. P. Sumana	WAPCOS
225	Mr. P.K. Singh	Meerut University
226	Mr. Paresh Shirsath	Borlaug Institute for South Asia (CGIAR)
227	Mr. Prakhar	DFCCIL
228	Mr. Prasanjit Bhowmick	Greenovera
229	Mr. Prasanta Kumar Mohapatra	CPHEEO, MOHUA
230	Mr. Prashanth	SELCO Foundation
231	Mr. Prasun Kumar Das	GIZ
232	Mr. Pratyush	Indian Oil Corporation Limited
233	Mr. Praveen Kumar	DFCCIL
234	Mr. Priyanshu	Shyam Lal College
235	Mr. Prodyut Mukherjee	Engenuity
236	Mr. PSSR Murthy	KPMG
237	Mr. Pulkit Khare	ACEO, GNIDA
238	Mr. PUNEET RANJAN	Gail
239	Mr. Pushpendra K Singh	NIH Roorkee
240	Mr. R. K. Agarwal	Wapcos
341	Mr. R. N. Malik	Rtd. Engineer in Chief Water Resource Haryana
242	Mr. R. R. Pandey	Media
243	Mr. Rahul Israni	Wapcos
444	Mr. Raj Karan Sinha	DFCCIL
245	Mr. Rajat Mendiratta	GA Infra Pvt. Ltd
246	Mr. Rajeev Ranjan	IIT Delhi
347	Mr. Rajeev Seth	Delhi
248	Mr. Rajeev Singh	WAPCOS
249	Mr. Rajesh Kumar	Ex. Central Water Commission
250	Mr. Rajesh Kumar	DFCCIL
251	Mr. Rajiv Agarwal	ESSAR Ports Limited
252	Mr. Rajiv Ranjan Bharti	Philately Bureau

Sr.	Name	Company
253	Mr. Rajni Kant Agrawal	WAPCOS
254	Mr. Rajnish Ranjan	India Water Foundation
255	Mr. Rajshekhar Raju Podili	JSW Vijayanagar Works
256	Mr. Rakesh Gupta	Central Water Commission
257	Mr. Rakesh Kumar	Delhi Circle
258	Mr. Rakesh Nainthani	RSS
259	Mr. Ranjit Chandra	Engenuity
260	Mr. Ravi Kumar	Delhi Circle
261	Mr. Ravi Shankar	Central Water Commission
262	Mr. Ravinder Gupta	VHP
263	Mr. Rishi Srivastava	ICID
264	Mr. Rishit Vyas	Greenzup
265	Mr. Ritik Kumar	Dayalsingh College
266	Mr. RN Malik	Delhi
267	Mr. Rohit Bansal	GAIL
268	Mr. Rohit Mittal	World Bank
269	Mr. Rupesh	ALIMCO
270	Mr. RV Singh	DFCCIL
271	Mr. S. Shaha	Indo Global
272	Mr. S. Sundaram	Niti Aayog
273	Mr. Sandeep Goel	World Bank
274	Mr. Sandeep Rana	ESSAR Ports Limited
275	Mr. Sanjay Agarwal	Delhi
276	Mr. Sanjay Guleria	NJS Engineers India Pvt. Ltd.
277	Mr. Sanjay Kumar	Delhi Circle
278	Mr. Sanjay Pandey	NEWS Network
279	Mr. Sanjoy Chakraborty	Haldia Energy Limited
280	Mr. Santosh	Shaurya Business Solutions
281	Mr. Saraswati Prasad	UNOPS India
282	Mr. Satish Kamboj	Central Water Commission
283	Mr. Satyam	ALIMCO
284	Mr. Saurabh Kumar Mohan	Gail
285	Mr. Shachaf	Embassy of Israel in India
286	Mr. Shailendra Sharma	Uttam Bharat
287	Mr. Sharad Jadhav	Bahujan Samudaay
288	Mr. Sharad Kamble	Bharat Petroleum
289	Mr. Shashank Adlakha	Reenergy Dynamics
290	Mr. Shashi Yadav	All India Womens Conference
291	Mr. Shashvat Dhiman	Student
292	Mr. Shawahiq Siddiqui	India Environment Law Organisation
293	Mr. Shikhar Jain	CII
294	Mr. Shilp Verma	IWMI
295	Mr. Shirshendu	PwC
296	Mr. Shivam Chauhan	Bharat NaturSol Pvt. Ltd
297	Mr. Shivam Sharma	Anondita Medicare Limited
298	Mr. Shivam Sharma	Anondita Medicare
299	Mr. Shresth Tomar	Amity International School, Vasundhara
300	Mr. Shubham	Shyam Lal College
301	Mr. Siva	CII
302	Mr. Somnath Dutta	Haldia Energy Limited
303	Mr. Somsuklo Biswas	IIEC
304	Mr. Sridhar Paladugu	Channel 5 Media

Sr.	Name	Company
305	Mr. Sudeep Shukla	EPAL
306	Mr. Sumit Pal	Syngeta Foundation
307	Mr. Suneet Manjavkar	Industry Head water - Business Development
308	Mr. Sunil Kumar	Delhi Circle
309	Mr. Sunil Phogat	Addl. Commissioner, Jalandhar
310	Mr. Sunil Sharma	ITDC
311	Mr. Surender Gupta	Dunar
312	Mr. Sushil Kumar	Gail Varanasi
313	Mr. Swanadooti Sarkar	UNESCAP SSWA Office India
314	Mr. Syed Yasir Ahmad	International Energy Agency
315	Mr. Tanishq	Sociallery Media
316	Mr. Trilok Singh	UNOPS India
317	Mr. Ujjwal Dhiman	UP
318	Mr. Ujjwal Kumar	CUTS
319	Mr. Umakant Sukhdev	EE Water Resources Division, Bemetara
320	Mr. Umakant Sukhdev	SDO, WRD, Bemetra
321	Mr. Utkarsh Rathi	UNOPS
322	Mr. Uzra Sultana	Bangalore IHE DELFT
323	Mr. V Kannan	CII
324	Mr. Vaibhav Kumar Mittal	Zion Education
325	Mr. Victor Lesniewski	khetworks
326	Mr. Vinay Jaju	Swich on
327	Mr. Vineet Bhatia	Grant Thornton
328	Mr. Vinod Mishra	UNOPS India
329	Mr. Virendra Kumar	Gurukul International
330	Mr. Vishal Toro	CLEAN
331	Mr. Vishwa Sinha	IUCN
332	Mr. Vishwa Ranjan Sinha	IUCN Asia Regional Office, Bangkok
333	Mr. WOO Chan Chang	Koica
334	Mr. Yash Kumar Singh	Dayalsingh College
335	Mr. Yogesh Kumar Kushwaha	Indian Institute of Technology Roorkee
336	Mr. Yugal Joshi	Niti Aayog
337	Mrs. Rajeev Seth	Delhi
338	Ms Neha Lakhwan	Mu Gamma Consultants Pvt Ltd
339	Ms Taranpreet Kaur	UNOPS
340	Ms. Amita Chandra	Shaurya Business Solutions
341	Ms. Anagha Krishnan	Mu Gamma Pvt. Ltd
342	Ms. Ananya Tyagi	India Water Foundation
343	Ms. Anita Miya	Aga Khan Agency for Habitat India
344	Ms. Ankita Menon	INDO NORDIC WATER
345	Ms. Anupama Madhok Sud	Water Digest
346	Ms. Apporva Oza	Aga Khan Foundation
347	Ms. Archana Chatterjee	IUCN
348	Ms. Asha Singh	SMRF
349	Ms. Aswina Sreekumar	UNIVERSITY OF WOLLONGONG, DUBAI
350	Ms. Bhanukala Shrivastava	YFC Project DMRC
351	Ms. Bhavna	DFCCIL
352	Ms. Charul Agarwala	WAPCOS
353	Ms. Debashri Vashistha	Dayalsingh College
354	Ms. Deepna Kaveriappa	UNOPS
355	Ms. Divyansha	The Indian Heights School
356	Ms. Divyanshi Tanwar	Gyan Mandir Public School

Sr.	Name	Company
357	Ms. Drishti	Shyam Lal College
358	Ms. Fawzia Tarannum	TERI
359	Ms. Harsha Meenawat	WRI
360	Ms. Indrani Mukherjee	GIZ
361	Ms. Iti Gupta	CGWB
362	Ms. Jyoti	DFCCIL
363	Ms. Jyoti Shankar Prasad	UNOPS India
364	Ms. Jyotsna	ISA
365	Ms. Kanchan Rohilla	The Indian Heights School
366	Ms. Kanika Grover	UNESCAP SSWA Office India
367	Ms. Karishma Bisht	FICCI
368	Ms. Kavita Prasad	India Water Foundation
369	Ms. Kavita Saraswat	World Bank
370	Ms. Kriti Akansha	Mu Gamma Pvt. Ltd.
371	Ms. Kritika Kumar	GIZ
372	Ms. L S Dahiya	ADANI
373	Ms. Laura Sustersic	GIZ GmbH
374	Ms. Lavanya Chauhan	Gyan Mandir Public School
375	Ms. Louisa Cramer	GIZ
376	Ms. Madhuri Shukla	UNOPS India
377	Ms. Mallika	Delhi
378	Ms. Malvika Agarwal	GA Infra Pvt. Ltd
379	Ms. Manalika Pandya	Devram International
380	Ms. Manisha Banik	West Bengal
381	Ms. Manisha Chaudhary	UNEP
382	Ms. Mannat Kaur	Delhi Public School RK Puram
383	Ms. Manpreet	EXCOVENTS
384	Ms. Manpreet Kaur	IUCN
385	Ms. Manu Kapoor	Essar
386	Ms. Monali Zeya Hazra	USAID
387	Ms. Monika Lamba Antil	Gyan Mandir Public School
388	Ms. Nathaniel B. Dkhar	Mu Gamma Pvt. Ltd.
389	Ms. Neelu Kalra	Darbari Lal DAV Model School
390	Ms. Neeru Bhushan	Bluebells School International
391	Ms. Neha Aggarwal	Water Digest
392	Ms. Neha Chaudhary, IRS	Income Tax
393	Ms. Neha Dhingra	CLASP
394	Ms. Neha Durga	CLASP
395	Ms. Neha Lakhwan	Mu Gamma Pvt. Ltd.
396	Ms. Nidhi Sarin	GEAPP
397	Ms. Nidhi Vatsa	Aga Khan Agency for Habitat India
398	Ms. Nikita Purty	Oxford Policy Management
399	Ms. Noa Amsalem	Embassy of Israel in India
400	Ms. Palak	Shyam Lal College
401	Ms. Parul Agarwala	UN-Habitat
402	Ms. Prachi	DFCCIL
403	Ms. Perna Sharma	GIZ
404	Ms. Priya	Shyam Lal College
405	Ms. Priyadarshini Karve	CLEAN
406	Ms. Radha Priya P	GIZ
407	Ms. Radhika Kaul Batra	Office of UN Resident Coordinator, India
408	Ms. Rajni	DFCCIL

Sr.	Name	Company
409	Ms. Rashmi murali	TERI
410	Ms. Rekha Krishnan	WEFT
411	Ms. RENU SUNIL FATEHPUR	Gail
412	Ms. Rishita	Shyam Lal College
413	Ms. Romika Saha	Greenovera
414	Ms. Ruby Rajput	DDO, RN Gujarat
415	Ms. Ruchi Gupta	GIZ
416	Ms. Sadhvi Gautam	Amity International School, Vasundhara
417	Ms. Sanobar Imam	CUTS International
418	Ms. Shailika Sinha	UNOPS
419	Ms. Sheela Ashopa	GGSSS Shyam Sadan Jodhpur
420	Ms. Shweta Bharti	DC, UK
421	Ms. Shweta Tyagi	India Water Foundation
422	Ms. Sonam Singh	Researcher
423	Ms. Sonia Shukla	IIEC
424	Ms. Sudipta Ghosh	SELCO
425	Ms. Sunita Bagga	Indraprastha Sahitya Bharti
426	Ms. Sunita Kamble	BPCL
427	Ms. Suparana Katyaini	CEEW
428	Ms. Sushmita Prapbu	IUCN
429	Ms. Swati Agarwal	OAK foundation
430	Ms. Swati Sagar	D/o Agriculture, Govt of Bihar
431	Ms. Sweta Bharti	Soil Conservation, Banka
432	Ms. Tanya	Deloit
433	Ms. Taranpreet Kaur	UNOPS India
434	Ms. Tincy George	Glenmark Foundation
435	Ms. Vandana Yadav	GIZ
436	Ms. Vanshika	Shyam Lal College
437	Ms. Vanshika Kalra	Darbari Lal DAV Model School
438	Ms. Vidya Mandave	CGIAR
439	Ms.Gungun	Bluebells School International
440	Prof. A. K. Gosain	INRM Consultant Pvt. Ltd
441	Prof. Amit Bose	Co-Founder, Director of DDF Consultants
442	Prof. Ashok K. Keshari	India Water Foundation
443	Prof. B Ravi Kumar Pillai	International Centre of Excellence for Dams
444	Prof. Baban Kumar S. Bansod	CSIO, Chandigarh
445	Prof. Kulvir Gujjar	Delhi University
446	Prof. Santosh Mehrotra	University of Bath, UK
447	Prof. Sushma Yadav	IIPA
448	Prof. Vimal Chandra Srivastava	IIT Roorkee
449	R. K. Pachnanda	India Water Foundation
450	Sh. Akhilesh Pandey	India Post, Delhi Circle
451	Sh. Anil Gupta	General Secretary, RSS
452	Sh. Anshuman	TERI
453	Sh. B L Verma	Ministry of Social Justice and Empowerment, GOI
454	Sh. Shailesh Nayak	National Institute of Advanced Studies
455	Sh. U P Singh	Ministry of Textiles GOI
456	Sh. Virendra Sachdeva	President BJP- Delhi
457	Shri Mahipal Ji	Paryavaran Sanyojak Gatividhi, Meerut Praant
458	Shri Ramavtaar Ji	Paryavaran Sanyojak Gatividhi, Meerut Praant
459	Smt. Rubising Rajput	Panchayat, Anand
460	Smt. Stuti Kacker	India Water Foundation
461	Yash Veer Bhatnagar	IUCN

Annexures

Annexure-3: Media Coverage

We are grateful to the media fraternity for the wonderful 400+ media outlets coverage given to the Water Transversality Global Awards and Conclave 2024 and expect the same for the future events.

ThePrint news article titled "Pioneering Global Call to Action: Transversality Awards and Conclave". The article features a photograph of three men on a stage, one of whom is presenting an award. The background of the photo shows a banner for the "International Conference on Deciphering Transversality of Energy-Environment Nexus".

Front page of the Hindi newspaper "Ravivar" (Saturday). The main headline reads "ट्रांसवर्सलिटी ग्लोबल अवार्ड्स और कॉन्क्लेव: जल, ऊर्जा और पर्यावरणीय स्थिरता की दिशा में एक निर्णायक कदम" (Transversality Global Awards and Conclave: A decisive step towards water, energy and environmental sustainability). The page includes a photograph of the award ceremony and a small advertisement for "SUGANDH MASALA TEA".

Press Trust of India news article titled "Breaking Barriers: Cross Sectoral Collaboration to Foster Water Transversality". The article features a photograph of a group of officials seated at a table during a formal event. The background shows a banner for the "Water Transversality Global Awards and Conclave".

Front page of the Hindi newspaper "Kareem" (Monday). The main headline reads "वॉटर ट्रांसवर्सलिटी ग्लोबल अवॉर्ड्स एंड कॉन्क्लेव का आयोजन" (Organizing Water Transversality Global Awards and Conclave). The page includes a photograph of the award ceremony and a small advertisement for "SUGANDH MASALA TEA".

Republic news article titled "Human Interventions Threaten Water Resources, Environment: Experts Warn At Water Conclave". The article features a photograph of a group of people on a stage. The background shows a banner for the "Water Transversality Global Awards and Conclave".

NCR Chronicle news article titled "Breaking Barriers: Cross Sectoral Collaboration to Foster Water Transversality". The article features a photograph of a group of officials seated at a table during a formal event. The background shows a banner for the "Water Transversality Global Awards and Conclave".

British News NETWORK
Fri, Dec 13, 2024 | Updated 07:59 UTC

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Pioneering Global Call to Action: Transversality Awards and Conclave
at Dec 07, 2024

दैनिक भास्कर | **विविध**
04 | **रविवार, 07 दिसंबर 2024 | नई दिल्ली**

वॉटर ट्रांसवर्सैलिटी ग्लोबल अवॉर्ड्स एंड कॉन्वलेव का भव्य आयोजन किया

भास्कर समाचार सेवा

नई दिल्ली। वॉटर ट्रांसवर्सैलिटी ग्लोबल अवॉर्ड्स एंड कॉन्वलेव केवल एक सम्मेलन नहीं है, बल्कि एक जटिल पहलू का संभावित उत्तर है, जहां पानी, ऊर्जा, पर्यावरण और स्वास्थ्य केवल हिस्से नहीं हैं, बल्कि संपूर्ण ढांचा हैं। यह एक परिवर्तनकारी मंच है जो हमारे ग्रह के सबसे महत्वपूर्ण संसाधन की खुनिवादी परस्पर संबंधता को पहचानता है, डॉ. अरविंद कुमार ने 5 दिसंबर 2024 को नई दिल्ली में वॉटर ट्रांसवर्सैलिटी ग्लोबल अवॉर्ड्स एंड कॉन्वलेव के उद्घाटन के अवसर पर कहा। इसका उद्घाटन भारत सरकार के कौर्पोरेट मामलों, राजमार्ग और परिवहन राज्य मंत्री हर्ष महतोत्रा, इंडिया वॉटर फाउंडेशन के अध्यक्ष डॉ. अरविंद कुमार, यूएन ईएससीएपी के एसएसडब्ल्यू कार्यालय की निदेशक सुश्री मिक्किो तनाका और दिल्ली



सरकार के मुख्य डाकपाल कनैल अश्विनेश कुमार पॉडे द्वारा किया गया। इस अवसर को चिह्नित करने के लिए इंडिया पोस्ट द्वारा एक विशेष आवरण भी जारी किया गया। माननीय अतिथियों ने डॉ. अरविंद कुमार की पुस्तक फ्राइडे म्यूजिंग्स का विमोचन किया, जो उनके फ्राइडे ब्लॉग का संकलन है, और उन्होंने दक्षिण और दक्षिण-पश्चिम एशिया क्षेत्र के दस देशों पर यूएन ईएससीएपी के लिए डॉ. अरविंद कुमार द्वारा तैयार एडीजी 6 पर एक रिपोर्ट भी प्रस्तुत की। माननीय मंत्री ने इस आयोजन के लिए 23 संघटनों को एक साथ लाने की पहल के लिए डॉ. अरविंद कुमार को बधाई दी।

Sat, Dec 14, 2024 | New Delhi | 22°C

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Loic Faucon, President World Water council bestowed with Lifetime achievement awards along with dignitaries like, Prof. Eddy Moors, Rector, iHE Delft Institute of Water Education, Satya Tripathi, Secretary General Global Alliance for a Sustainable Planet, Dr Nagesh Kumar, Director Institute for Studies on Industrial Development, Sh. Navneet Sehgal, Chairman, Prasar Bharati, Parveen Kumar, CMD, Dedicated Freight Corridor Corporation Limited, and few others.

Sh. Raj Bhushan Chaudhary honourable minister of state for Ministry of Jakhakti was the chief guest for the Valedictory and Awards Ceremony. More than 60 Water Transversality Global awards in various categories like Water use efficiency in industrial sector, climate resilient agriculture practices, rain water harvesting and ground water management, water reuse and treatment were given away to organisations, districts, states, individuals, youth, schools etc. by the honourable Minister in presence of Dr Arvind Kumar and Ms. MIKIKO Tanaka.



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Union minister calls for judicious use of groundwater resources

The Central government is taking a number of steps to address the water crises in the country, he said, adding that the public and NGOs should join hands with the government to conserve water.

Ajit Ahluwalia
Last Updated: 14 December 2024, 22:05 IST



International Conference on Deciphering Transversality of Water-Energy-Environment Nexus

Water Transversality Global Awards and Conclave 2024

Dr. Arvind Kumar, Minister of State, Ministry of Corporate Affairs at the inaugural event of The Water Transversality Global Awards and Conclave held at Delhi, Arvind Kumar, President, India Water Foundation, Mikiko Tanaka, Director of the SDWA office of UN ESCAP and Dr. Ashish Kumar Pandey, Chief Post master General of the Delhi Circle presided.

NEW DELHI THURSDAY DECEMBER 19, 2024

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Entertainment & Promotional Features

Celebrating water leadership: The Water Transversality Global Awards 2024

International Conference on Deciphering Transversality of Water-Energy-Environment Nexus

Water Transversality Global Awards and Conclave 2024

Dr. Arvind Kumar, Minister of State, Ministry of Corporate Affairs at the inaugural event of The Water Transversality Global Awards and Conclave held at Delhi, Arvind Kumar, President, India Water Foundation, Mikiko Tanaka, Director of the SDWA office of UN ESCAP and Dr. Ashish Kumar Pandey, Chief Post master General of the Delhi Circle presided.

The dignitaries also released a book by Dr Arvind Kumar titled My Friday Musings alongside a report on Accelerating SDG 6 in the SDWA region for UN ESCAP.

The Water Transversality Global Awards and Conclave kicked off in New Delhi, recently, organised by the India Water Foundation with support from the Ministry of Power, Ministry of Jal Shakti, Ministry of Social Justice and Empowerment, and the SDWA Office of UNESCAP.

The event was inaugurated by Harsh Mahotra, Minister of State for Corporate Affairs and Highways and Transport; alongside Arvind Kumar, President of India Water Foundation, Mikiko Tanaka, Director of the SDWA Office of UNESCAP; and Ashish Kumar Pandey, Chief Post Master General, Delhi Circle.

India Post released a special commemorative cover for the occasion, and Arvind Kumar's book My Friday Musings was launched, along with a report on Accelerating SDG 6 in the SDWA Region for UNESCAP.

The opening plenary featured influential speakers including Shreshth Shrivastava, UN Resident Coordinator in India; Anil Ghosh, Additional Secretary at the Ministry of Social Justice and Empowerment; and Sachin Chaturvedi, Director General of IIS.

At the valedictory and awards ceremony, Raj Bhushan Chaudhary, Minister of State for Jal Shakti, presented 60+ Water Transversality Global Awards. Leadership awards went to WAFPOS, DFCCIL, and GAIL India, while the Lifetime achievement honours were given to global leaders in the water sector.

The two-day event included 18 sessions and parallel side events with knowledge partners such as UNOPS, GIZ, IUCN, and ISD.

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Business

India Water Foundation Hosts Landmark Water Transversality Awards and Conclave

December 19, 2024, 13:58



Adventure First, Pollution Last!

More in Business

UP Pollution Control Board (UP PCB) releases 10th annual report of 2023-24

UP PCB releases 10th annual report of 2023-24

UP PCB releases 10th annual report of 2023-24

UP PCB releases 10th annual report of 2023-24

Global Cooperation via Water Transversality Global Awards and Conclave



The Water Transversality Global Awards and Conclave was organized by India Water Foundation with support from the Ministry of Power, Jal Shakti, Social Justice and Empowerment of the Government of India and South and South West Asia Office of United Nations Economic and Social Commission for the Asia Pacific Region. The inauguration was opened by Mr. Shrikanth Shrivastava, UN Resident Coordinator of the United Nations in India, Sh. Anil Kumar, Additional Secretary, Ministry of Social Justice and Empowerment, Government of India, Dr. Sachin Chaturvedi, Director General, IIT, and Sh. Mahesh Tanaka, Director of the SSWA office of UN ESCAP.

Sh. Harsh Mathur, Minister of State, Ministry of Corporate Affairs and Ministry of Highways and Transport of the Government of India, inaugurated the Water Transversality Global Awards and Conclave on 30th December 2024 in New Delhi in presence of Dr. Anand Kumar, President, India Water Foundation, Sh. Mahesh Tanaka, Director of the SSWA office of UN ESCAP and Col. Ashish Kumar Pandey, Chief Post Master General of the Delhi Circle.

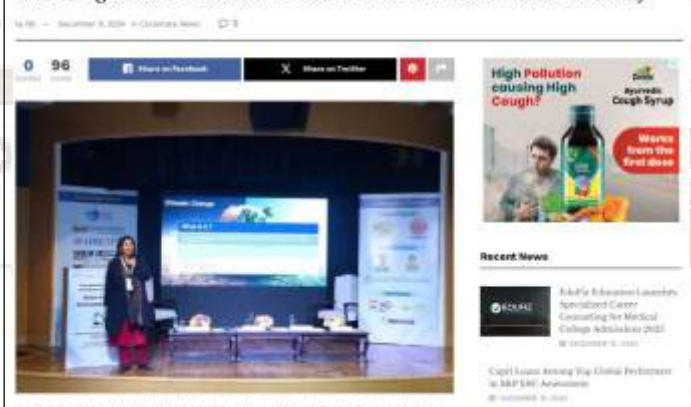
A special award was also released by the India Post to commemorate this event. The honorable guests also released a book by Dr. Anand Kumar, My Friday Blessings, a compilation of his Friday Blog and they also presented a report on SDG 6 by Dr. Anand Kumar of the two countries of South and South West Asia region for the UN ESCAP. The Hon'ble Minister congratulated Dr. Anand Kumar for this initiative of bringing 23 organizations on board to collaborate for this event.

All the dignitaries shared their concerns over the degradation of the environment and water resources due to human interferences. They showed appreciation for India Water Foundation and its team for organizing this crucial event, especially during these critical times. Sh. Gaur highlighted the challenge of liquidity and

APN NEWS

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Honoring Global Leaders for Lifetime Contributions to Sustainability



New Delhi: A side event was organized by UNOPS on 'Water of Change: Building Resilience Against a Climate Crisis' to address the urgent intersections of water security, climate change, and sustainable

Two Days, 18 Sessions, One Mission-Advancing WEF Nexus



New Delhi: The Water Transversality Global Awards and Conclave organized by India Water Foundation with support from Ministry of Power, Jal Shakti, Social Justice and Empowerment of the Government of India and South and South West Asia Office of United Nations Economic and Social Commission for the Asia Pacific Region was attended by several ITO participants, 160 participants of 12 countries and 40 agencies. The inauguration was opened by Mr. Shrikanth Shrivastava, UN Resident Coordinator of United Nations in India, Sh. Anil Kumar, Additional Secretary, Ministry of Social Justice and Empowerment, Government of India, Dr. Sachin Chaturvedi, Director General, IIT and Sh. Mahesh Tanaka, Director of the SSWA office of UN ESCAP.

Human Interventions Threaten Water Resources, Environment: Experts Warn At Water Conclave

Experts say that over-extraction of groundwater, pollution from industrial activities, and deforestation have contributed to the draining of natural resources.

India News | 3 min read | Reported by Digital Desk



All the dignitaries shared their concerns over the degradation of the environment and water resources due to human interferences. They showed appreciation for India Water Foundation and its team for organizing this crucial event, especially during these critical times. Sh. Gaur highlighted the challenge of liquidity and

AhmedabadMirror

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Others Specials Honoring Global Leaders For Lifetime Contributions To Sustainability



New Delhi [India], December 09: 90 awards given away at the Water Transversality Awards and Conclave in various categories like Leadership awards in water, energy, environment sector was given to organisations like WAPCOS, DRCCIL, GAIL, India etc. These awards are a recognition for those who have made extraordinary contributions to water management and sustainability. These awards are more than mere recognition. They are a celebration of human ingenuity, of those who have dared to think differently, who have developed innovative solutions that bridge the complex relationships between water, technology, and environmental sustainability.

Parveen Kumar, CEO, Dedicated Freight Corridor Corporation Limited, Prof Eddy Alonso, Rector, IHE Delft, Institute of Water Education bestowed with Lifetime achievement awards along with dignitaries like, Loic Fauquion, President World Water Council, Setya Tripathi, Secretary General Global Alliance for a Sustainable Planet, Dr. Nagesh Kumar, Director Institute for Studies on Industrial Development, Sh. Navneet Sehgal, Chairman, Pagar Bharat and few others.

Sh. Raj Bhushan Chaudhary honourable minister of state for Ministry of Jalshakti was the chief guest for the Valedictory and Awards Ceremony. More than 60 Water Transversality Global awards in various categories like Water use

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Get latest articles and stories on Business at LatestLY New Delhi [India], December 7: "The Water Transversality Global Awards and Conclave is not merely a conference, but a potential answer to a complex puzzle, where water, energy, environment and health are not just pieces, but the entire framework," said Dr. Anand Kumar at the inauguration of the Water Transversality Global Awards and Conclave which opened on 30th December 2024 in New Delhi by Harsh Mathur, Minister of state, Ministry of Corporate Affairs and Ministry of Highways and Transport of the Government of India, Dr. Anand Kumar, President, India Water Foundation, Mahesh Tanaka, Director of the SSWA office of UN ESCAP and Col. Ashish Kumar Pandey, Chief Post master General of the Delhi Circle.

Annexures

Annexure-4: Photo Gallery







ACKNOWLEDGEMENT

We take this opportunity to express our heartfelt gratitude to our esteemed collaborators, including the South and South-West Asia Office of UN ESCAP, Government of India's Ministry of Power, the Ministry of Jal Shakti, and the Ministry of Social Justice and Empowerment, for their unwavering support and partnership. We would also like to acknowledge the invaluable contributions of individual experts who have played a pivotal role in the formulation of this report and in ensuring the success of the Water Transversality Global Awards and Conclave 2024.

Our sincere thanks extend to all the jury and advisory committee members for their valuable suggestions during the advisory committee discussions and related meetings. Special appreciation goes to our collaborating organizations, including GAIL India Ltd., Indian Oil Corporation, Anondita Medicare Ltd., Oil India, BPCL, HPCL, WAPCOS India Ltd., and the Dedicated Freight Corridor Corporation of India Ltd., whose contributions were instrumental in bringing this conference to fruition.

We are also deeply grateful to the dignitaries and members of our knowledge partners, such as the World Water Council (WWC), the Global Alliance for a Sustainable Planet (GASP), the Institute of Studies on Industrial Development (ISID), the International Union for Conservation of Nature (IUCN), GIZ, UNOPS, the International Commission for Irrigation and Drainage (ICID), IHE Delft Institute of Water Education, and the Embassy of Israel in India. Their participation and contributions to enriching our discussions during the two-day conference have been immensely valuable.

We also wish to recognize the remarkable efforts of our speakers, panellists, and attendees, whose active participation, insightful ideas, and collaborative spirit have transformed this conclave into a dynamic platform for innovation and action. A special thanks is due to the students who participated, offering fresh perspectives and emphasizing the vital role of youth in shaping a sustainable future.

Lastly, we acknowledge the tireless efforts of the organizing committee, volunteers, and technical staff, whose diligent work ensured the event's resounding success. Your commitment and teamwork have made this conference a meaningful platform for dialogue, collaboration, and the advancement of sustainable water, energy, and environmental solutions. Together, we have laid the foundation for meaningful change and collaborative solutions to address the interdependencies of water, energy, and the environment.

We would also like to place on record our sincere appreciation for the editorial team and all other organizations and individuals who contributed to the formulation of this report.

EDITOR: Dr. Arvind Kumar
COORDINATOR: Ms. Shweta Tyagi
RAPPORTEUR: Mr. Ashish Sharma
PRODUCER: India Water Foundation
DISTRIBUTOR: India Water Foundation
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DR. ARVIND KUMAR'S

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