

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2024

LEADERSHIP FOR SUSTAINABLE DEVELOPMENT AND CLIMATE JUSTICE

February 7-9, 2024
India Habitat Centre, New Delhi



SUMMIT BULLETIN | DAY 2

8 February 2024

PLENARY | SPECIAL SESSION



Venue: Stein Auditorium

TERI ALUMNI ASSOCIATION ON VISIONARY INSTITUTION BUILDING

Speakers:

- Dr Priyanka Kochhar, President, TERI Alumni Association
- Dr Saroj Pachauri, Public Health Expert
- Dr Veena Joshi, TAA Member
- Dr Akanksha Chaurey, Director, IT Power Private Limited
- Dr Ash Pachauri, Founder, POP Movement
- Dr Rajiv Chhibber, Vice President, Sahajanand Medical Technologies Ltd
- Dr Vibha Dhawan, Director General, TERI

This session was organized by TERI Alumni Association. The discussion delved into the aspects of visionary institution building. It reflected on how TERI, as an organization, was ahead of the knowledge curve and contributed to shaping and driving sustainability actions even before the term sustainability became popular. The discussion attempted to create a roadmap for knowledge institutions to achieve the present climate goals. ■



DR ASH PACHAURI
Founder, POP Movement

“Dad’s vision was that the 1.8 billion youth of the world must take knowledge-inspired action to protect our planet and that’s how the POP movement was born.”



DR AKANKSHA CHAUREY
Director, IT Power Private Limited

“Under the leadership of Dr Pachauri, TERI was ahead of its curve. In 2008, when Dr Pachauri asked me to start a programme on solar lantern, words such as energy access and sustainable energy for all were not even coined. He knew that 1.2 billion people have no access to electricity, and at that time, the magnitude of the problem was not even recognized, but TERI had that vision to target that project.”



DR SAROJ PACHAURI
Public Health Expert

“When he (Dr Pachauri) started, he started in a small room in Jor Bagh with nothing. With a lot of hard work, a lot of sweat, he built a world-class institution which TERI is today”



DR RAJIV CHHIBBER
Vice President, Sahajanand Medical Technologies Ltd

“Today, when we hear our global leaders talk about Viksit Bharat or Bharat@100, those were things that TERI envisioned way beyond its time.”

PLENARY LEADERSHIP PANEL

Venue: Stein Auditorium

INFRASTRUCTURE, RESILIENCE AND OCEANS; LAUNCH OF NCOEGPS PORTAL

Ministerial Address:

- **H.E. Mr Vatimi Rayalu**, Minister, Ministry of Agriculture and Waterways, Fiji
- **H.E. Mr Virginijus Sinkevicius**, European Commissioner for Environment, Oceans and Fisheries European Commission (video message)

Leadership Address

- **Prof. Celeste Saulo**, Secretary-General, World Meteorological Organization (video message)

Interactive Discussions

- **H.E. Ms May-Elin Stener**, Norwegian Ambassador to India
- **Mr Amit Prothi**, Director General, Coalition for Disaster Resilient Infrastructure
- **Ms Shloka Nath**, CEO, India Climate Collaborative
- **Mr Himanshu Shekhar Mishra**, Senior Editor, NDTV India

Chair

- **Dr Vibha Dhawan**, Director General, TERI

The session saw many experts talking about efforts their organization has taken towards climate change impacts including climate change extreme events and those particularly taken in the maritime sector and for sustainability of oceans. The representation at the session was diverse with the Minister of Fiji talking about how climate change has posed a problem in Fiji's infrastructure, food and nutritional security, top soil erosion, etc. He called for enhancement of coastal ecosystem like mangroves, seagrass, coastal reef, and also stressed that collaborations are required through South-South cooperation.

Representative from EU and WMO pointed out the need for collaboration and EU's role in sharing good practices. Several bilateral initiatives between India and Norway were also discussed and how these two countries have shared knowledge in terms of technology transfer, manufacturing, financing, etc. Representative from CDRI pointed out the need for incorporation of disaster planning into financial

planning, i.e., the need to plan for a future disaster in the initial investment phase of any project and the need for building holistic resilience of the entire system—not just ports but also the connected logistics. There is also a need for incorporating grant capital/philanthropic capital into financing projects, taking up digital solutions and making donations to funds such as loss and damage more accessible to everyone. ■



H.E. MR VATIMI RAYALU
Minister Ministry of Agriculture and Waterways, Fiji

“Recognizing the urgency to act, Fiji has set its ambitious targets as part of its nationally determined contributions including transitioning to nearly 100% renewable energy-based grid conducted power by 2030”



H.E. MR VIRGINIJUS SINKEVICIUS
European Commissioner for Environment, Oceans and Fisheries, European Commission

“We need to accelerate ocean action and turn challenges into opportunities; opportunities for the ocean economy, opportunities to create jobs and support communities while protecting the fragile ocean ecosystems.”



PROF. CELESTE SAULO
Secretary-General, World Meteorological Organization

“Despite increasing extreme events, WMO and its partners' efforts have helped to reduce mortality from disasters over the years.”



H.E. MS MAY-ELIN STENER
Norwegian Ambassador to India

“Indian shipyards are delivering autonomous zero emissions vessels to Norwegian partners and it is perfect example of maritime cooperation.”



MR AMIT PROTHI
Director General, Coalition for Disaster Resilient Infrastructure

“Annual asset loss through disasters is of the order of 300–350 billion dollars and it further increases up on adding the effects on services.”



MR HIMANSHU SHEKHAR MISHRA
Senior Editor, NDTV India

“Climate change is running much faster than we are.”

Venue: Stein Auditorium

PROTECTING NATURE AND ECOSYSTEMS – TOWARDS INTEGRATED APPROACHES

Moderated Discussions

- **Prof. Jeffrey D Sachs**, University Professor; Director, Center for Sustainable Development in the Earth Institute, Columbia University (virtual)
- **Dr Erik Solheim**, Sixth Executive Director, United Nations Environment Programme; former Norwegian Minister (virtual)
- **Mr Avinash Persaud**, Special Envoy to the Prime Minister of Barbados (video message)
- **Ms Temina Lalani-Shariff**, Regional Director, CGIAR
- **Dr Yash Veer Bhatnagar**, Country Representative, International Union for Conservation of Nature
- **Ms Bahar Dutt**, Environment Journalist and Conservation Biologist
- **Mr Rajiv Tikoo**, Consulting Editor (Sustainability), Outlook Group
- **Mr Ranjit Barthakur**, Founder & President, Balipara Foundation

Moderator

Ms Jayashree Nandi, Environment and Climate Correspondent, Hindustan Times

Plenary Segment 2

Launch of the Policy Brief - Enhancing Industrial Water Use Efficiency

- **Dr Vibha Dhawan**, Director General, TERI
- **Shri Gajendra Singh Shekhawat**, Hon'ble Union Minister, Ministry of Jal Shakti, Government of India
- **Mr Anshuman**, Senior Fellow and Director, Water Resources



The plenary session titled, “Leadership Panel: Protecting Nature and Ecosystems – Towards Integrated Approaches” revolved around problems, solutions and perspectives that are required so as to lead us to integrated approaches for protecting nature, ecosystems with people at centre and not

neglecting the economic and financial aspects. It is the debate of striking a balance between environment and development. The eminent panel touched upon various aspects ranging from nature, ecosystems and protected areas, market systems and need of finance, limitations of traditional financial systems, social

norms and their impact, renewable energy and its expansion, to having robust planning and anticipating future trends and priorities, about accessibility and inclusivity for stakeholders, need and requirement of credible data, informed and evidence-based policy development, need for convergence, of not



PROF. JEFFREY D SACHS

University Professor; Director, Center for Sustainable Development in the Earth Institute, Columbia University

“ Ecosystem protection requires regional cooperation because every major ecosystem cuts across national boundaries. ”



SHRI GAJENDRA SINGH SHEKHAWAT

Hon'ble Union Minister, Ministry of Jal Shakti, Government of India

“ TERI has contributed and worked along with the Ministry of Jal Shakti for the sustainable water supply and expects the work to continue in future as well. ”



MS BAHAR DUTT

Environment Journalist and Conservation Biologist

“ We blame everything on climate change but we are not taking responsibility for the skewed development policies that we have in place and how we correct these. ”



DR VIBHA DHAWAN

Director General, TERI

“ We need to set up water use benchmarks for various kinds of industries. ”



DR ERIK SOLHEIM

Sixth Executive Director, United Nations Environment Programme; former Norwegian Minister

“ When we do renewables, we need to do it in a people-centred way and have a very detailed level of planning as the main constraint for solar and wind is land. ”



MR AVINASH PERSAUD

Special Envoy to the Prime Minister of Barbados

“ The world is suffering from the actions of small minority who put their interest above the planet health and the poorest are bearing the brunt of the damage. ”



setting accountability and blaming climate change for all our problems, about having myopic approaches, about approaches like naturenomics, mainstreaming environmental evaluation and being at par with financial balance sheet, incentivizing the most vulnerable and bottom of pyramid. These all were shared and discussed through their personal experiences and real life examples. As an extension to the plenary was a brief message during the launch of the policy brief, "Enhancing Industrial Water Use Efficiency". ■

16TH CONVOCATION CEREMONY



16TH CONVOCATION CEREMONY OF TERI SCHOOL OF ADVANCED STUDIES

The 16th convocation of TERI School of Advanced Studies (TSAS) was held at the World Sustainable Development Summit (WSDS), 2024. The Chief Guest for the day was Prof. Ajay Kumar Sood, Principal Scientific Advisor to the Government of India, who implored students and all those present to continuously upgrade and upskill towards sustainability. Dr Shailesh Nayak, Chancellor, TERI SAS, while awarding 230 masters degrees and 18 doctoral degrees, advised students to be sincere and mature individuals contributing towards growth of nation. Thanking Prof. Sood for his enthralled and motivating speech Prof. Arun Kansal, Officiating Vice-Chancellor, TERI SAS spoke about the legacy that TERI SAS carries as an institute and how it's the collective responsibility of all including the outgoing students to add new feathers to the institute's cap.

Venue: Magnolia

MARKET AND FINANCE INSTRUMENT TO PROPEL CLIMATE ACTION

Chair

- **Mr R R Rashmi**, Distinguished Fellow, TERI; Former Special Secretary, MoEFCC

Speakers

- **Mr Satyendra Kumar**, Director, Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India
- **Mr Perumal Arumugam**, Manager, Mitigation Division, UNFCCC
- **Mr Shalabh Tandon**, Regional Director and South Asia Regional Head of Operations & Climate Change, IFC
- **Ms Vibhuti Garg**, Director, South Asia, Institute for Energy Economics and Financial Analysis
- **Ms Neha Kumar**, Head, South Asia Programme, Climate Bonds Initiative
- **Mr Nihal Nizar**, India Policy Advisor, IETA

The deliberations under this thematic track brought forth the idea harnessing market forces such as carbon markets holds immense potential to catalyze change, by driving climate action and green investments in India. Realizing this potential requires a carefully designed framework that ensures cost-effectiveness, while simultaneously driving investments. Balancing India’s ambitious carbon reduction goals with affordability for industries necessitates a phased approach that considers both historical responsibility and developmental needs.

Operationalizing India’s carbon market demands robust systems (for data integrity and verification), clear trading rules, and adequate market liquidity. Collaboration across government, industry, and civil society is crucial, both for effective market design and to address challenges like technology transfer and community engagement. Attracting both domestic and international investments requires transparent pricing mechanisms, risk mitigation instruments, and alignment with global trends under the Paris Agreement. Technological innovation plays a critical role in enhancing data management, improving project development, and driving market efficiency. Balancing national priorities with international integration, strategically prioritizing emission removal versus reduction, and leveraging both voluntary and compliance-based mechanisms are essential. However, carbon markets cannot achieve decarbonization alone; they must be part of a broader strategy that includes complementary policies and investments in clean technologies and sustainable practices. ■





YESHIKA MALIK
Climate Change Specialist, The World Bank

“ Carbon markets can play an integral role in facilitating the achievements of India’s enhanced NDC targets and future NDC goals, along with mobilizing a significant portion of investments in clean technology. ”



SATYENDRA KUMAR
MoEFCC, Government of India

“ As of now, there is no carbon trading platform, but there is a very pragmatic and ambitious programme as it will encourage everyone in the industry to go in for environment-positive actions. ”



PERUMAL ARUMUGAM
Mitigation Division, UNFCCC

“ It is quite clear, in terms of the financial gaps, that we are looking at the New Delhi declaration from G20, to set up the stones for tripling of renewables and doubling of energy efficiency. ”



VIBHUTI GARG
Director, South Asia - Institute for Energy Economics and Financial Analysis

“ Unless we have the right emission targets for the sectors, it will be very difficult to come up with the right pricing signal. ”

Venue: Gulmohar

INDIA’S ELECTRICITY TRANSITION PATHWAYS TO 2050

Introductory Remarks

- **Mr A K Saxena**, Senior Director, Electricity and Renewables Division, TERI

Panellists

- **Mr Alok Kumar**, Former Secretary (Power), Government of India
- **Dr Alejandro Hernández**, Director, India and Global Opportunities program at RAP - The Regulatory Assistance Project & Former Head, Renewable Integration and Secure Electricity Unit, IEA
- **Shri Ashok Lavasa**, Former Finance Secretary, GoI & Former VP, Pvt Sector & PPP, Asian Development Bank
- **Ms Ammi Toppo**, Chief Engineer, Central Electricity Authority
- **Mr Tim Gould**, Chief Energy Economist, IEA

India is at a critical juncture in its energy transition journey. To meet the anticipated growth in demand for electricity in the coming years, the electricity system infrastructure in the country needs to be built up at much higher scale with appropriate choices not only in the long-term but also in the near-term.


TERI’s report, “India’s Electricity Transition Pathways to 2050: Scenarios and Insights,” seeks to provide a comprehensive understanding of the critical issues, challenges and opportunities in the decarbonization pathways leading to mid-century. With the objective of informing key stakeholders, the study undertakes investigation of anticipated demand and



supply scenarios including a stylized scenario on the supply side namely 'No Fossil-fuel Scenario' (NFS) which has a bearing on India's power sector achieving net zero. The significance of this study lies in its potential to guide strategic decision-making. The report's findings are expected to contribute to the discussions on electricity sector decarbonization pathways to make informed decisions that will define the trajectory of India's electricity sector landscape.


The thematic track aimed to deepen discussions on the critical issues underlined in TERI's report – 'India's Electricity Transition Pathways to 2050'. It provided actionable insights and targeted recommendations, fostering collaboration among stakeholders for effective implementation of sustainable energy strategies taking a note of the (a) growth of electricity demand in India, (b) RE resource potential in India and alternatives for decarbonization of power sector,

(c) meeting demand in non-solar hours and measures to make the options cost-effective, (d) accelerating collaboration among key stakeholders including industry, main consumer categories shaping the demand profile, etc. ■




MR ALOK KUMAR
Former Secretary (Power), GoI

India has done an excellent job in pushing renewables through renewable purchase obligations and at the same time scaling up through government incentives and support, that's why the tariffs have come down.




DR ALEJANDRO HERNÁNDEZ
Director, IEA

The energy sector will keep innovating through this cycle and at some point, what they do is leave most of the decisions to the industry, as long as you are sure, you are going to get through your target.



SHRI ASHOK LAVASA
Former Finance Secretary, GoI & Former VP, Pvt Sector & PPP, Asian Development Bank

The three pillars of electricity planning in India and everywhere in the world will be availability, accessibility, and affordability. But they continue to be challenges even today.




MR A K SAXENA
Senior Director, Electricity and Renewables Division, TERI

Energy transition, we know, in India, has been a remarkable journey. The pathways up to 2030 have been studied and meaningful learning has been derived, the action plan has been made out.



MR TIM GOULD
Chief Energy Economist, IEA

Renewable technologies worldwide are now the technologies of choice



MS AMMI TOPPO
Chief Engineer, Central Electricity Authority

Electrical energy demand is likely to increase around four to five times of what we are envisaging at present.

Venue: Magnolia

Bloomberg Philanthropies

BEST PRACTICES FOR AIR POLLUTION MANAGEMENT AND MITIGATION

Welcome Address

- **Dr Vibha Dhawan**, Director General, TERI

Speakers

- **Mr Ashish Tiwari**, Secretary, DoEFCC, UP
- **Dr Anju Goel**, Associate Director, TERI
- **Mr Sree Kumar Kumaraswamy**, Program Director – Clean Air Action, World Resources Institute
- **Mr Mohit Beotra**, Director, A-PAG
- **Dr Sumi Mehta**, Vice President, Environmental and Climate Health, Vital Strategies
- **Prof. Sagnik Dey**, Institute Chair Professor, Centre for Atmospheric Sciences, IIT Delhi
- **Ms Karin Shepardson**, Lead Environmental Specialist, World Bank Chair
- **Ms Priya Shankar**, India Director – Climate and Environment Program, Bloomberg Philanthropies


Special Address

- **Dr Prashant Gargava**, Director, NCAP




The thematic session addressed the urgent need to tackle global air pollution, a leading cause of global deterioration of human health. Despite various initiatives, many cities still exceed National Ambient Air Quality Standards (NAAQS), posing serious health risks. To combat this, the Ministry of Environment, Forest and Climate Change (MoEFCC) launched the National Clean Air Programme (NCAP) in 2019, with a revised target of reducing air pollution by 40% by 2026.

The session focused on sharing best practices and success stories to guide tailored interventions for managing air




DR ANJU GOEL
Associate Director, TERI

To enhance air quality, solutions must be underpinned by scientific assessments, including source apportionment studies and advanced monitoring techniques, to ensure regulatory compliance and enhance the efficacy of control measures.



MR MOHIT BEOTRA
Director, A-PAG

Systematic issue identification, allocation, and resolution pave the way for effective mitigation of pollution from dust and garbage.



PROF. SAGNIK DEY
Institute Chair Professor, Centre for Atmospheric Sciences, IIT Delhi

The collective use of smog guns yields a 9% reduction in Delhi's PM2.5 levels, within a confined radius of 300 meters.



MR SREE KUMAR KUMARASWAMY
Program Director – Clean Air Action, World Resources Institute

We need to think proactively about the transition in the construction sector, which does not affect the environment.



MS KARIN SHEPARDSON
Lead Environmental Specialist, World Bank

IGP states can drive significant air quality improvements by fostering positive spillovers from neighbouring regions.

pollution. Discussions highlighted state-level strategies, such as those implemented by the Uttar Pradesh government, including using mechanical road sweepers to manage road dust and adopting gas-based tandoors in hospitality sectors as cleaner alternatives. On-ground pilot studies showcased effective measures, including pollution monitoring units and strategies for tackling municipal waste burning.

Best practices for dispersed source management were emphasized, with examples such as clean construction pilots and wet processes to mitigate road dust re-suspension. Case studies from Bihar highlighted successful strategies, such

as removing dust and garbage from public lands, greening barren spaces, and implementing technology-enabled solutions for road dust mitigation.

The key takeaways from the session emphasized the importance of tailored interventions and collaborative efforts between government bodies, local communities, and stakeholders. Implementing targeted strategies, coupled with continuous evaluation and adaptation based on monitoring data, emerged as critical factors for achieving NCAP targets and sustaining the progress in air quality management. ■



MR ASHISH TIWARI
Secretary, DoEFCC, UP

“ Our goal is not to increase the count of non-attainment cities but to reduce their prevalence by uplifting them to the status of attainment cities. ”

PARTNER TRACKS | GROUP B

International Energy Agency

Venue: Marigold

TECHNOLOGIES FOR A NET ZERO IRON AND STEEL SECTOR

Introductory remarks

- **Ms Rebecca Berry**, Second Secretary, Climate and Energy Policy Officer, British High Commission, New Delhi

Speakers

- **Ms Tiffany Vass**, Industry Analyst, IEA
- **Ms Neha Verma**, Director, Ministry of Steel
- **Mr Deependra Kashiva**, Executive Director, SIMA
- **Ms Sugandha Jayaswal**, Resident Executive Corporate Services, Tata Steel
- **Mr Biswadeep Bhattacharjee**, Vice President Sales and Head of Green Steel India, Primetals (Online)

Closing remarks

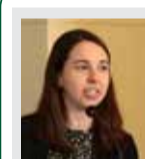
- **Mr Girish Sethi**, Director, TERI

The thematic session titled, “Technologies for a Net Zero Iron & Steel Sector” was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS) 2024. The session aimed to achieve net zero by mid-century, global emissions from industry and the steel sector need to fall by over 95% by 2050, this industry sector crucial to transition because cement, iron, and steel industry cause 70% of the emissions alone. Material efficiency and process efficiency is key to reducing steel sector emissions, innovative near zero emissions technology already make in-roads by 2030 and will play an even larger role after 2030. Innovation in technologies is very much required and many pilots are going on for growing economies. Discussions ranged around the need to reduce the emissions immediately by targeting the low hanging fruits like moving from thermal to renewable energy sources. In Indian context we are at a very critical juncture where our economy is growing very fast, but we need to focus on emission reduction simultaneously. In this session, the IEA set out the pace and scale of transition required in the steel sector for net zero and Indian Government representative talked about carbon minimization, capture, and green steel. Topics like Biochar in the manufacturing of green steel were also touched upon. Long-term and short-term goals to carbon CCU and CCS are important pillars to achieve net zero. For India, the journey for decarbonizing is not going to be an easy one. We have a long path ahead of us and reaching all three stages of decarbonization will take some time. ■



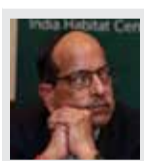
MS NEHA VERMA
Director, Ministry of Steel

“ Recently we have added Biochars, exploring how biochar can be used in steel making and solutions are being looking forward to in different aspects targeting up to 2030 and goals beyond 2030. ”



MS TIFFANY VASS
Industry Analyst, IEA

“ There’s a broad range of policy tools that will be needed across the world and here in India as well, governments have been starting to look into these all these different acting tools which are needed to setting of overall framework of the targets and policies that set the direction of things. And we also need some really specific policies to target to address some really specific challenges of the industry sectors. ”



MR DEEPENDRA KASHIVA
Executive Director, SIMA

“ Entire world is talking about natural gas to green hydrogen, but it is a difficult proposition. The Government should propose availability at an affordable price for the steel industry. ”



MR GIRISH SETHI
Director, TERI

“ Very key for a country like India is to create demand for Green Steel. ”



MS REBECCA BERRY
Second Secretary, Climate and Energy Policy Officer, British High Commission, New Delhi

“ India is taking steps to diversify the Green hydrogen mission, by the Government of India releasing guidelines for utilizing green hydrogen in the steel sector, with the aim of establishing a green hydrogen ecosystem. With the government and private sector joining hands and leading together, India can aim to gradually decrease the greenhouse gas intensity in steel. ”



MS SUGANDHA JAYASWAL
Resident Executive Corporate Services, Tata Steel

“ We are conscious about our environmental performance and employ some of the stringiest system. Our processes in control of across units for monitoring our environmental footprints, incorporating the latest technologies, be mindful of proper waste management, resource allocation and energy saving and other measures are our top most priority. ”



MR BISWADEEP BHATTACHARJEE
Vice President Sales & Head of Green Steel India, Primetals

“ Decarbonizing plants is a phased approach from optimisation, reducing from 10%-30% CO₂ to transition phase, reducing 30%-40% and the green steel which will reduce 70%-80% of CO₂ emissions from the industry until 2050. ”

Venue: Juniper

REDUCING PLASTIC AND CHEMICAL WASTE IN THE MARINE ENVIRONMENT

Welcome Remarks

Norwegian Embassy, New Delhi

Keynote Address

- **H.E. Martine Bottheim**, Deputy Ambassador of Norway to India
- **Marianne Olsen**, Research Director, Norwegian Institute for Water Research

INOPOL Presentation

- **Hans Nicolai Adam**, Senior Research Scientist, NIVA

Presentations by

- **Rachel Hurley**, Senior Research Scientist, NIVA - Monitoring and Harmonization
- **Sissel B. Ranneklev**, Senior Research Scientist, NIVA - POPs

Chair

- **Girija Bharat**, Managing Director, Mu Gamma Consultants (MGC)

Panellists

- **Smita Mohanty**, Director and Head (Principal Scientist), Central Institute of Petrochemicals Engineering and Technology (CIPET)
- **Satish Sinha**, Associate Director, Toxics Link (TL)
- **Paromita Chakraborty**, Prof. and Head, SRM Institute of Science and Technology (SRMIST)

Question and Answer Session

- **Nathaniel Bhakupar Dkhar**, Senior Research Scientist, MGC

Concluding Remarks

- **Saloni Saran Goel**, Director, Religare New Delhi



There were deliberations during the panel discussion on bioplastics, health impacts of plastics and microplastics, and efforts needed at community level. Discussions involved

perspectives from both organizations and academia and the steps that can be taken to reduce plastic generated pollution from oceans as well as rivers. ■

The thematic—"Reducing Plastic and Chemical Waste in the Marine Environment" was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS) 2024. The session aimed at sharing and building knowledge and capacities to tackle plastic and chemical pollution and its associated social, economic, and environmental impacts and identifying opportunities associated with reducing plastic and chemical waste in the marine environment.

Discussions ranged from persistent organic pollutants (POPs) and its impact on water bodies, to the existing pilot projects that work towards reducing the same as well as other innovative solutions. The discourse encouraged development of new strategies to approach the issue. It also encouraged organizations and academia to realign their goals and objectives to rethink and reapproach into tackling this issue.

One of the major highlights of the session was the discussion on India-Norway cooperation project on capacity building for reducing plastic and chemical pollution in India (INOPOL). This included sharing some light on the background of the project, the approach and motivation, case studies in Gujarat, Tamil Nadu, and Uttarakhand (pilot), macroplastic and microplastic monitoring, and certain social and policy dynamics involved with the project.

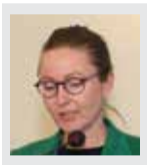
The session also witnessed a book launch titled "Managing Persistent Organic Pollutants in India: A Case Study on Vapi and Surat" by the dignitaries on the dais. Furthermore, there were discussions on monitoring riverine macroplastic pollution, microplastics pollution, challenges associated with monitoring, lack of standardised methods, harmonisation and the future of monitoring.



SMITA MOHANTY

Director and Head (Principal Scientist), Central Institute of Petrochemicals Engineering and Technology (CIPET)

Today, we do not have any Indian company who really produces bioplastics and we are still importing from abroad. The major thing with bioplastics is that their functional properties are somewhere less than the conventional plastics, so once it enters the recycling stream, it becomes really difficult and it actually acts as a contaminant for the normal recycling stream. So, they need to be treated separately, need to be collected separately, and they need to be collected along with the garbage so that they can be composted. So, that is how it needs to be managed.



H.E. MARTINE BOTTHEIM

Deputy Ambassador of Norway to India

Plastic waste is a challenge to the environment if not properly collected. The chemicals in plastic pose a severe challenge as it leads to the consequences to the marine life and humans.



MARIANNE OLSEN

Research Director, Norwegian Institute for Water Research (NIVA)

Coming together to discuss and join forces are more important than ever as the world is facing more and more major environmental challenges on a global scale.



HANS NICOLAI ADAM

Senior Research Scientist, NIVA

We actually don't know the scale and scope of the problems in detail in the sense that it is rough estimates of quantities that are released into the environment. So, there is a great need actually to develop coherent systems for data collection and analysis.



RACHEL HURLEY

Senior Research Scientist, NIVA - Monitoring and Harmonization

The vast majority of microplastics that we observe in our environment is actually these kind of fragments which are hard to actually link to a particular source and these are actually derived from the breakdown of large pieces of plastic and microplastics, and so it is important to monitor these microplastics as well so we can make a meaningful advancement in reducing microplastic pollution in the environment.



SISSSEL B. RANNEKLEV

Senior Research Scientist, NIVA - POPs

Why should we bother monitoring of POPs in the aquatic environment? Because it determines concentrations in biota, for instance like fish, and water as a part of the aquatic ecosystem, and finally, they dissolve and get transported down to the sediments where they try to stick.



GIRIJA BHARAT

Managing Director, Mu Gamma Consultants (MGC)

It took us 15 years to build this momentum on persistent organic pollutants and plastic waste management.



PAROMITA CHAKRABORTY

Prof. and Head, SRM Institute of Science and Technology (SRMIST)

Different organs are impacted by different kinds of POPs. There are different receptors which these POPs can find and then based on those receptors, like what kind of hormone mimicking might happen, we can target like what diseases can come up. So, it is quite an elaborate study and that is how we should be doing it.



SATISH SINHA

Associate Director, Toxics Link (TL)

Something that we understand that anything that happens from downstream upwards is more sustainable in many ways and that is what is the advantage of doing these kind of strategies and planning for plastics also. But the fact remains that it has its limitations. Looking at efforts from downstream upwards, some of those efforts can result into significant positivity, if we are attempting to do behavioural change at the community level.

Venue: Magnolia

ENHANCING PLANNING, INSTITUTIONAL FRAMEWORKS AND CAPACITIES ON ADAPTION AND RESILIENCE

Welcome Remarks

• **Dr Pablo Benitez Ponce**, Senior Environmental Economist, World Bank

Framing Presentation

• **Dr Pablo Benitez Ponce**, Senior Environmental Economist, World Bank

Chair

• **Mr J.M. Mauskar**, Member, Governing Body, Indian Institute of Tropical Meteorology (IITM), Pune; Former Special Secretary – MoEFCC

Panellists

• **Ms Supriya Sahu**, Additional Chief Secretary to Government, Department of Environment, Climate Change and Forests, Tamil Nadu

• **Dr Ashish Chaturvedi**, Head of the Environment, Energy, and Resilience, UNDP

• **Dr Christoph von Stechow**, Senior Policy Advisor, BMZ Regional Department, India Desk, German Ministry for Economic Cooperation and Development (BMZ)

• **Ms Zeenat Niazi**, Senior Vice President and Chief Knowledge Officer, Development Alternatives

• **Mr Shubhashis Dey**, Director–Climate Policy and Climate Finance, Shakti Sustainable Energy Foundation

• **Dr Manish Kumar Shrivastava**, Senior Fellow and Associate Director, Earth Science and Climate Change Division, TERI



The thematic session titled, “Enhancing Planning, Institutional Frameworks and Capacities on Adaption and Resilience” was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS). The discussion in the session focused on adaptation and resilience as key to address welfare and poverty in developing nations, with India as a prime example. The panel also highlighted the involvement of local communities in managing and protecting their resources playing crucial roles as custodians. Their ownership and intimate knowledge enabled the use of natural resources to boost rural livelihoods and opportunities. The panelists also shared an interesting perspective of integration of science

into national and regional planning, underscoring the need for social, economic, and environmental considerations. The discussion also emphasized on the importance of gathering and utilizing data from various sources, along with blending different knowledge systems for informed decision-making. This holistic approach aimed to improve the resilience and adaptability of both people and infrastructure. It required a synthesis of scientific insight, community engagement, and sustainable practices. By fostering ownership among local communities and leveraging their understanding, coupled with a science-based framework, the goal is to create a sustainable, resilient framework that supports the welfare and eradication of poverty in developing countries. The major takeaway was the understanding that this comprehensive method not only promotes environmental stewardship but also enhances the socioeconomic well-being of these communities but also ensuring a sustainable and prosperous future. ■



MS SUPRIYA SAHU

Additional Chief Secretary to Government, Department of Environment, Climate Change and Forests, Tamil Nadu

“ Tamil Nadu has one of the longest coastlines in India, in one sense it's an opportunity, it's a boon but at the same time it's a bane because of the challenges. For coastal resilience Tamil Nadu has setup a Special Purpose Vehicle, which is India's first green climate company. ”



MS ZEENAT NIAZI

Senior Vice President and Chief Knowledge Officer, Development Alternatives

“ Need to involve local communities right from the design and planning of the programmes. ”



DR ASHISH CHATURVEDI

Head of the Environment, Energy, and Resilience, UNDP

“ Adaptation and Resilience are both moving targets. By the time you reach there, the targets have moved already. ”



DR MANISH KUMAR SHRIVASTAVA

Senior Fellow & Associate Director, Earth Science and Climate Change Division, TERI

“ We should begin to see mitigation projects which are aligned with development strategies as an instrument of adaptation. ”



DR CHRISTOPH VON STECHOW

Senior Policy Advisor, BMZ Regional Department, India

“ Self-help groups and extension services can improve natural framing practices. ”



MR SHUBHASHIS DEY

Director–Climate Policy & Climate Finance, Shakti Sustainable Energy Foundation

“ Critical for us to de-link between energy usage and emissions. ”

Venue: Magnolia

CLIMATE FINANCE: CATALYST FOR INDIA'S ENERGY TRANSITION

Moderator

- **Mr Pankaj Sindwani**, Chief Business Officer, Cleantech Finance, Tata Capital and Managing Partner, Tata Capital Cleantech AIF

Speakers

- **Mr P R Jaishankar**, Managing Director, India Infrastructure Finance Company Limited
- **Mr Parag Sharma**, Founder and CEO, O2 Power
- **Mr Virender Pankaj**, CEO, Aseem Infrastructure Finance
- **Mr Saurabh Kumar**, Vice President - India, The Global Energy Alliance for People and Planet
- **Mr Sanjeev Aggarwal**, Chairman, Hexa Climate

The partner thematic session titled, "Climate Finance: Catalyst for India's Energy Transition" was curated by Tata Capital. The discussion was centred around climate finance as a catalyst for economic growth and innovation and the possible mechanisms to raise money for energy transition. The industry experts analysed the nuances of climate finance and its role in steering India towards sustainable energy. The discourse spanned the essence and urgency of climate finance, instruments of green finance, strategies for climate mitigation through financial channels, and the synergy of collective endeavours. The discussion explored the current landscape of India's renewable energy sector, the government's active policies, and the green finance mechanisms at play. Technology stabilization, flow of public resources in project preparation along with instruments of credit enhancement, blended finance and multidisciplinary actions can provide a seamless transition of energy in India. The necessity of climate finance was underscored as critical for India to meet its ambitious renewable energy objectives, transitioning effectively from conventional fossil fuels to greener alternatives. The dialogue further explored the imbalance between the supply of and demand for these funds, stressing the need for bridging this gap through strategic initiatives and policy frameworks. The conversation highlighted the government's current initiatives and schemes designed to bolster the renewable market, alongside discussing the potential of green finance instruments in mobilizing necessary funds.

The panel advocated for integrated actions among stakeholders—governments, financial entities, and the corporate sector—to amplify the impact of climate finance. This collaborative approach is envisioned to accelerate India's



transition to renewable energy, aligning with global efforts to combat climate change and promoting a sustainable and resilient energy future. A pronounced need for a robust legal framework with central laws in place of policies for energy-related projects was highlighted with the creation of a 2-way credit system where participation of retail investors are encouraged and integrated into the ecosystem.

The session concluded by underscoring the imperative of climate finance as not just a financial mechanism, but

as a transformative force driving India's energy transition, spotlighting the intertwined challenges and prospects within the renewable sector and beyond. ■

MR VIRENDER PANKAJ
CEO, Aseem Infrastructure Finance

“Energy markets need derivatives market and ancillary services”

MR SAURABH KUMAR
Vice President - India, The Global Energy Alliance for People and Planet

“Right instruments have to be employed to minimize risks.”

MR P R JAISHANKAR
Managing Director, India Infrastructure Finance Company Limited

“Climate finance probably is going to be an integral part of every activity an economy performs. In other words, it will be the spinal cord.”

MR PANKAJ SINDWANI
Chief Business Officer, Cleantech Finance, Tata Capital and Managing Partner, Tata Capital Cleantech AIF

“I firmly believe that the key to locking India's energy transition lies in collaboration between public and private sector, between financial institutions and policymakers and between local communities and global investors.”

Venue: Marigold

SYNERGISTIC ACTIONS FOR SDGs AND CLIMATE CHANGE

Welcome Address

- **Ms Taina Dyckhoff**, German Embassy

Chair

- **Dr Prodipto Ghosh**, Distinguished Fellow, The Energy and Resources Institute

Speakers

- **Mr P Mudalige**, Director General (Planning), Ministry of Environment, Sri Lanka
- **Dr Andrew Singh Tukana**, Permanent Secretary, Ministry of Agriculture and Waterways, Fiji
- **Dr Farran Redfern**, Secretary, Ministry of Infrastructure and Sustainable Energy, Kiribati
- **Ms Nidhi Madan**, Associate Director, Shakti Sustainable Energy Foundation
- **Ms Veronica Tomei**, BMUV Head of Division and Commissioner for the 2030 Agenda for Sustainable Development

The thematic session titled, "Synergistic Actions for SDGs and Climate Change" explored how synergies between climate action and Sustainable Development Goals (SDGs) framework can be maximized by exploring guidance from the SDGs, interconnectivity of systems leading to guided growth of economies. Discussions ranged around the need of alignment of SDGs to the environmental policies and procedures of small island nations such as Sri Lanka

and Fiji, which are more affected with the climate change crisis. While investments in mitigation, especially in the emerging economies is more crucial than the developed

DR ANDREW SINGH TUKANA
Permanent Secretary, Ministry of Agriculture and Waterways, Fiji

“We're all in the same boat, and if we don't all paddle in the same direction—if even one paddles in the opposite direction—we'll all sink.”

DR FARRAN REDFERN
Secretary, Ministry of Infrastructure and Sustainable Energy, Kiribati

“One of the challenges that we face is lack of availability of data to form policies at national level.”

MS TAINA DYCKHOFF
German Embassy

“This year, WSDS arrives at a crucial time. With half of the 2030 agenda timeframe passed, it's becoming clear that global efforts need to be significantly ramped up. Today, we will discuss how synergies between climate action and SDG implementation can be maximized.”

MR P MUDALIGE
Director General (Planning), Ministry of Environment, Sri Lanka


“National Environmental Action Plan in alignment with SDGs and National Environmental plan by Sri Lankan government includes nine thematic areas.”



nations but a synergy in acting towards a common goal is the main imperative that all need to work on. Climate change and capacity building are two things that go hand in hand to provide opportunities for sustainable development. Another key takeaway was movement from linear economy to circular economy to mitigate and minimize the effect of resource depletion. International cooperation plays a very crucial role in moving forward for collaborative global growth. Economy-wise planning was stressed over sector-wise planning while reporting on SDGs and their effective implementation at all levels. A synergistic approach at all levels for better coordination between strategies and plans is needed for effectively delivering sustainable, resilient, and innovative solutions. Discussions around different SDGs and their interconnectedness was emphasized by the speakers

showing how they play together for showing a complex interconnected model. For instance, SDG 14 and 15 are related to capacity of biodiversity to sequester carbon from environment naturally that is created by different sources on

land. There was a mutual agreement on the need of more collaborative solutions, innovation, and technological transfer between different economies of the world. ■



MS NIDHI MADAN
Associate Director, Shakti Sustainable Energy Foundation

“ Half of the SDGs are impacted by climate change and half of the SDGs are contributing to climate change. ”



MS VERONICA TOMEI
BMUV Head of Division and Commissioner for the 2030 Agenda for Sustainable Development

“ Taking synergistic approach at local, national and global level is needed. ”

Royal Norwegian Embassy and UNEP

Venue: Silver Oak 1

CHALLENGES AND SOLUTIONS FOR REDUCING MARINE PLASTIC POLLUTION

Welcome Remarks

• Mr Atul Bagai, Head UNEP (India office)

Special Address

• Mr Erlend Draget, Senior Advisor, Ministry of Climate and Environment, Norway

Special Address

• Dr Satyendra Kumar, Director, MoEFCC, Govt. of India

Panellists

- Dr Suneel Pandey, TERI (Key challenges for implementation of PWM rules)
- Mr Pranay Pasricha, CHUK (Manufacturing of alternatives to banned SUP)
- Mr Ankit Gupta, ITC Limited (Implementing sustainable packaging solutions & EPR)
- Ms Annupa Mattu Ahi, TOMRA (Solutions for plastics waste segregation)
- Mr Sourabh Manuja, GIZ (Digital portal for monitoring of MRF operations)
- Ms Pratibha Sharma, UNDP (Effectiveness of MRFs)

Chair

• Dr Sumit Sharma, UNEP



The partner thematic session titled, “Challenges and Solutions for Reducing Marine Plastic Pollution” was focussed on the formidable challenges encountered in the battle against marine plastic pollution. The discourse emphasized the need for comprehensive solutions spanning upstream, midstream, and downstream processes to

effectively manage this waste. The panel brought together distinguished representatives from the industrial sector, packaging industry, and other relevant fields to delve into these issues.

A significant portion of the discussion was dedicated to exploring potential solutions, highlighting the critical role of legal frameworks. Key measures such as the ban on Single Use Plastics (SUPs) and the introduction of Extended Producer Responsibility (EPR) were thoroughly debated. The session also marked the introduction of an online portal for EPR, a move aimed at enhancing the management and reduction of plastic waste. Furthermore, the panel engaged in an in-depth analysis of single-layer and multi-layer packaging, evaluating their impacts and exploring sustainable alternatives. The impact of Materials Recovery Facilities (MRFs) on waste management and recycling efforts was also discussed. MRFs serve as crucial nodes in the recycling process, where various types of recyclable materials collected from households, businesses, and collection points are sorted, cleaned, and prepared for sale to, or use by, manufacturers as raw materials for new products. Operation of digital portal for monitoring MRF operations which is a national digital platform to monitor recycling and reuse of marine waste was also shown. ■




MR ERLEND DRAGET
Senior Advisor, Ministry of Climate and Environment, Norway

“ We are using more plastic than we can manage and threat to human health and environment due to plastic pollution including the threat of unseen plastic such as microplastics is increasing. ”




DR SATYENDRA KUMAR
Director, MoEFCC, Govt. of India

“ We need to sustainably manage the plastic waste, understand the whole cycle and take measures keeping in mind the cost and understand the implications of it that might occur in the later stage and then make a commitment to it. ”



DR SUMIT SHARMA
UNEP

“ We need to spread awareness about the legal ban of use of single use plastics, sensitize people about it— making an emotional connection that plastic is something that can be very harmful. ”



MR SOURABH MANUJA
GIZ (Digital portal for monitoring of MRF operations)

“ It is not only plastics that enter in the marine litter, it is the dry waste flowing through different water bodies causing a disaster and most of it comes from unmanaged waste from cities. ”

THEMATIC TRACKS GROUP A



JUST TRANSITION FRAMEWORK FOR A SUSTAINABLE FUTURE IN INDIA'S COAL MINING REGION

Keynote Address

- **Shri Amrit Lal Meena ji**, Secretary, Ministry of Coal

Speakers

- **Mr Binay Dayal**, former Director (Technical) CIL & Adjunct Professor, IIT(ISM) Dhanbad
- **Ms Sabina Dewan**, President and Executive Director, JustJobs Network
- **Mr Ashim Roy**, General Secretary, Hind Mazdoor Kisan Panchayat
- **Mr Vinod K Pandey**, GM (Environment), CPMDI(HQ)
- **Mr Madhuban Pandey**, Co-Founder, SCORE Livelihood Foundation

As India's energy mix witnesses increasing diversification, there is greater deliberation around a just and equitable transition that considers the diverse impacts on workers, communities, the environment, and associated industries. Recognizing this imperative, TERI has developed a Just Transition Framework, drawing insights from the extensive field research in the eastern coal-belt of India and engagement with diverse stakeholders. The framework has its underpinning in the theories of procedural, distributive, and restorative justice. While existing policy initiatives at national and state levels acknowledge the necessity for a just transition, the framework allows for a more organized structural transformation to comprehensively address concerns in regions affected by coal mine closure. The Just



Transition Framework proposes a dual approach involving structural institutional transformations at central, state, and district levels, along with targeted interventions focusing on consensus building, socio-economic transformation, and green development. ■



APPROACH FOR OPERATIONALIZING STATE LEVEL SUB-NATIONAL REDD+ IN INDIA

Chair and Moderator

- **Dr Jagdish Kishwan**, Asia Pacific Regional Coordinator, Coalition for Rainforest Nations (CFRN)

Speakers

- **Shri Shailesh Tembhurnikar**, PCCF and HOFF, Maharashtra
- **Dr Jagmohan Sharma**, Director, Indira Gandhi National Forest Academy
- **Mr Varghese Paul**, Deputy Director, Environment and WASH, USAID
- **Mr Kundan Burnwal**, Senior Advisor, Climate Change, GIZ India
- **Dr Jitendra Vir Sharma**, IFS (Retd.) Programme Director, Land Resources, TERI

The session highlighted the vital role that the REDD+ mechanism can play in protecting and restoring natural ecosystems, as well as securing the rights and livelihoods of local communities that heavily depend on forests. Additionally, REDD+ has the potential to generate extra revenue and facilitate the transfer of technologies, knowledge, and expertise, all while contributing to the global reduction in greenhouse gas emissions.

The session argues for a sub-national approach in establishing Forest Reference Levels (FREL), rather than a National FREL approach. Proposing the sub-national approach as a solution, the discussion suggests that it provides an opportunity for state governments to leverage local conditions, attract investments aimed at improving local livelihoods, and



enhance carbon sequestration and ecosystem services. In essence, the sub-national approach recognizes the nuances of different regions within the country. ■



A ROADMAP FOR MAINSTREAMING INCLUSIVE CLIMATE ACTION PLANNING IN URBAN LANDSCAPES

Speakers

- **Ms Debolina Kundu**, Acting Director, National Institute of Urban Affairs (NIUA)
- **Dr Renu Khosla**, Director, Centre for Urban and Regional Excellence (CURE) India
- **Dr Meenakshi Dhote**, Dean (Academics), School of Planning and Architecture, Delhi
- **Shri R Srinivas**, Retired Town and Country Planning Organization (TCPO), Consultant Ministry of Housing and Urban Affairs (MoHUA)

The session began with a discussion on the challenges of climate change, emphasizing historical changes and the need for urban planning to address uncertainties. Highlighting the urgency of mitigating carbon emissions, the panellists stressed on the vital role of city governments. Issues of planning disparities and the importance of coordination

were discussed, along with the need for inclusive planning to address social disparities in urban areas. India's commendable steps in climate change, including the Climate Smart Cities Assessment Framework, were acknowledged. Following this, the Urban Act project was introduced as a regional initiative, focusing on multi-level



governance, participatory methods, and evidence-driven tools for climate-sensitive urban planning. In conclusion, the session underscored the importance of inclusive climate action planning, learning from global experiences, and collaborative efforts for sustainable and resilient cities. ■

UNDERSTANDING SUSTAINABILITY DIMENSIONS OF BIO-CNG IN INDIA

Speakers

- **Mr Souvik Bhattacharjya**, Associate Director, TERI
- **Dr Vibha Dhawan**, Director General, TERI
- **Mr Meenesh C Shah**, Chairman, National Dairy Development Board
- **Mr Kenichiro Toyofuku**, Director, Maruti Suzuki India Limited
- **Mr Kishore Kumar**, General Manager (Marketing CBG), GAIL
- **Dr Veena Joshi**, Energy and Environment Expert, Independent Consultant
- **Prof. Pratham Arora**, Department of Renewable Energy, IIT Roorkee
- **Sri Mahant Ram Mangal Das**, Head, Shri Radhakrishna Mandir Gaushala



The session marked the launch of a report, titled 'Comprehensive Environmental and Social Sustainability Assessment of Bio-CNG as a Vehicular Fuel in India.' This report signifies the culmination of TERI's exercise aimed at

assessing the potential of Bio-CNG as a green energy not only in mobility, but also in producing sustainable by-products that can replace fossil-based fertilizers used in agricultural activities, among others.

The thematic track was structured to cater to all automotive manufacturers, highlighting the broader implications that the utilization of Bio-CNG has in facilitating circularity for the automotive sector in India, promoting a sustainable and environmentally conscious approach. The event presented a thorough overview and illustrated the research outcomes across the broad study heads undertaken in the report, highlighting Bio-CNG's potential to play a significant role in India's transition towards more sustainable and environment-friendly mobility. ■

DECARBONIZING FRIGHT IN INDIA: TURNING AMBITION TO ACTION

Speakers

- **Mr Sanjay Seth**, Senior Director – Sustainable Infrastructure Programme, TERI
- **Shri Chhatrasal Singh**, Additional Member (Traffic), Railway Board, Ministry of Railways, Government of India
- **Shri Ramesh Kumar Verma**, Deputy Secretary, Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India
- **Shri Sanjay Bajpai**, Executive Director (Strategic Planning, Customs, and Distribution Logistics), Container Corporation of India Ltd (CONCOR)
- **Shri Saurabh Diddi**, Director, Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India
- **Ms Chetna Nagpal**, Senior Associate, RMI India

Moderator

- **Mr Narayankumar Sreekumar**, Associate Director – Electric Mobility, Shakti Sustainable Energy Foundation (SSEF)

The thematic session highlighted the multifaceted approach required to achieve decarbonization of freight in India, emphasizing the adoption of electric and hybrid vehicles, investment in efficient logistics infrastructure, and the promotion of alternative fuels.

The discussion outlined the significant strides made by the railways in achieving freight loading targets, with a focus on electrification. Government initiatives to reduce logistics costs and promote clean freight were also highlighted; along with the importance of modal shifts to meet emission reduction targets.



The session also addressed the challenges faced by original equipment manufacturers in the absence of incentives and clear policy signals for electrification in medium and heavy-duty vehicle segments.

The session underscored the urgency of collaborative efforts between government, industry, and other stakeholders to resolve policy gaps, incentivize investments, and accelerate the transition to decarbonized freight for a low-carbon future. ■

INTEGRATED IMPACT: REIMAGINING CSR, ESG, AND PHILANTHROPY FOR LOCAL, NATIONAL, AND GLOBAL PROGRESS

Speakers

- **Mr Vikas Goel**, MD and CEO, PNB Gilts Limited
- **Shri Prakash Kumar**, Jt GM HR, Security Printing and Minting Corporation of India
- **Dr Dipankar Saharia**, Senior Director, TERI

Moderator

- **Dr Amit Kumar Thakur**

The thematic session signified a transformative approach to CSR that aims to transcend the conventional silos, fostering a holistic and synergistic integration of CSR, ESG, and philanthropy initiatives.

The discussion underscored that companies need to integrate sustainability into their core business models, by incorporating responsible practices into decision-making processes. ESG considerations should be embedded in corporate governance, ensuring ethical conduct and environmental stewardship. Philanthropy efforts must be aligned with broader societal goals, creating a more strategic and impactful footprint. In essence, this integrated impact approach heralds a new era—where businesses become catalysts for positive change by contributing to a more sustainable and equitable future. ■



MEDIA ROUNDTABLE: LEADERSHIP FOR SUSTAINABLE DEVELOPMENT AND CLIMATE JUSTICE

Speakers

- **Ms Aarti Khosla**, Founder, Climate Trends (Moderator)
- **Ambassador Manjeev Singh Puri**, Distinguished Fellow, The Energy and Resources Institute
- **Hon'ble Vatimi Rayalu**, Minister, Ministry of Agriculture and Waterways, Fiji
- **Dr Amar Bhattacharya**, Senior Fellow, Brookings Initiative on Climate Research and Action

The recent rise in the geopolitical conflict globally has added another dimension to the world order grappling with multiple challenges, from an ever-threatening climate crisis to sliding back of key sustainable development goals. The adverse impact of extreme weather events, especially in a conflict situation, is usually felt the most by

the vulnerable. This Media Roundtable on Leadership for Sustainable Development and Climate Justice attempted to understand the policy perspectives, address the need for determined national and global leadership, and techniques to promote climate justice in the contemporary context. ■



MOBILIZING FINANCE FOR LOW-CARBON TRANSITION IN INDIA: ROLE OF GREEN BONDS AND PARTNERSHIPS

Session Chair and Moderator

- **Dr Dipak Dasgupta**, Distinguished Fellow, TERI

Panellists

- **Ms Chandni Raina**, Economic Adviser, Climate Change Finance Unit, Dept of Economic Affairs, Ministry of Finance
- **Mr Pradeep Tharakan**, Director Energy Transition, Asian Development Bank
- **Mr Manas Puri**, Senior Professional, New Development Bank
- **Mr Gagan Sidhu**, Director – Centre for Energy Finance, Council on Energy, Environment and Water
- **Ms Neha Khanna**, Senior Manager, Climate Policy Initiative
- **Mr Promit Mookherjee**, Associate Research Fellow, Observer Research Foundation

This thematic session aimed at understanding the role that unique financial instruments, like green bonds and partnerships, can play in mobilizing the climate finance needs of the country. The deliberations revolved around challenges faced by the Indian bond market and

the green financial sphere, in terms of taxonomy and standardization, alongside the fiscal and policy requirements. Various innovative solutions and potential policy interventions were discussed to overcome these bottlenecks. While the domestic market needs to be catalysed to absorb the existing



climate finance, partnerships and the support of multilateral development banks shall be key to unlocking foreign capital flows. India's capital market and its potential for green growth provides significant opportunities to leverage green finance and holds the promise to grow enormously in the future. ■

SUSTAINABLE AGRICULTURE FOR FOOD SECURITY: EXPLORING CLIMATE ACTION AND SDG SYNERGIES

Key Speakers

- **Dr Asha Ram Sihag**, Distinguished Fellow, TERI
- **Dr Alka Bhargava**, Senior Policy Advisor, UNEP, The Economics of Ecosystems and Biodiversity (TEEB)
- **Dr Malan Chakrabarty**, Senior Fellow and Deputy Director (Research), Observer Research Foundation (ORF)
- **Ms Pradnya Paithankar**, Head of Unit, Climate Change, Resilient Food Systems and DRR, World Food Programme (WFP)
- **Dr Arvind Kapur**, Distinguished Fellow, Sustainable Agriculture, TERI
- **Dr Arindam Datta**, Senior Fellow, TERI
- **Ms Suruchi Bhadwal**, Senior Fellow and Director, Earth Science and Climate Change Division, TERI

Moderator

- **Ms Marit Marie Strand**, Counsellor and Head of Cooperation, Norwegian Embassy, New Delhi



For this thematic session, the panel consisted of five distinguished members who discussed on how the impact of climate change is not just on agriculture as a sector, but on a humanitarian level as well. They emphasized that the processing systems need to be developed and

installed where the crops are produced. An amalgamation of multiple crisis stops us from achieving the SDGs.

The session touched upon how farmers are under the misconception that using excess amount of fertilizers will lead to excess production. However, this has severe impacts on the nutrition of the soil and thereby, on the nutrition of the produced crops. The discussion underlined the many challenges that would come along for the agriculture sector on its journey to be climate resilient. A primary area of concern was that the farmers need to be aware of what the climate information is, along with being trained to make decisions to adapt. Since, farming as a profession is witnessing a huge decline—owing to the decrease in their income—the need for an increase in real investments was highlighted. The session concluded that governments play a significant role in making policies and need to make real investments in the agriculture sector. ■

THEMATIC TRACKS GROUP B

MOVING BEYOND STRATEGIES: THE GENDER FACTOR IN THE DYNAMICS OF ENERGY ENTREPRENEURSHIP

Welcome Address:

- **Dr Amit Kumar Thakur**, Associate Director, TERI

Setting the context:

- **Vision of a reimagined future:** unlocking the journey of women entrepreneurs
- **Dr Mini Govindan**, Senior Fellow, TERI

Group 1 Discussion:

Inspiring the next generation of women entrepreneurs

- **Ms Ipshita Banerjee**, Communications and Gender Lead – USEA
- **Dr Nidhi Prabha**, GESI Advisor, USAID/SAREP
- **Ms Mandavi Kulshreshta**, Program Advisor, Future of Work/ SocialEcological Transformation, FES India

Group 2 Discussion:

Gender transformative pathway to energy transition

- **Mr Mohammed Adil Ahsan**, Manager, In-charge-Srinagar, Small Industries Development Bank of India
- **Ms Vaishali Mishra**, Director, Communications and Advocacy- Asia, GEAPP
- **Ms Suravee Nayak**, Associate Fellow, Sustainable Futures Collaborative (virtual)

Group 3 Discussion:

Advancing clean energy technologies for inclusive growth and gender entrepreneurship

- **Mr Nilanjan Ghose**, Project Manager, Indo-German Energy Programme, GIZ
- **Mr Prabhav Garudadhwanj**, Director, Easy Krishi Pvt. Ltd (virtual)
- **Dr Manjushree Banerjee**, Gender Specialist

Concluding remarks:

- **Dr Mini Govindan**, Senior Fellow, TERI

Vote of Thanks:

- **Dr Dipankar Saharia**, Senior Director, TERI



The discussion was primarily carried out on the fact—to achieve net zero by mid-century, global emissions from industry – and the steel sector – need to fall by over 95% by 2050. This includes a rapid scale-up of new technologies that can produce low and near zero emissions iron and steel. By 2030, the IEA estimates that there should be over 100 Mt of near zero emissions steel production operating globally. In the session, the IEA will set out the pace and scale of transition required in the steel sector for net zero, introducing

a few of the technologies that will be key as the sector decarbonizes. The session was composed of Government of India representatives who gave their opinions on the latest plans that are underway to support the development and deployment of such technologies, before turning to panel of experts. The panel explored the main issues arising from the early deployment of these technologies and key strategies for accelerating progress. ■

HIGH LEVEL CONVENING OF INDUSTRY CHARTER FOR NEAR ZERO EMISSIONS BY 2050

Speakers

- **Mr Rajiv Mishra**, Managing Director, Apraava Energy
- **Mr Mahendra Singhi**, Managing Director & CEO, Dalmia Cement (Bharat) Ltd & Governing Council member, TERI
- **Dr Dipak Dasgupta**, Lead Author of the IPCC Working Group III (Mitigation) report (Ch.15 Investment and Finance) & IPCC 1.5C Special Report and UNEP Emissions Gap; and Distinguished Fellow, TERI
- **Mr Vineet Mittal**, Chairman, Avaada Group
- **Mr Vinayak Pai**, Managing Director, Tata Projects Ltd
- **Ms Kiran Gupta**, Chief (Customer Experience, Commercial and Govt Affairs), Tata Power DDL
- **Mr Akilur Rehman**, Chief Technology Officer, Hitachi Energy
- **Mr Raju Goyal**, Executive President & Chief Technical Officer, UltraTech Cement
- **Mr K K Bhattacharjee**, Chief Sustainability Officer, Jindal Stainless Steel
- **Mr Abhishek Goyal**, Lead – Climate & Sustainability, Tata Sustainability Group
- **Mr Mukesh Kumar Tiwari**, CGM – Corporate Strategy & Sustainable Development, GAIL
- **Mr Jayant Sinha**, Senior Principal Consultant – Energy Transition & Utilities, Capgemini India
- **Col. Rohit Dev**, Managing Director, Reveille Energy
- **Ms Gillian Nelson**, Director (Policy), We Mean Business Coalition
- **Ms Pallavi Kalita**, Asia Lead, Business for Nature
- **Mr Krishnamoorthy Sivaram**, Deputy Director – Industry, SED Fund
- **Mr Bose Varghese**, Senior Director – ESG, Cyril Amarchand Mangaldas
- **Mr Vishal Bhavsar**, Head – ESG Investments, Multiples Alternate Asset Management Pvt. Ltd
- **Ms Anjana Seshadri**, Lead - ESG and Impact Evaluation, SBICAP Ventures Ltd
- **Dr Vijay Kalantri**, President, All India Association of Industries (AIAI)
- **Mr Mahesh Date**, Chairman, Indian Institute of Foundrymen, Kolhapur
- **Mr Kaustubh Phadke**, India Head, Global Cement and Concrete Association (GCCA)
- **Mr Deepak Bhatnagar**, Secretary General, Pellet Manufacturers' Association of India (PMAI)
- **Mr Sudhanwa Koperdekar**, Director, Maharashtra Chamber of Commerce, Industries and Agriculture
- **Mr Arupendra Nath Mullick**, Vice President – TERI Council for Business Sustainability

Chair

- **Mr R R Rashmi**, Distinguished Fellow, TERI; former Special Secretary, Ministry of Environment, Forests and Climate Change, Government of India

The plenary session titled, "High Level Convening of Industry Charter for Near Zero Emissions by 2050" was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS). The session aimed at channelizing how operationalizing net-zero goals of the Indian industry will require participation of all key actors of the sector, ranging from well-established industrial houses to the MSMEs. Further, the session deliberated on the key levers that will enable decoupling industrial growth from emissions, and focused the need to enhance sharing of best practices among signatory companies, including large industries, technology providers and sectoral associations, especially of MSMEs. The session also discussed the financing needs of the industries to decarbonize their operations.

Panellists also discussed technological requirements to improve energy efficiency and conservation, and how policies need to be better aligned to create an ecosystem. ■



NET ZERO POSSIBILITIES IN TEXTILE WASTEWATER TREATMENT

Inaugural Address

- **Mr G Asok Kumar**, IAS, Director General
- **Mr Rajiv Ranjan Mishra**, IAS (Retd) (Virtual Message)

Keynote Address

- **Mr Rajiv Ranjan Mishra**, IAS (Retd), Former Director General, National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, Government of India and Advisor, NMCG-TERI CoE on Water Reuse (NTCOE)

Policy and Strategy Perspective

- **Ms Prajakta L. Verma**, IAS, Joint Secretary, Ministry of Textiles, Government of India

Regulator's Perspective

- **Mr Dinabandhu Gouda**, Scientist-F and Director, Central Pollution Control Board (CPCB), Government of India

Textile Industry's Perspective

- **Ms Chandrima Chatterjee**, Secretary General, Confederation of Indian Textile Industry (CITI)

Environment Perspective

- **Ch. Vijay Kumar**, Managing Director, Swan Environmental Pvt. Ltd

Moderator

- **Dr Nupur Bahadur**, Associate Director, NMCG-TERI CoE on Water Reuse (NTCOE), TERI

The thematic session titled, "Net Zero Possibility in Textile Wastewater Treatment" was held as part of the annual flagship event of The Energy and Resources Institute (TERI)'s, World Sustainable Development Summit (WSDS). The session aimed at delivering key insights and outcomes regarding the successful pilot demonstration of TADOX® technology. The project, funded by the National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, Govt. of India, represents a groundbreaking initiative globally, addressing the treatment of textile effluent at a Textile CETP, Rooma

Industrial Area, Kanpur. The TADOX® plant, operating at a treatment capacity of 20,000 Liters per day, has demonstrated remarkable efficacy in removing colour and various pollutants, ensuring compliance with stringent norms. This success has prompted discussions on proposing TADOX® as a retrofittable solution at the pre-biological treatment stage of existing CETPs, aiming to achieve Zero Liquid Discharge (ZLD) compliance while alleviating the burden on downstream treatment processes. The integration of TADOX® with ZLD systems offers promising prospects for enhanced treatment efficacy and environmental sustainability, as highlighted by Life Cycle Assessment (LCA) studies showcasing significant reductions in Global Warming Potential (GWP). Moreover, the potential integration of renewable energy sources like solar power could further enhance the technology's sustainability

and significantly reduce operational costs, moving towards a net-zero emission solution. Hence the study recommends policy shifts to encourage advanced oxidation adoption like TADOX®, ZLD guideline revisions to include TADOX® use, and renewable energy integration within treatment systems. These actions, aimed at the major regulatory bodies like the CPCB and SPCB in the country, are crucial steps toward fostering sustainable industrial frameworks. Also this initiative would strongly support the industry's shift towards sustainable wastewater management practices, offering a viable solution for meeting ZLD requirements in National Mission like Water Vision@2047 and 'Namami Ganage', where the core objective of rejuvenation of rivers and in particular achieving the goal of 'Nirmal Dhara', the 'Unpolluted Flow' will be achieved. ■



JUST TRANSITIONS FOR LAND-BASED CLIMATE ACTION IN INDIA

Session Chair and Moderator

- **Ms Suruchi Bhadwal**, Director, Earth Science and Climate Change Division, TERI

Panellists

- **Dr Archana Chatterjee**, National Co-ordinator, International Union for Conservation of Nature (IUCN), India Country Office
- **Dr Ritu Mathur**, Senior Energy Consultant, Niti Aayog
- **Mr Subhash Chandra (IFS)**, ADG and CEO – National CAMPA, MoEFCC
- **Mr Piyush Dogra**, Senior Environmental Specialist, World Bank
- **Ms Sambita Ghosh**, Senior Specialist – Climate Change Adaptation, World Wide Fund, India

The thematic session titled, "Just Transitions for Land-based Climate Action in India" was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS). The session aimed at understanding the socio-

economic context and associated vulnerabilities where land-based measures are identified or being implemented. The issues of risks and benefits, principles of equity, inclusivity, suitability of adaptation measures, and trade-offs and synergies arising at different scales were discussed for

assessing the transitional risks for climate action for meeting the net-zero targets. The panel further deliberated on the solutions that could possibly assist in reducing these risks on societies and ensuring well-being. ■



SUSTAINABLE SKYLINES: ENABLING TOMORROW'S ARCHITECTURE WITH A WEB-BASED KNOWLEDGE HUB ON ADVANCED BUILDING MATERIALS AND ENERGY-EFFICIENT DESIGN

Keynote Address

- **H.E. Dr Keheliya Rambukwella**, Hon'ble Minister of Environment, Sri Lanka

Speakers

- **Mr Sanjay Seth**, Senior Director – Sustainable Infrastructure Programme, TERI
- **Mr Yatin Choudhary**, Fellow, Sustainable Buildings Division
- **Ms Tarishi Kaushik**, Associate Fellow, Sustainable Buildings, TERI
- **Mr Jiwesh Nandan**, IAS, Distinguished Fellow, TERI
- **Dr Vandana Kalita**, Scientist 'F' and Member Secretary A2K+ Studies, Department of Scientific & Industrial Research (DSIR), Ministry of Science and Technology, Government of India
- **Mr Santhosh Muzumdar**, Director of Government Relations and Sustainability Johnson Controls
- **Mr Mohammad Amin Nayyar**, Director, ANA Design Studio Pvt Ltd
- **Ms Shabnam Bassi**, Director, Sustainable Buildings Division, TERI and Deputy CEO-cum-Secretary, GRIHA Council
- **Mr T P Sankar**, Senior Fellow, Knowledge Resource Centre, TERI

This thematic session opened by underlining the fact that buildings consume over one-third of India's electricity: a figure which is escalating with rapid urbanization. Therefore, implementing advancements in construction not only improves quality, efficiency, safety, sustainability

and value for money, but essentially enhance building performance. However, such sustainable construction faces a primary challenge in the form of accessing knowledge about advanced building materials and design. The session underscored how such problems hinder progress and

widespread adoption of new, clean, and green practices. Such a gap impedes the Smart Cities Mission and its goal of achieving net-zero emissions by 2070.

As a probable solution to this problem, a web-based knowledge portal being developed by TERI (as part of a research study under the A2K+ Studies scheme by the DSIR) was introduced in the session. This tool aims to share valuable information on advanced building materials and energy-efficient design. ■



LEADING COLLECTIVE ACTION FOR GREENER FUTURE

Introductory Remarks

- **Ms Khushbu Prajapati**, Manager Education, Tata Steel Foundation

Session I: Schools as 'Centre for change'

- **Ms Nikita Kumari**, Student, DAV Public School, Alkusa
- **Ms Irtika Hussain**, Student, DAV Public School, Alkusa
- **Ms Risa Munda**, Student, Joda Women's College
- **Mr Tejaswar Pradhan**, Student Prashant Dash, Teacher, Steward School, Sukinda

Session II: Green Harmony

- **Mr Taukeer Alam**, Samvaad Fellow 2020, Winners of Green Harmony – Nurturing Eco-awareness: a Pan India Campaign

Session III: Panel Discussion on Environment Education

- **Ms Smita Agarwal**, Head of Education, Tata Steel Foundation
- **Mr Vishesh Gupta**, Chairperson, Bharat Soka Gakkai
- **Ms Padmini G B**, Loyala School, Jajpur
- **Mr Vinod Kumar Tiwari**, Tata D A V School, Jamadoba

Session IV: Conversation on a Greener Tomorrow

- **Mr Sourav Roy**, Chief Executive Officer, Tata Steel Foundation; Chief CSR, Tata Steel Ltd
- **Ms P N Vasanti**, Director General, Centre for Media Studies
- **Dr Neha**, Senior Fellow and Area Convenor, Strategic Communication for Sustainability, TERI

The thematic session served as a pivotal platform for a comprehensive discussion, aiming to leverage the potential of the younger generation for a sustainable and environmentally conscious future. It sought to position schools as centres for change, advocating for environmental education and promoting behaviour change for greater impact. The first panel highlighted children's leadership roles, emphasizing awareness campaigns to motivate communities in their vicinity. Notably, children played a pivotal role as panelists, sharing their initiatives and action points as leaders propelling change. The session commenced with an overview



of The Green School: a programme striving to instil pro-environment behaviour in children.

The second panel discussed the significance of preserving traditional practices for a greener environment, and also provided a platform for the winners of The Green Harmony campaign, a pan India initiative capturing local sustainable practices.

Further sessions delved into the integration of environmental education into school curricula, aligning with the National Education Policy. The summit concluded with a discussion exploring ways to involve youth in environmental initiatives. ■



PROGRESS AND ADOPTION OF ALTERNATE ENGINES AND FUTURE FUELS FOR SUSTAINABLE MARITIME TRANSPORT

Welcome Address

- **Dr Vibha Dhawan**, Director General, TERI

Keynote Address

- **Dr Prasad Chaphekar**, Deputy Secretary, Ministry of New and renewable Energy
- **Mr Pierrick Fillon-Ashida**, Science Counsellor at the EU Delegation in New Delhi Presenters
- **Mr Heino von Meyer**, Sustainability and Global Relations, International PtX Hub
- **Dr Patrick Crehan**, Coordinator EU-India Workshop on Roadmap Development for cooperation in Biofuel in Maritime and Aviation Aug'23
- **Dr Kjeld Aabo**, Senior Adviser, Methanol Institute Adviser/MAN
- **Dr German Weisser**, Expert, WINGD
- **Mr Deepu Surendran**, GM, Cochin Shipyard Limited

Chair

- **Prof. Avinash Agarwal**, IIT Kanpur

Vote of Thanks

- **Dr Bucci**, HoD, European External Action Service

The session commenced with the discussion on Green Hydrogen Mission and its scope to work in steel, shipping and alternative fuels. In this regard, guidelines for steel and shipping have already been released. So far the shipping industry has been somewhat neglected and focus has been more on energy efficiency rather than emissions, however, its

incorporation into the discourse is crucial to achieve net-zero targets. In India, ports have shown proactiveness in providing finances, this has proved to be encouraging. Their adaptability allows for a gradual transition to cleaner fuels while regulatory support and technological innovation further drive their adoption. Ultimately, alternating engines represent a vital



step towards long-term environmental sustainability in the maritime industry, ensuring its viability in a carbon-conscious future. There is need for additional measures beyond current policy and initiatives such as saving time, learning from international experiences and market, cost of greening, and potential for carbon credits in the sector.

The session also witnessed launch of Roadmap for EU-India Cooperation on Sustainable Biofuels from Biomass for Aviation and Maritime Transport: An EU-India Action Plan. Eminent experts from the field gave their presentations. Mr Michael Bucci delivered the concluding remarks. ■

THEMATIC TRACKS GROUP C



SHAPING THE FUTURE – THE PATH TOWARDS NET-ZERO FUTURE FUELS FOR SHIPPING

The discussions in this event provided critical inputs and insights in developing the roadmap that will guide for the path to be taken, and the policies, standards and safety and framework development to ensure a smooth transition towards sustainable marine fuels and engines. The deliberations on reducing the policy gaps between India and other countries and the overall scope for short- and long-term collaboration opportunities were critically assessed. ■



FPOS AND BIOFUELS: EMPOWERING AGRICULTURE, ENERGIZING TOMORROW

The panel discussion unravelled synergies, showcased successful models, and charted a sustainable course for an agrorevolution that harmonizes environmental stewardship and agricultural prosperity. Under the theme “FPOs and Biofuels: Empowering Agriculture, Energizing Tomorrow,” this dialogue envisioned a future where collective action and eco-friendly energy solutions can pave the way for a thriving agricultural sector. ■



LESSONS AND EXPERIENCES FROM NBS CARBON PROJECT DEVELOPMENT IN INDIA

- **Dr J V Sharma (Chair and Moderator)**, Senior Director, Land Resources Division, TERI
- **Mr Deepak Gupta**, Executive Vice President, ReNew
- **Dr Lokesh Chandra Dube**, Senior Standards Manager (Energy, Land Use & Forests), Gold Standard India
- **Mr Santosh K Singh**, Partner and Managing Director, Climate and Argi Solutions, Intellectap
- **Mr Rohit Garg**, Regional Director for Climate Projects in South Asia & Middle East at South Pole
- **Mr Amit Anand**, Chief Executive Officer, Carbon Check India Pvt Ltd
- **Mr Sachin Jain**, Secretary, Network for Certification and Conservation of Forests (NCCF)

The discussion revolved around the development, challenges, and future of Nature-based Solutions (NbS) Carbon Projects in India within the framework of Voluntary Carbon Markets (VCMs). VCMs enable carbon emitters to offset their emissions by investing in projects aimed at reducing or removing greenhouse gases from the atmosphere. NbS projects, which focus on the sustainable management of natural resources such as forests, agricultural landscapes, and wetlands, are gaining attention due to their cost-effectiveness and sustainable approach to climate change mitigation. These projects can significantly contribute to global climate mitigation goals at a fraction of the cost compared to technological solutions, especially in developing countries. ■



ADVANCING SUSTAINABLE BUILDING PRACTICES: ROLE OF LABORATORIES AND STATE-OF-THE-ART INFRASTRUCTURE TO ENHANCE ENERGY EFFICIENCY & THERMAL COMFORT

The Sustainable Buildings Division at TERI and Mahindra Lifespace Developers Ltd. jointly convened a thematic session on “Advancing Sustainable Building Practices: Role of Laboratories and State-of-the-Art Infrastructure to Enhance Energy Efficiency & Thermal Comfort”. A pool of distinguished experts representing government bodies, academia, green building rating agencies, architects, industry associations and other key stakeholders engaged in discussions revolving around the collaborative initiative undertaken by the Mahindra-TERI Centre of Excellence (MT-CoE) to foster innovation and develop solutions tailored to the Indian building sector and climates. ■



MEETING OF CHIEF SUSTAINABILITY OFFICERS

The session “Meeting of Chief Sustainability Officers” highlighted the need for making transparency about economic, environmental, and social impacts a fundamental component in effective stakeholder relations, investment decisions, and other market relations, against the backdrop of the urgency and magnitude of the risks and

threats to our collective sustainability, alongside increasing choice and opportunities. Discussions focused on the changing and evolving environmental, social, and governance (ESG) and ESG ratings landscape in India, the need for adopting sustainability standards and metrics with respect to the produced goods and services in the context of international trade and global market access, and the role of quality data for enhanced sustainability-focused capital deployment, along with perspectives on the evolving workforce skills and green jobs and the need to address the widening skill gap with respect to the demand for green skills and availability of green talent that needs to be addressed in the global green economy regime. ■



ENERGY STORAGE: THE KEY TO THE DECARBONIZATION OF ELECTRICITY

The thematic track presented the findings of the TERI study in the report titled, 'Pumped Storage Plants – Essential for India's Energy Transition' that recommends inter alia preparation of standard bidding documents, measures for identification of new sites, bidding for projects with capacity charge and energy charge, utilization of exhausted mines and another report titled, 'Concentrated Solar Power Plants with Storage: Deployment Essential Now,' which seeks to develop projects based on the learnings from National Solar Mission for development of solar parks. ■



CULTURAL EVENING



A cultural evening followed by a cocktail dinner was hosted by Johnson Controls International at The Hub. A cultural performance by the students of The Modern School ECNCR, Delhi in cooperation with Act Now, was enjoyed by the attendees.



Bhangra Dance by TAB Events




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