

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2021

REDEFINING OUR COMMON FUTURE:
SAFE AND SECURE ENVIRONMENT FOR ALL

February 10-12, 2021



SUMMIT BULLETIN | DAY 3

#Act4Earth



THEMATIC TRACKS

Virtual Hall: Kamuthi

LOW CARBON INDUSTRY TRANSITION

Session 1: The Role of the Industry Transition in Meeting Climate Objective

Opening Remarks: Mr Girish Sethi, Senior Director-Energy Programme, TERI

Special Address: Dr Ajay Mathur, Director General, TERI

Keynote Address: Mr Pradip Kumar Tripathi, Secretary, Ministry of Steel, Government of India

Speakers: Mr Jacob Werksman, Principal Adviser to Directorate General for Climate Action, European Commission; Prof. Måns Nilsson, Executive Director, Stockholm Environment Institute

Session II: Decarbonization of Hard to Abate Industry Sectors (Steel and Cement)

Moderator: Mr R R Rashmi, Distinguished Fellow, TERI

Speakers: Ms Richa Sharma, Joint Secretary, MoEFCC; Mr Will Hall, Visiting Fellow, TERI; Mr Kaustubh Phadke, General Manager, Global Cement and Concrete Association, India; Mr Tobias Winter, Director, Indo-German Energy Forum, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Panellists: Ms Madhulika Sharma, Chief - Corporate Sustainability, Tata Steel Ltd; Mr Uday Gupta, Managing Director, Adhunik Metaliks Ltd / Liberty House Group; Mr Arvind Bodhankar, Joint Executive President & Chief Sustainability Officer, Ultratech Cement; Dr Gökçe Mete, LeadIT Secretariat, Stockholm Environment Institute; Ms Dina Lanzi, Head - Technical Business Unit Hydrogen, SNAM



PROF. MÅNS NILSSON

Executive Director, Stockholm Environment Institute

“International Collaboration is critical to establish joint development toward the Paris Agreement ambition and decarbonisation of industry sector”

The first session started with the opening remarks from Mr Girish Sethi. He stated that the discussion on energy transition is gaining momentum from the past two years. Mr Jacob Werksman gave insight from the Europe Perspective. He focused on the importance of the

policy back up for achieving net-zero emission targets and implementation. Prof. Måns Nilsson said that the industry sector has been contributing roughly 30% of global CO₂ emissions. He explained the need for investment in providing infrastructure and the assets required to help the

heavy industry transition to net zero. In his special address Dr Ajay Mathur stated the importance of steel and cement sector contribution in the economy of India and the major challenge is to make steel and other industries carbon proof. Mr Pradip Kumar Tripathi in his key note address gave insights to Indian steel sector and India's commitment towards lowering emission.

In the second session, Ms Richa Sharma spoke about the Leadership Group for Industry Transition (LeadIT) initiative. The aim of this initiative is to bring companies and countries together to develop low-carbon pathways for transition within the companies and countries. Mr Will Hall gave a presentation where he showcased the work done

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in the industry transition area. He spoke on the pathways to decarbonize the Indian iron and steel sector and added that hydrogen-based direct reduction route is the most promising option for India. Mr Kaustubh Phadke said that India's cement plants have exceeded PAT (Perform, Achieve & Trade) targets by over 80%. Mr Arvind Bodhankar mentioned achievement of 19.2% reduction in CO₂ emissions/ tonne of cement material globally and 40% in India since 1990. Mr Tobias Winter said that 7 out of 8 steel makers have pledged to achieve net zero by 2050 in Europe.

In the panel discussion Ms Madhulika Sharma highlighted the key challenge in terms of incentivizing demand of green steel, policy regulation and finance. She stated that "Technologies are available but are costly. Some portion needs to be clubbed towards the steel sector which will



MR UDAY GUPTA
Managing Director, Adhunik
Metaliks Ltd/Liberty House
Group

“ There is a bad news, that it is hard to abate sector but it is followed by the good news: It's possible to abate ”

surely need a regulatory framework and incentivization of demand to be generated in industry.”

Mr Arvind Bodhankar spoke about the challenges faced by the cement sector in India and Ultratech's approach in tackling them. Dr Gökçe Mete highlighted the issue of transition and financial availability. He added that the technologies that are emerging need to be adapted in the local context. Mr Uday Gupta was optimistic in terms of future transition. He agreed that there are challenges but also had faith in the approach for future transition in the steel sector. Ms Dina Lanzi explained that SNAM is studying the possibility of mixing Hydrogen and NG in pipelines in the future to create a Hydrogen Valley to make it accessible to industry.

The session was concluded by Ms Madhulika Sharma explaining the challenges of the supply chain management during the lockdown. She added that the availability of man power with minimum amount of interaction was bit a task.

THEMATIC TRACKS

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2021

REDEFINING OUR COMMON FUTURE: SAFE AND SECURE ENVIRONMENT FOR ALL

Virtual Hall: Rewa

PLANNING CITIES FOR A SUSTAINABLE FUTURE

Session 1: Partnerships and Initiatives for Sustainable Urbanization

Welcome Address: Mr Sanjay Seth, Senior Director, Sustainable Habitat Programme, TERI

Speakers: Mr Hitesh Vaidya, Director, National Institute of Urban Affairs (NIUA); Mr Michel Mouchiroud, Partner Instrument Coordinator, EU Foreign Policy Instruments, Regional Team Asia & Pacific, Delegation of the European Union to Thailand; Mr Jostein Nygard, Senior Environmental Specialist, World Bank; Dr Michael Bucki, Head of Section, Counsellor, Delegation of the European Union to India; Mr Banchhanidhi Pani, IAS, Commissioner, Surat Municipal Corporation, Gujarat

Session II: Panel Discussion on Planning Cities for a Sustainable Future

Panellists: Ms Kamilla Kristensen Rai; Ms Sriparna Iyer; Ms Parul Agarwala; Ms Vaishali Nandan; Mr Emani Kumar; Ms Rupali Deshmukh

Giving the Welcome Address, Mr Sanjay Seth stated that cities are growth drivers and at the same time consume a lot of resources. Hence, the key is to strike a balance between development and environment for planning sustainable, smart and inclusive cities. Mr Hitesh Vaidya highlighted that this discourse will pave a new way to search for vaccine of urbanization challenges. He said that COVID-19 pandemic has shown that our local governments have the capacities to innovatively manage the difficult situations and bring about transformative impact by utilizing technology and multi-level partnerships.

Mr Michel Mouchiroud discussed the second phase of the global corporation programmes on urban action and EU as a global player in achieving sustainable development. He also mentioned the various good practices such as European Green Deal, Sustainable Development Goals and the importance of corporation between countries for developing their cities resilient in future.



MR MICHEL MOUCHIROUD
Partner Instrument
Coordinator, EU Foreign Policy
Instruments, Regional Team
Asia & Pacific, Delegation of the
European Union to Thailand

“ Ambitious actions are required to combat climate change ”

Mr Jostein Nygard and Dr Michael Bucki gave a presentation where they informed the audience about their on-going city-level AQM programmes in various countries such as Vietnam, Mexico, Egypt, China, South Africa.

Mr Banchhanidhi Panis poke about Surat's work in sustainable development through local economic and social initiatives. He elucidated that with social cohesion and flood



MR HITESH VAIDYA
Director, National Institute of
Urban Affairs (NIUA)

“ Innovative technology and multi-stakeholder engagement can become vaccine to address challenges to sustainable urbanization ”

resilience initiatives, Surat has paved its way to resilient and sustainable development.

Ms Sriparna Iyer briefly explained the need to revisit our existing URDPFI and modal building bye-laws to make our cities resilient. She highlighted that cities will continue to grow, and physical planning is vital with a combination of good governance and community mapping. Ms Parul Agarwala shed light on the need to strengthen city-city partnerships for implementation of planning policies and schemes at grassroots level. She also emphasized that data collection and synthesis are important pillars for sustainable development. Ms Vaishali Nandan added that all the sectors in the cities such as water, waste, etc. are inter-connected and the planning initiatives should be integrated efforts. Mr Emani Kumar explained how public-private partnership model can become an important instrument in timely implementation of innovative schemes for sustainable development of cities. Concluding the session, Ms Rupali Deshmukh outlined the three tools – eco-governance, innovations and community engagement – for creating long-lasting and sustainable solutions.



THEMATIC TRACKS

Virtual Hall: Charanka

MAINSTREAMING CLIMATE FINANCE SOLUTIONS IN SMES INCLUDING START-UPS

Welcome Address: Dr Ajay Mathur, Director General, TERI

Keynote Address: Mr Ashok Lavasa, Vice President, ADB

Introduction to PLCF: Ms Kathrin Kirsch, Enterprise Support Advisor, SEED

Panel Discussion Chair: Mr Ajay Shankar, Distinguished Fellow, TERI

Panellists: Mr Rainer Agster, Director of Operations at SEED and Executive Board Member, adelphi Germany; Mr Santosh Singh, Director, Intellectap; Ms Namita Vikas, Founder and Managing Partner, auctusESG LLP; Mr Shankar A Pande, Director, Bankers Institute of Rural Development; Mr R K Mittal, CGM (Sustainability), GAIL; Mr Sandeep Roy Choudhury, Co-Founder, VNV Advisory

Climate Finance for small and medium enterprises (SMEs) is a key component for addressing India's climate action and sustainable development agendas. The India Hub of SEED hosted by TERI organized the Practitioners Lab for Climate Finance in 2020, targeting different challenges such as online solutions to facilitate access to climate finance for SMEs, democratizing blended finance for supporting agri-tech SMEs, mainstreaming credit assessment and appraisal for solar micro, small, and medium enterprises (MSMEs) and supporting MSMEs in adopting energy efficiency.

Delivering the welcome address, Dr Ajay Mathur highlighted that climate finance is an extremely important issue in today's scenario to solve the challenges related to climate action.

Mr Ashok Lavasa emphasized the importance of climate finance for SMEs and mentioned his involvement in negotiating the Paris Agreement as former Secretary, Ministry of Environment, Forest and Climate Change. Mainstreaming



MR ASHOK LAVASA

Vice President, ADB

“Deploying climate finance in more transformative way to address the barriers that restrain the uptake of climate solutions by SMEs”

climate finance is a major target for Asian Development Bank with many initiatives in line with climate finance and its solutions.

Ms Kathrin Kirsch explained the Practitioners Lab for Climate Finance as an approach to address challenges faced by SMEs and financial institutions and opportunities to innovate climate finance solutions.

The panel discussion threw up some insightful perspectives and suggestions. Scaling-up of the climate finance solutions in thousands of industries suggested by Mr Rainer Agster was agreed upon unanimously. As one of the solutions, Mr Santosh Singh described an online platform for climate finance creating an ecosystem to bridge the gap between demand and supply (SMEs and financial institution or investors). Ms Namita Vikas highlighted shortage of funds allocation as one of the challenges for successful roll out of climate finance solutions. To overcome this, blended finance where Development Finance Institutions (DFIs) come with guarantee and motivate private investors is important. Mr Shankar A Pande mentioned government's and various National Bank for Agriculture and Rural Development's (NABARD) initiatives such as NAB Ventures and NAB Sanrakshan, supporting agri-based SMEs and startups to make them more climate resilient. Mr R K Mittal talked about the GAIL initiative 'PANKH', to promote start-ups wherein 24 start-ups have been supported in incubation and access to investment. Mr Santosh Roy Choudhury summarized the major challenges as absence of data on SMEs, unfavourable perception related to investment in climate finance solutions due to higher payback, lack of homogenization of industries and customized funding for different sectors.

Summarizing the discussions, to successfully roll out climate finance solutions, Mr Ajay Shankar emphasized that there is need for analytical work to mainstream SMEs as they are the building blocks of Indian economy. There is also merit in identifying technologies that are a priority for climate finance and creating platforms for aggregators and service providers.



THEMATIC TRACKS

Virtual Hall: Muppandal

COLLABORATIVE PLATFORMS TO FAST-TRACK INDIA INC.'S 'RACE TO ZERO' EMISSIONS

Welcome Address: Dr Ashvini Kumar, Senior Director – Renewable Energy, TERI and Former Chairman and Managing Director, Solar Energy Corporation of India Ltd (SECI)

Opening Remarks: Ms Rhiannon Harries, Deputy Trade Commissioner, South Asia, British High Commission

Special Address: Dr Arun Kumar Tripathi, Director General, National Institute of Solar Energy

Corporate Action Zone: Introduction to BHC's Corporate Green Leadership Alliance | Sneak peek on TERI's corporate relevant collaborations, platforms and initiatives

Panel Discussion Chair: Mr Nigel Topping, High level Climate Action Champion for COP26

Panellists: Mr Mahendra Singhi, MD & CEO, Dalmia Cement (Bharat) Ltd; Mr Rajiv Mishra, Managing Director, CLP India Pvt Ltd; Dr Maria Mendiluce, CEO, We Mean Business Coalition; Ms Deeksha Vats, Chief Sustainability Officer, Aditya Birla Group; Mr Rohit Anand, Head – Infrastructure, CDC Group; Mr Bose Varghese, Head – Green Initiatives, Infosys Ltd; Dr Sunita Purushottam, Head of Sustainability, Mahindra Lifespace Developers Ltd

Vote of Thanks: Mr Arupendra Nath Mullick, Vice President, TERI Council for Business Sustainability

The Climate Action Tracker reveals that India continues to be the only country among the G20 nations whose Paris pledges and actions are well placed on track to hold global warming below 2°C. The UK too has firmed its road map towards its goal of net-zero emissions by 2050. With the upcoming COP26, both the countries are in a strong position to encourage other countries to adopt similar ambitious net-zero targets.

In this context, the session provided a sneak peek into the platforms that businesses can leverage to accelerate their climate actions/ambitions while accenting the United Nations Framework Convention on Climate Change's Race to Zero campaign and British High Commission's Corporate Green Leadership Alliance.

In his welcome remarks, Dr Ashvini Kumar said that global minds in climate change are all in this race towards the



MS RHIANNON HARRIES

Deputy Trade Commissioner,
South Asia, British High
Commission

COP 26 is the biggest summit the UK has ever hosted, bringing together over 30,000 delegates when it takes place in Glasgow in November and we need countries, cities, states, and businesses to move on to credible path towards net-zero globally in the coming decade

clean energy future and thus, it shall foster collaborations from non-state actors to build momentum for a shift towards a decarbonized economy. The thought resonated well with Ms Rhiannon Harries who appreciated India Inc's efforts in driving this change. One of the key points as mentioned by Dr Arun K Tripathi was the positive intent by the Government of India in setting up a huge target of producing 450 GW through renewables by 2030 to help in reducing GHG emissions and also to take clean energy to the furthest point in the country.

During the discussion, the eminent panellists reflected on the national and global collaborations helping to reduce the

negative externalities in their climate journey so far and the next set of bold climate targets demonstrating their thought leadership. The session was chaired by Mr Nigel Topping.

Mr Mahindra Singhi redefined net-zero paradigm as one which provides a larger purpose of responsible global corporate citizen and asserted that reducing carbon footprint brings energy efficiency, prosperity, pride, and happiness. On the other hand, Mr Rajiv Ranjan Mishra deliberated on the roadmap for harder-to-abate sectors and reiterated the notion that we shall follow the footsteps of the cement sector to harmonize businesses on a long-term basis. Other panellists from progressive companies too delved into the availability of climate finance, supporting regulatory instruments, political will, and strong corporate leadership in moving the needle and achieving this Race to Zero.



MR MAHENDRA SINGH

MD & CEO, Dalmia Cement
(Bharat) Ltd

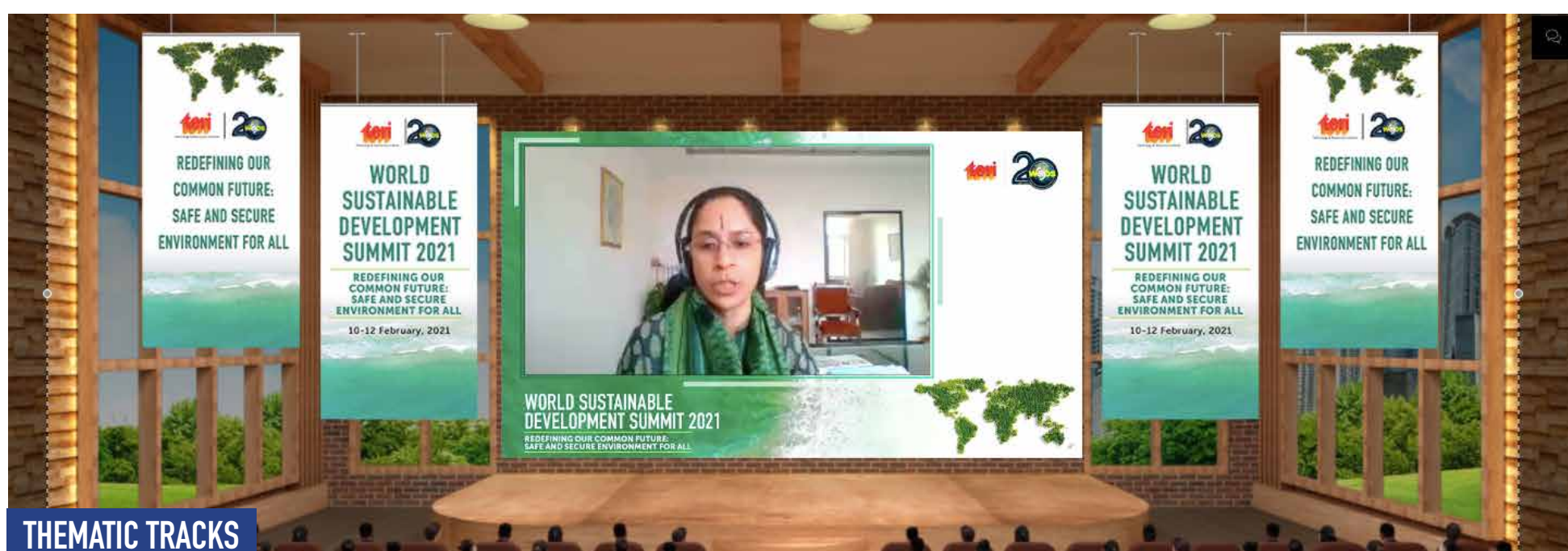
The threat of climate change is real and the impacts are also real and so are the opportunities and challenges associated with it



MR NIGEL TOPPING

High Level Climate Action
Champion for COP26

That's been the case. The leader sets the big audacious goals and the rest of the organization has to run around to fulfil them



THEMATIC TRACKS

Virtual Hall: Brahmanvel

INDUSTRY DIALOGUE: TOWARDS SUSTAINABLE URBAN COOLING SOLUTIONS

Welcome Address: Mr R R Rashmi, Distinguished Fellow, TERI

Inaugural Address: Mr B Thiagarajan, Managing Director, Blue Star Limited

Keynote Address: Ms Geeta Menon, Joint Secretary, Ministry of Environment, Forest & Climate Change

Special Address: Dr Shirish Sinha, Director (Climate), CIFF

Panel Discussion Chair: Mr J M Mauskar, Former Special Secretary, MoEFCC

Panellists: Mr Dinesh Kumar A N, Head Energy Efficiency, Energy Management Centre, Kerala; Dr Satish Kumar, India Cooling Coalition (ICC); Mr J M Bhambure, Refrigeration & Air-conditioning Manufacturing Association (RAMA); Mr Benjamin Hickman, UN Environment Programme; Ms Janhavi Parab, Sustainability & Corporate Social Responsibility, Mahindra Lifespaces

Delivering the welcome address, Mr R R Rashmi set the objective of the event to facilitate the exchange of the knowledge through best practices in policy, technology, and business model interventions. He talked about the heat island effect study of TERI in Jharsuguda on the impact of industrial activities.

Mr Manjeet Singh deliberated on the causes, drivers, and impact of the urban cooling demand. He also talked about the instruments and tools to address the urban cooling challenges along with the opportunities and approaches.

Two publications (newsTRAC 12th Edition and TERI Policy Brief on AC bulk Procurement Program) were also e-launched during the session and they would be available on TERI's website.

Mr B Thiagarajan highlighted the need for a scrappage policy to replace the old HVAC systems with energy efficient new technologies.

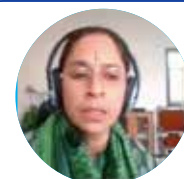
Ms. Geeta Menon stated that synergizing the relevant stakeholders and embracing circular economy with innovative financial models can lead us to achieve our intended sustainable cooling commitments. She highlighted that the



MR B THIAGARAJAN

Managing Director, Blue Star
Limited

Next 5 years are going to be the golden period for the Indian air conditioning and refrigeration industry



MS GEETA MENON

Joint Secretary, Ministry of
Environment, Forest & Climate
Change

Synergizing action between government sector, private sector, and associated stakeholders is key to achieving sustainable cooling

thermal comfort for all can be achieved only with equal focus on passive and active cooling and the cold chain sector plays a vital role in agriculture and food processing industries by extending its shelf life.

Dr Shirish Sinha said that cooling offers lots of opportunities to improve the livelihood of the millions and have applications in the areas to increase work productivity, food security and job creation. He stated that the work in the field of reducing the cooling demand, making behavioral changes, and analyzing the different aspects of social resilient cooling in different sectors is significant to achieve the goals of the sustainable cooling.

Panellists were unanimously of the view that the passive design techniques should be a priority while designing buildings and promoting the sustainable cooling at the city and state levels is imperative.

Mr Dinesh Kumar talked about the increasing power consumption scenario and its associated emissions, resulting in unprecedented climate calamities such as flash floods and storms.

Dr Satish Kumar said that India is facing a perfect cooling storm because of its rising middle class with aspirations and



DR SHIRISH SINHA
Director (Climate), CIFF

“Cooling offers lots of opportunities to improve the livelihood of millions”



MR BENJAMIN HICKMAN
UN Environment Programme

“Mobilization of the financial resources can overcome the initial price hump for new cooling technologies such as district cooling”

tropical climate of India. He stated that India should take the leadership position in the cooling and refrigeration sector and develop ICAP with the involvement of the government, private sector, civil society, and academia.

Talking about the need for automation and innovation through the use of AI in the servicing sector, Mr J M Bhambure emphasized on better user experience and monitoring of the performance parameters of the HVAC systems.

Mr Benjamin Hickman said that the role of municipal governments would be crucial in addressing the sustainable urban cooling and the model of cooling as service for the space cooling and cold chains would be beneficial in addressing the initial upfront equipment costs and maintenance cost of servicing.

Ms Janhavi Parab mentioned that the construction sector accounts for 30% of the energy consumption and highlighted the need for in-house R&D to tackle sustainable cooling challenges.

In his closing remarks, Mr J M Mauskar highlighted that there is a need to study the impact of NDC's and Kigali targets on the implementation of the ICAP and deliberating with various stakeholders at different levels about sustainable cooling solution.



Virtual Hall: Pavagada

MEGA CLIMATE CHANGE PLENARY: ZERO CARBON FUTURE MAKES BUSINESS SENSE

Opening Remarks: Dr Ajay Mathur, Director General, TERI
Keynote Address: Mr Michael Bloomberg, Founder, Bloomberg LP & Bloomberg Philanthropies, and United Nations' Special Envoy for Climate Ambition and Solutions
Special Address: Shri Ravi Shankar Prasad, Additional Secretary, Ministry of Environment, Forest and Climate Change
Moderator: Mr Yvo de Boer, President, Gold Standard Foundation
Panellists: Mr Vineet Mittal, Chairman, Avaada Group; Mr Nitin Prasad, Chairman, Shell Group of Companies, India; Mr R Mukundan, Managing Director, Tata Chemicals Ltd and Co-Chair, TERI CBS Executive Committee; Mr Mahendra Singhi, MD & CEO, Dalmia Cement (Bharat) Ltd and Co-Chair, TERI CBS Executive Committee; Mr Rajiv Mishra, Managing Director, CLP India Pvt. Ltd; Mr Anil B Jain, Managing Director, Jain Irrigation Systems Ltd, Mr Alexander Slater, Deputy Managing Director, U.S.-India Business Council (USIBC), India

Carbon neutrality is critical for success of businesses going forward. Delivering the welcome address, Dr Ajay Mathur discussed the role of corporates in building the ecosystem for low-carbon solutions. Mr Ravi Shankar Prasad shared his perspectives on importance of climate actions for developing nations. He emphasized on charting a development pathway which ensures sustainable growth, eradicates poverty, and creates jobs. Mr Yvo de Boer welcomed the eminent group of panelists from leading businesses and requested thought-provoking inputs from the CXOs on key strategies and actions to execute climate actions.

The panel discussed ambitious carbon neutrality targets announced by businesses and road maps to achieve those targets. Mr Nitin Prasad discussed carbon strategy of Shell to achieve net zero by the year 2050. He stressed on the need for innovative technologies and a set of operating principles which are inspired from ESG values. The panel discussed the importance of bringing ESG focus into strategic decision-making and helping investors and customers to reduce emissions.

The panel discussed importance of climate ambition in the coming decade and shared their thoughts and learnings from the pandemic. The panel deliberated on importance of



MR NITIN PRASAD
Chairman, Shell Group of Companies, India

“We need to accelerate pace of technologies going forward and integrate ESG values in our operating principles”

collaboration, green finance, and international carbon markets to drive innovation and commercialization of technologies.

Mr Mahendra Singhi offered examples of initiatives in his organization. He emphasized that reducing emissions for hard-to-abate sectors is possible, with Dalmia showcasing a classic example of cement company with lowest carbon footprint in the world.

Mr Rajiv Mishra discussed overhauling of regulations and tariff structures to bring renewables in the core of India's power mix.



MR ALEXANDER SLATER
Deputy Managing Director, U.S.-India Business Council (USIBC), India

“Focus of investments are now shifted to climate smart infrastructure”

MrAnil B Jain provided insights on the role of sustainable agriculture as 17–18% of emissions of the country are linked to agriculture. He shared his ideas on importance of bottom-up low carbon approach which ensures prosperity of farmers along with sustenance of natural systems.

The panellists reiterated the role of businesses to lend predictability to climate ambition. The Indian CEOs showcased their support to TERI's Industry Charter on Near-Zero Emissions Ambition by 2050. Mr Nitin Desai, Chairman of TERI, delivered the vote of thanks to all the panelists and moderator. He appreciated the leadership role of private sector in setting standards that are instrumental in bringing desired changes for a low carbon future.



MR R MUKUNDAN
Managing Director, Tata Chemicals Ltd and Co-Chair, TERI CBS Executive Committee

“Integrating carbon pricing in decision-making is crucial for building a foundation of low carbon transition”

PLENARY

Virtual Hall: Pavagada

MEGA CLIMATE CHANGE PLENARY ON CLIMATE FINANCE: MOBILISING FINANCE FOR ENHANCED CLIMATE ACTION

Welcome Address: Mr R R Rashmi, Distinguished Fellow, TERI

Moderator: Mr Pankaj Sindwani, Chief Business Officer, Sales, Tata Cleantech Capital Limited

Panellists: Ms Patricia Espinosa, Executive Secretary, United Nations Framework Convention on Climate Change; Ms Rachel Kyte, Dean, The Fletcher School, Tufts University; Mr John Murton, UK's COP26 Envoy and responsible for coordinating UK diplomacy in relation to COP26; Mr John A Roome, Regional Director, South Asia Sustainable Development, The WorldBank



Ms Patricia Espinosa said that adaptation and resilience need to be recognized by multilateral development banks. She stated that we have never had an opportunity as now to share and work towards a common climate future and take into account that 'no one is left behind.'

Ms Rachel Kyte said that public financial development banks across Europe, USA, and all the nations should be used to the maximum effect in areas such as renewable energy, storage, electric vehicles, and infrastructure needed for EVs. The western economies need to come together with a stimulus scale package for the least developed countries. She said that national development bank and



MR JOHN MURTON
UK's COP26 Envoy and
responsible for coordinating UK
diplomacy in relation to COP26

"We need to focus on adaptation and resilience state rather than just focusing on the mitigation space"



MS PATRICIA ESPINOSA

Executive Secretary,
United Nations Framework
Convention on Climate
Change

"We need to have leadership that is not only focused on specific numbers and purpose but is also based on transformational approach on where we need to go next"



MS RACHEL KYTE

Dean, The Fletcher School,
Tufts University

"The role of the IMF is critical in building back better from this crisis"

green development banks can be effective in establishing the infrastructure that we need to manage green financing.

Mr John Murton emphasized on improving the quality and quantity of public finance and the need to focus on adaptation and resilience state rather than just the mitigation space. He said that there is need to involve private sector for a transition to low carbon economy as most investments come from this sector.

Mr John A Roome stated that to make a transition, there is a need to mainstream climate in planning and early finance decisions. He said that climate finance is not a stand-alone thing and it has been mainstreamed in various sectors. He added that besides fossil fuel subsidies we need to focus on fertilizer subsidies, economic case of carbon pricing, and role of international carbon markets. He said that a leadership triangle is emerging comprising the United States, China, and EU. Now India should join considering the country has strong record of renewable energy, early warning systems, and EESL on energy efficiency.

PLENARY

Virtual Hall: Pavagada

FUTURE OF AIR: PROGRESS AND CONSTRAINTS

Welcome Address and Session Chair: Dr Ajay Mathur, Director General, TERI

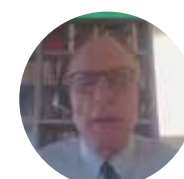
Panellists: Mr MM Kutty, Chairman, Commission for Air Quality Management in National Capital Region and Adjoining Areas; Mr Mitchell Bernard, President and Chief Counsel, Natural Resources Defense Council; Mr James Thornton, Founding CEO, ClientEarth; Ms Priya Shankar, Director- India Environment Programme, Bloomberg Philanthropies



Dr Mathur started the session with a warm welcome to all the panellists. He stated the importance to tackle regional sources with equal or more intensity to clean Delhi's air quality. He expressed his absolute delightedness towards setting up of Commission for Air Quality Management in National Capital Region and Adjoining Areas.

Mr MM Kutty stated that it is well understood that the future of humanity is dependent on how policy on air is shaped. It is our responsibility that air is made cleaner. There is no single

solution, it requires many continuous actions for its mitigation. All states and central government have acknowledged this problem. Construction-demolition, standards on emissions are all in place. The National Car Assessment Programme (NCAP) aims to bring down the pollution level by 20%-30% for PM_{2.5} by 2024. In 2016 household LPG supply was 60%, today it is 99.6%. A study done by IIT Kanpur estimated that the daily maximum pollution levels have come down from 350 ug/m³ to 200 ug/m³. The generation mix of renewable



MR MITCHELL BERNARD

President and Chief Counsel,
Natural Resources Defense
Council

"The issue of air pollution cannot be resolved by stopping economic development, it has to done by pushing economy in such a way that it helps clean the air along with healthy environment"

energy is going to increase from 10% in 2019 to 24% in 2024. And capacity mix 23% to 43% in 2024. Nationally we have introduced the best quality fuels comparative to anywhere in the world. BS-VI vehicles are being adopted very fast. There has been major success in cities such as Delhi by using natural gas as domestic fuel. Specifically focusing on urban transport, 13 cities today have metros, which have 750 km network



MR M M KUTTY

Chairman, Commission for
Air Quality Management in
National Capital Region and
Adjoining Areas

"The future of humanity is dependent on how policy on air is shaped"

and another 15 metros with 600 km network are under construction. Pollution mitigation requires continuous action. The Good AQI days in Delhi increased from 108 days in 2017 to 182 days in 2019 and 227 in 2020. Now we are targeting how to control open stubble burning of agriculture residue by developing framework or plan of action in consultation with Uttar Pradesh, Punjab, Haryana, Delhi, and Rajasthan. We are in the process to establish a robust monitoring system in place.

Mr Mitchell Bernard discussed about the change in national agenda of USA due to change in political change in the country. The new government has put the environmental issues along with climate change and air pollution as one of the top agenda in US politics. National Resources Defense Council's (NRDC) former president has been chosen as one of the cabinet members in the White House. The government is not just promoting but pushing aggressively towards cleaner environment policies. He further explained an obvious relation between economic development and air pollution. There is need to direct development in such a way which is environmentally safe. About 10% of worldwide deaths due to air pollution happens in India. One in every five deaths in India in late 2019 was because of air pollution. The pandemic is a vivid reminder of importance of this issue, because breathing dirty air increases likelihood of COVID-19 related deaths. Clean air is everyone's right and air must be kept clean in such a way that it supports economy. Since 1970, whatever we invested in clean air, the return is much more, according to a study by United States Environment Protection Agency (USEPA). It has been two decades already since the standards have been developed, and we keep fighting for it. Enforcement is the key;



MS PRIYA SHANKAR
Director, India Environment
Programme, Bloomberg
Philanthropies

“ India needs to track the source and need innovativeness from leadership at higher levels ”

we cannot have everything only in books and research papers. Citizens also have opportunity to enforce the law, at NRDC we do that, we go to court that the government enforce these policies. Indian government has already started moving in the positive direction by implementing policies like NCAP from 2019 onwards and since last year Finance Commission started funding to clean the air. The issue of air pollution cannot be resolved by stopping economic development. It has to done by pushing economy in such a way that it helps clean the air along with healthy environment.

Mr James Thornton shared his experience as a lawyer in NRDC while he was in USA and EU while fighting for environmental justice. He stated that the courts have been very reliable in all 20 countries in Europe where NRDC has sued government and private organization for healthy environment. Judges were prohibited to use diesel cars, and people were also encouraged not to buy diesel cars. Some reluctance has been observed on part of the government but still the experience has been overall positive in Europe. Twenty per

cent reduction in sale was observed for diesel vehicles. To conclude, there needs to be accountability, there needs to be good access to justice, and then citizens are willing to take the role of helping and influencing. In EU the standards are strong, clean energy is there, both to build up the economy and clean up the air. The goal is to use this experience and try it in US, China and more Asian countries. Use this skill with more local groups.

Ms Priya Shankar thanked TERI for partnership with Bloomberg Philanthropies. She discussed about the long discussion on tradeoff between economics and air quality. Household air pollution and burning of wood is reduced through Ujjawala Yojana scheme. Delhi is now introducing Switch Delhi policy, where vehicles will be electrical. India has an opportunity to leapfrog the pathways that US and Western Europe has followed. We do not have to go down on the same path. Having said that, in terms of questions and challenges in cities like Patna, Surat, and Delhi. The sources of air pollution in India is very complex, there is transport, domestic, industry, power plant, etc, which means lots of sources and also regional transport of pollution which requires coordination and collaboration from other regions. We also believe that there is greater awareness required in these cities. When Mike Bloomberg was mayor of New York, many policies were introduced and implemented to clean the air successfully. On the same lines India needs to track the source and need innovativeness from leadership at higher levels. Also is awareness amongst citizens must be generated. Finally, to combat air pollution there is requirement of partnerships between civil society, academia, and citizens for cleaning the air.

PLENARY

Virtual Hall: Pavagada

TOWARDS AN ENABLING GLOBAL ENVIRONMENT: ACCELERATING WOMEN LEADERSHIP AND EMPOWERMENT

Welcome Remarks: Dr Ajay Mathur, Director General, TERI
Special Addresses: Ms Karen Klimowski, Acting Deputy Mission Director, USAID/India
Chair: Ms Vaishali Sinha, Chief Sustainability Officer, ReNew Power Pvt Ltd and Co-Chair, SAWIE
Panellists: Dr Mukesh Aghi, President and CEO, USISPF; Ms Sheebu David, CHRO, GE South Asia & GE Renewable Energy Onshore Wind APAC & China; Ms Anita Marangoly George, Executive Vice President, Deputy Head- CDPQ Global, CDPQ India; Dr Irene Giner-Reichl, President, Global Forum for Sustainable Energy



DR IRENE GINER-REICHL
President, Global Forum for
Sustainable Energy

“ Women and girls have felt the economic impact more, as they were already earning lesser than men and the burden has only increased during lockdown ”

advocates for gender equality and mainstreaming women leadership.

The panel discussion was chaired by Ms Vaishali Sinha, Chief Sustainability Officer, ReNew Power Pvt Ltd and Co-Chair, SAWIE. In her opening remarks, Ms Vaishali emphasized the importance of building back to recover from the pandemic, but in a green and inclusive manner, and ensure that women are at the centre of efforts. She highlighted some dismal statistics, when it came to women's inclusion and contribution in the workforce, leadership roles, and the economy. According to Ms Vaishali, though entrepreneurship in energy is growing rapidly, funds for women entrepreneurs are inadequate. Therefore, much action is needed, where inclusiveness in funding must be prioritized.

Dr Mukesh Aghi, President and CEO, USISPF, addressed the need to look at the global perspective. He cited the findings of a recent IMF study that highlighted the kinds of discriminations women face, including disparity in pay and being prevented from doing certain jobs. There is also an increase in the digital divide between men and women, and one cannot progress in the present times without being in the digital arena. Mr Aghi further stated that studies have shown that increasing women's participation in the workplace increases productivity. Moreover, in the context of India, increasing women's participation by 10% can lead to a 20% increase in GDP. However, there is a structural discrimination against women in various aspects, and laws, culture, and attitudes have all contributed to this. Furthermore, the biggest gender discrimination happens in the energy sector. Mr Aghi mentioned some of the steps taken by his organization to bring about change, such as defining criteria for inclusivity in recruitment.



Dr Ajay Mathur, Director General, TERI gave the welcome address. He stated that it is at the heart of a country's progress, how women and girls participate in households and at work. Though women are achieving parity in terms of education and at workplaces, yet, their representation remains low. Dr Mathur highlighted TERI's efforts at gender inclusivity at the workplace, wherein around 40% of the workforce at TERI are women and 28% of the senior leadership comprises women. However, in the energy field, women are only a handful. Dr Mathur applauded the successful women leaders present on the panel and implored them to share their experiences in the ensuing discussions. He concluded with the hope that in the next edition of the WSDS, there would be at least 50% women speakers.

Ms Karen Klimowski, Acting Deputy Mission Director, USAID/India, delivered the special address. She remarked that India represents a unique mix of culture, tradition and innovation, and investing in gender equality and women's

empowerment could unlock human potential, which is key to sustainable outcomes. She highlighted USAID's work with governments and corporations to empower women, men, girls and boys, and transgender people, in various domains such as education, health, access to credit, and sustainable livelihoods, among others. She stressed that women's empowerment is the key to reaching the sustainable development goals and their initiative SAWIE



MS KAREN KLIMOWSKI
Acting Deputy Mission
Director, USAID/India

“ Need to focus our energy for a sustainable world and women should be at the core of it ”

Ms Anita Marangoly George, Executive Vice President, Deputy Head- CDPQ Global, CDPQ India shared her experiences in increasing women's representation in organizations such as World Bank and IFC. According to Ms George, having more women changed the dynamics of the team and led to richer discussions and better execution. She noted that while multilaterals mandate having women in top positions, the number of women in mid-level positions were fewer as they dropped out. She asserted that if women are given flexibility, they will stay back. Therefore, they made several structural changes that enabled women and men to carry out domestic responsibilities while managing their careers. She further highlighted some of the initiatives undertaken by them to empower women in the workforce, such as training women to be able to take on board positions that would help them perform and deliver as per the company's requirements. They also work with women entrepreneurs and provide them access to capital.

Dr Irene Giner-Reichl, President, Global Forum for Sustainable Energy stressed on the strong correlation between



MS SHEEBU DAVID
CHRO, GE South Asia & GE Renewable Energy Onshore Wind APAC & China

“ Inclusion of dialogues on diversity and meritocracy is key to progress ”

SDGs 5 and 7. She stated that while the COVID-19 crisis is threatening progress across all SDGs, the major setback has been in the progress of SDG 5. Women and girls have felt the economic impact more, as they were already earning much lesser than men, and bear the brunt of unpaid care work, and the burden has only increased during lockdown. She added that several economic recovery programmes across the world focus on energy transitions, which give an opportunity to make the transition just and gender equitable. There is also a need

to include the talent and experiences of women to enable societal transformations. Dr Irene shed light on the efforts made by the Gender-Energy Forum that brings together youth and women to accelerate gender inclusion in energy.

Ms Sheebu David, CHRO, GE South Asia & GE Renewable Energy Onshore Wind APAC & China foregrounded why every organization must have a structured approach on how to make changes. Rather than doing anecdotal and sporadic work, scalable efforts are required. Ms David talked about the various inclusive and sustainable practices that were adopted by them, which included understanding why women were leaving their jobs, and creating support systems such as employee assistance programmes, and engaging trained counsellors to help bring women back to work. She also highlighted the policy changes made to enable more flexibility for both men and women to contribute to family responsibilities.

VALEDICTORY SESSION

COLLABORATION FOR GREEN GROWTH

Welcome Remarks: Mr Nitin Desai, Chairman, TERI
Special Addresses: Rt Hon Mr Alok Sharma MP, COP26 President Designate, UK Cabinet Office; Mr Frans Timmermans, Executive Vice-President of the European Commission responsible for the European Green Deal
Valedictory Address: Mr Suresh Prabhakar Prabhu, Sherpa, G20 Summit
Summit Closing Remarks: Dr Ajay Mathur, Director General, TERI

Virtual Hall: Pavagada



MR FRANS TIMMERMANS
Executive Vice-President of the European Commission responsible for the European Green Deal

“ It’s either ‘just’ transition or just ‘no’ transition ”

There should be an increased sense of urgency, especially in the sphere of biodiversity, which must be higher on everyone's agenda. Both the EU and India are defenders of the Paris Agreement and both sides are ambitious to counter climate change risks, shared Mr Frans Timmermans, which he felt was promising. “We have the drive to lead an energy-efficient, renewable-energy future that can revolutionize the way we use and produce energy,” he said.

In his concluding remarks, he said that money must be spent in the right way and innovating economies at world scale could open the gates to green growth and sustainable recovery.

Mr Suresh Prabhakar Prabhu congratulated TERI and WSDS in bringing together different opinions on a common platform to achieve a common target. Within the paradigm of collaboration for green growth, he said that we have different capabilities but the common action becomes difficult to execute. “Collaboration is key. Without common action, we cannot achieve green growth,” he said, and highlighted how the nationwide lockdown as a means to curb the spread of the virus turned out to be a blessing in disguise. “Those who doubted whether climate change is human induced or not, got their answers when everything closed down in (early) 2020. There were clearer skies, cleaner air, and a better environment,” he pointed out.

Raising a pertinent point about the power of collaboration, Mr Prabhu expounded how the global supply of vaccines to combat the COVID-19 was an outcome of proactive involvement and collective strength. Taking a cue from the IPCC model, where collaborative science produces irrefutable evidence, he suggested that the application of a similar model in bringing together top scientific minds to address climate challenges in the sectors, such as energy, oceans, forestry, could work wonders.

We must also invest in green growth for wildlife because forest preservation is mandatory in the fight against climate change, he asserted. “We need a new regime, an IPCC-like model that can encourage research, time-bound programmes, and countries to join in and act together,” he concluded.

In the closing remarks, Dr Ajay Mathur began with a recap of the events held at the first-ever online WSDS and reiterated how everybody must be united to achieve the climate goals. With over 30 sets of discussions, more than 265 speakers, 6 reports launched, he highlighted how the 20th Summit was also special in a way that it was dedicated to the founder Dr RK Pachauri, the man who built the institution and whose brainchild is the Summit.

He acknowledged and thanked all the partners for both their financial support and intellectual leadership. The online mode opened up opportunities for more participation and exchange of ideas, which Dr Ajay Mathur noted to be a positive communication trend in a pandemic-stricken world.

Thanking his colleagues, management, directors, and the entire TERI fraternity, Dr Ajay Mathur signed off and said, “We have been successful in having our first online WSDS, and I thank all for your participation, commitment, and for walking with us.”



The valedictory session marked the culmination of the 20th annual World Sustainable Development Summit (WSDS) with the promise of a more secure and sustainable future. At the outset, Mr Nitin Desai expressed hope in the way the climate narrative has taken shape over the years, especially among young activists such as Greta Thunberg and others who have been leading from the front. There is universal agreement by scientists about what needs to be done along with a great deal of support from civil society and corporations to tackle climate change. The challenge, he felt, is before the governance. “The governments must deliver in terms of policies, which support the positive sentiment on climate change. Climate action cannot be divorced from other areas of sustainable development,” he said.

Joining from Nigeria, Rt Hon Alok Sharma shared his concern over the urgent need to tackle climate change, and expressed his deepest condolences to the families who lost their loved ones in the recent Uttarakhand glacier disaster. According to the UN, there has been a staggering rise in climate disasters, affecting

more than 4 billion people across the world, he pointed out, and said that over the past two decades, the world has experienced its hottest 10 years on record.

The climate crisis is accelerating and Mr Sharma reiterated why we must act now and act together. “The Paris Agreement may have established the framework, but we are far away from the target and are on the brink of environmental tragedies of epic proportions,” he said. In this regard, COP26 presidency is at the forefront to get the world on track to make the Paris Agreement a reality through investment in green recoveries, adaptation plans, commitment to net-zero emissions, and aligned NDCs. He also applauded the Hon'ble Prime Minister Shri Narendra Modi's commitment to generate 450 GW of RE capacity by 2030.

In climate negotiations, it is important to include the voices of youth and women, marginalized, and indigenous. With their knowledge, leadership, and expertise, sustainable solutions could be developed and prioritized in the sectors of finance, adaptation nature, clean energy, and clean transport, he shared.

Mr Frans Timmermans warned the audience about the challenges of climate change and biodiversity loss. Only a couple of years are left to make the necessary changes in the climate policies to avoid reaching the tipping points, which are dangerously near, he asserted. “How we shape the recovery from the pandemic will determine whether we can succeed in realizing our goals against our fight against climate crisis,” Mr Frans Timmermans said, and added, “we have to build a comprehensive plan to make our economy and society ready for a climate-neutral future.”

Mr Timmermans talked about the need for the 2050 climate neutrality goal to be set into law in addition to the target of reducing emissions by 2030. It is relatively easy to declare you are going to be carbon-neutral, but a realistic plan is more important than a mere declaration, he asserted. “We are not in an area of traditional diplomacy; we must help each other in creating solutions to the existing challenges,” he said.



RT HON MR ALOK SHARMA MP
COP26 President Designate, UK Cabinet Office

“ If we focus on civic challenges across sectors, we can make progress faster by sharing solutions, bringing down costs, driving innovation ”