



WORLD SUSTAINABLE DEVELOPMENT SUMMIT

PARTNERSHIPS FOR A RESILIENT PLANET

FEBRUARY 15–17, 2018
INDIA HABITAT CENTRE,
LODHI ROAD, NEW DELHI

#Act4Earth

SUMMIT BULLETIN | DAY 1

15–17 February 2018 | India Habitat Centre, New Delhi, India

GREENOVATION 2018 EXHIBITION INAUGURATED AT THE WSDS 2018



(left to right) Prof. Jeffrey D Sachs, Director, Centre for Sustainable Development, The Earth Institute, Columbia University; Mr Ashok Chawla, Chairman, TERI; Ms Patricia Appiagyei, Hon'ble Deputy Minister, Ministry of Environment, Science, Technology & Innovation, Ghana; HE Nils Ragnar Kamsvåg, Ambassador of Norwegian Embassy in New Delhi, Dr Ajay Mathur, Director General, TERI

OPENING SESSION

Welcome Remarks: Dr Ajay Mathur, Director General, TERI
Mr Ashok Chawla, Chairman, TERI;

Ms Patricia Appiagyei, Hon'ble Deputy Minister, Ministry of Environment, Science, Technology & Innovation, Ghana;

Special Address: HE Mr Nils Ragner Kamsvåg, Ambassador of Norway to India, Royal Norwegian Embassy

Keynote Address: Prof Jeffrey David Sachs, Director, Earth Institute, Columbia University



DR AJAY MATHUR

Director General, TERI

“ We must move towards a future where the world is better environmentally, economically, and socially. ”



(left to right) Mr Ashok Chawla, HE Nils Ragnar Kamsvåg, Ms Patricia Appiagyei, Prof. Jeffrey D Sachs, and Dr Ajay Mathur

Witnessing participation from over 41 countries, the second annual edition of the WSDS 2018 commenced with a call for unparalleled global cooperation towards mutual sustainability goals. While defining the imperatives of global sustainability, Dr Ajay Mathur spoke about the need to build a better environment. Ambassador Kamsvåg recounted the tragic story of the 'Plastic Whale' as a call to action for global cooperation.

In his keynote address, Dr Sachs defined a five-point way forward, wherein India could direct its capabilities towards sustainable growth and stated that India, like

the USA, must open up endless frontiers of science and technology. 🌍

THEMATIC TRACKS



(left to right) Mr Bharat Mahadevan, Dr Christian Siderius, Dr Prodipto Ghosh, Ms Bijal Brahmabhatt, Dr Richa Sharma

The session initiated with Dr Christian Siderius speaking about the HI AWARE project, focusing mainly on Delhi followed by Mr Bharat Mahadevan who elaborated on the IB valley in Odisha. Dr Richa Sharma focussed on climate change and urban heat island as the factors responsible for decrease in night-time cooling. Ms Anjali Jaiswal added, "No one should be dying from heat". As temperatures rise, the human body cannot survive without cooling measures. Dr Rohit Magotra spoke about how the NDMC Delhi will soon launch a heat stress action plan. 🌍



(left to right) Ms Suruchi Bhadwal, Ms Anjali Jaiswal, Mr Murli Kallur, Dr Prodipto Ghosh, Dr Rohit Magotra, Dr Vinay S P Sinha



DR VINAY SHANKAR PRASAD SINHA

Associate Professor, TERI School of Advanced Studies

“ The mitigation plan should be looking at the three needs— boundary, canopy, and scheme. ”

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WSDS 2018 Thematic Track Partners



THEMATIC TRACKS

CIVIL SOCIETY ENGAGEMENT IN LAND DEGRADATION NEUTRALITY

Moderator: Aziaka, President, Togo Welfare Journalist;
Speakers: Mr S S Negi, VC, Uttarakhand Village Development and Migration Commission; Dr Alex Zvoleff, Data Science, Moore Centre for Science, Conservation International; Bhavani Shankar Kusum, ED, Gram Bharti Samiti; Ms Nathalie Van Haren, Cluster Coordinator, Land Both Ends, Netherlands; Mr Ritesh Kumar, Director, Wetlands International; Ms Hindou Ibrahim, Coordinator, Association for Indigenous Women and Peoples of Chad; Ms Marioldy Sanchez Santivarez, Project Coordinator, AIDER, Peru

Sustainable land management depends on creating a rights-based approach where building synergies with key stakeholders is a critical component. As land degradation and rural migration are closely linked, a key solution lies in distilling information and making it available to government and civil society organizations (CSOs) for policy formulation.

Access to information, investments in farmers, and working with CSOs—all have a unique role in land degradation neutrality and partnerships are key to achieve this, said Dr Alex Zvoleff.

According to Mr Kumar, civil society can heighten understanding and play a meaningful role by linking developmental agenda with restoration solutions.



THE GRIHA TROPHY AT NASA

Panelists: Mr Sanjay Seth, CEO, GRIHA Council; Ar. Sanjay Prakash, Principal Consultant, Shift; Mr Sanjeev Joshi, Senior Vice President, Experion Developers Pvt Ltd; Dr Ajay Mathur, Director General, TERI

This year's GRIHA Trophy entry required students to design a multipurpose complex for the competition sponsors, Experion Developers, incorporating the latest thinking on sustainable design.

Dr Ajay Mathur reiterated that "The student designers of today will influence the cities and buildings of tomorrow" while Mr Sanjay Seth advised students to incorporate resource efficiency and frugality in their future work. Mr Sanjeev Joshi stressed on the practicality of achieving sustainability.



PRABIR SENGUPTA

Distinguished Fellow, TERI

Without the availability of reliable data, transport policy formulation becomes a difficult task, and posits difficulty in evaluating options.

MAKING LIVABLE CITIES: CHALLENGES AND WAY FORWARD

Panelists: Raina Singh; Fellow and Convenor, Centre for Urban Planning and Governance, TERI; Yuri Afanasiev; UN Resident Coordinator and UNDP Resident Representative in India; HE The Ambassador Peter Taksøe-Jensen, Royal Danish Embassy in India; Swayan Pal Chaudhuri, CEO & MD, Imagine Panaji Smart City Development Corporation Limited, Panaji, India; Rama Krishna Rao R, Director (Planning), Andhra Pradesh Capital Region Development Authority (APCRDA); Kamlesh Yagnik, Chief Resilience Officer, Surat Municipal Corporation; Pier Roberto Remitti, Program Director, International Urban Cooperation, India

That global urbanization is rapid and unavoidable is a universal truth. Unless a timely and smooth shift towards sustainable urbanization is made, global resources will continue to face increasing pressure. In alignment with the 11th Sustainable Development Goal, The Energy and Resources Institute and the Danish Embassy in New Delhi plan to initiate a policy dialogue series enabling smart and sustainable cities in India.



(left to right) Mr S Pai Chaudhari, Mr Kamlesh Yagnik, Mr Pier R Remitti, Mr Rama K Rao, and Mr Bhupesh Rathore



YURI AFANASIEV

UN Resident Coordinator and UNDP Resident

"We have reached the boundary and a shift needs to happen in the next 20 years not only in terms of decarbonization but making cities centres of human habitat."

TOWARDS RESOURCE-EFFICIENT MANAGEMENT OF PLASTIC WASTE

Moderator: Jurgen Hannak Senior Project Manager, Adelphi

Panelists: Dr Suneel Pandey, Director, TERI; Mr Astrid Schomaker, Director of European Commission - DG Environment; Ms Rachna Arora, Deputy Team Leader & Coordinator of EU-REI Initiative, India of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH; Mr Amit Saha, Chief Sustainability Officer of Hindustan Coca-Cola Beverages Pvt Ltd; Mr Ulhas Parlikar, Dy. Head, Geocycle India of ACC Ltd; Mr Siddharth Hande, Founder & CEO, Kabadiwalla Connect

A blanket of plastic wreckage spanning 965,000 sq. miles, floating in the ocean and an emaciated whale with 30 polythene bags in its stomach dying in Norway—these thoughts weighed heavy on the minds of the distinguished panel. Making the plastic industry more sustainable and competitive through cooperation amongst stakeholders—producers, the informal sector, and the consumers—is imperative, in addition to adopting a reuse and recycle approach.



CARBON MARKETS AND PRICING: DEMYSTIFYING POLICY LANDSCAPE AND THE ROLE OF THE PRIVATE SECTOR

Speakers: Mr Dipak Dasgupta, Distinguished Fellow, TERI & Former Principal Economic Adviser, Ministry of Finance, Government of India; Mr Suman Bery, Former Chief Economist, Strategy and Business Environment, Shell International Ltd; Dr Chandra Shekhar Sinha, Lead Climate Change Specialist, World Bank; Dr Ashok Kumar, Director, BEE, Ministry of Power, Government of India; Mr Damandeep Singh, Director, CDP India; Mr Anirban Ghosh, Chief Sustainability Officer, Mahindra Group; Mr Manish Mishra, Chief Regulatory Affairs, Tata Steel; Mr Sandeep Shrivastava, Head- Environment & Sustainability, Ambuja Cement Ltd



In the session on carbon markets and pricing, it was highlighted that India has taken several initiatives on the domestic front. Carbon pricing hits two birds with one stone, that is, it puts a price on negative externalities of greenhouse gas (GHG) emissions and generates resources for cleaning the environment. However, the opportunity cost of saving carbon in India is higher, hence there is a need for global optimization and richer countries need to play a bigger role.

THE BUSINESS OF LAND

Speakers: Dr A K Bhattacharya, CEO, National Green Highways Mission; Mr Subhash Chandra, Joint Secretary, Ministry of Mines; Mr Chandan Bhavnani, Executive Vice President, Yes Bank; Dr Pia Sethi, Fellow and Area Convenor, Centre for Biodiversity and ecosystem services, TERI; Ms Katherine Kennedy, Head of Climate Change, Commonwealth Secretariat; Mr Sun Jinan, Head of Sustainable Productivity China, Syngenta; Mr Aviram Rozin, Chairman, Sadhana Forest Kenya; Dr Paul Luu, Executive Secretary, "4 per 1000" initiative; Mr F L Winterhalder, Professor of Environment and Sustainability at ESADE Business School

Chair: Mr Siddhanta Das, Director General, Forests and Special Secretary, Minister of Environment, Forest and Climate change, Government of India



Better stewardship of the land could have a much bigger role in fighting climate change than previously estimated. Forest landscape restoration has an invaluable carbon sequestration potential and offers a wide array of benefits like food security, soil conservation as well as rural development. India is committed to sequestering 2.5–3 billion tonnes of CO₂ by 2030. Highlighting the need to understand the value of degradation, the value of restoration, and the value of sustainable land management techniques, the session was concluded with an urgent call to action.

THEMATIC TRACKS

FUTURE OF OIL AND GAS SECTOR OF INDIA IN A CLIMATE-CONSTRAINED WORLD

Chair: Dr Prodipto Ghosh, Distinguished Fellow, TERI; Mr Sanjiv Singh, Chairman, IOCL; Opening Address: Mr Prabir Sengupta, Distinguished Fellow and Director, TERI

Panelists:

Dr Manish Shrivastava, Fellow, TERI; Ms Vartika Shukla, Executive Director, Technical, Engineers India Limited; Dr Ritu Mathur, Senior Fellow and Director, TERI; Mr Kamal Kishore, Member, NDMA; Mr Aya Yaohide, Head, Asia Pacific Partnership Division, International Energy Agency



In view of India's energy needs, it is unlikely that oil and gas would cease to have a role in India's energy mix, said Mr Prabir Sengupta. Achieving the target in the Paris Agreement would require decarbonization of the energy sector and electrification of the transport sector. Dr Ritu Mathur said India's long-term energy demands are expected to be influenced by economic growth targets and by the way government policies and alternative technologies evolve in terms of their costs and efficiencies. Summing up, Dr Shrivastava said the Indian oil and gas sector should be concerned more from the resilience point of view rather than mitigation of GHG emissions.

ELECTRIC VEHICLES IN INDIA: THE RESOURCE-EFFICIENT WAY

Speakers: A Deshpande, Deputy Director, AED, ARAI; Charlotte Pera, President & CEO, ClimateWorks Foundation; Sohinder Gill, CEO, Global Business, Hero Electric & Director, Corporate Affairs, SMEV; Ajit Kumar Jindal, Head EV Engineering, Tata Motors; Guruprasad Mudlapur, Managing Director, Bosch Automotive Electronics India Pvt. Ltd; Tapan Sahoo, Sr Vice President, Engg. Research, Design & Development, Maruti Suzuki India Ltd; Abhishek R Ranjan, Head, Renewables BSES Rajdhani Power Ltd BRPL; Rahul Walawalkar, Executive Director, India Energy Storage Alliance; Saurabh Rohilla, Deputy Director, SIAM; Abhilash ET Nair, Sr Marketing Manager, ABB; Ajoy Raychaudhuri, Founder Director, Battery and Recycling Foundation International

While electric vehicles (EVs) are not a new concept in India, they have begun gaining momentum only recently; major leaders, such as Maruti Suzuki, Mahindra, Tata Motors, and so on have provided this the necessary push. Not only are EVs more efficient, they have a higher reliability as compared to internal combustion engines; they are critical from the viewpoint of sustainability, and a step towards addressing fiscal as well as social concerns such as air quality. The session panelists also identified the many challenges that EV adoption faces in India today.



(left to right) Mr Souvik Bhattacharjee, Mr Tapan Sahoo, Mr A A Deshpande, Ms Charlotte Pera, Mr Sohinder Gill, Mr Ajit Kumar Jindal, and Mr Guruprasad Mudlapur

CLIMATE SERVICES: NAVIGATING INTO AN UNCERTAIN FUTURE

Speakers: Ambassador Mr Ajai Malhotra, Distinguished Fellow & Sr Advisor (Climate Change), TERI; Mr Jan Petter Barring, Senior Advisor, Norwegian Ministry of Climate and Environment of The Royal Norwegian Embassy; Dr SD Attri, Deputy Director General of Meteorology (SF) of India Meteorological Department; Dr Trond Vedeld, Researcher Professor International Studies of Norwegian Institute for Urban and Regional Research (NIBR-HiOA) and Dr Hege Hofstad, Norwegian Institute for Urban and Regional Research (NIBR-HiOA); Dr GC Shrotriya, National Head (Value Added Services), IFFCO Kisan; Mr Crispino Lobo, Managing Trustee of Watershed Organisation Trust (WOTR); Mr Mihir Mathur, Consultant, TERI; Dr Geir Heierstad (Closing remarks), Head of Research, International Studies and Migration, Norwegian Institute for Urban and Regional Research (NIBR)



The discussions in this thematic track centred around the fact that there was an urgent need to combat climate change due to its direct impact on global food security. It was felt that climate change was perhaps the greatest challenge being faced by the world population today due to its widespread effects on our geology, economies, and societies. The panelists also discussed through the prism of climate change's impact on India's agricultural community, and the correct responses.

PROTECTING OCEANS FROM CHEMICAL AND PLASTIC POLLUTION

Moderators: Dr S K Sarkar, Distinguished Fellow and Senior Director, TERI; Dr Girija K Bharat, TERI

Speakers: Professor Thorjorn Larssen, Research Director, Norwegian Institute of Water Research (NIVA); Anne M Mo Ravik, Norwegian Environmental Agency; Vikas Dighe, Scientist, ICMR; Ambassador, Nils R Kamsvag, Royal Norwegian Embassy; Eirik Steinndal, Researcher, NIVA; Dr Ashu Juwarkar, MGC, Ex-Chief Scientist and Head—National Environmental Engineering Research Institute; Satish Sinha, Associate Director, Toxics Link; Luca Nizetto, Research Scientist, NIVA

With over billions of tonnes of waste dumped into the world's oceans every year, the impact on marine and human lives is unprecedented. Management and mitigation of this waste, therefore, cannot be dealt in silos. This session, in essence, invoked the spirit of cooperation within and between countries. Towards implementation, India's National Implementation Plan (NIP) has identified priority areas, of which developing infrastructure, technical and analytical capabilities through focus groups are primary.



(left to right): Mr Vikas Dighe, Ms Anne Marie Mo Ravik, Dr S K Sarkar, Mr Nils Ragnar Kamsvåg, and Mr Thorjorn Larssen

GREENING THE SUPPLY CHAIN OF SOLAR PV

Speakers: Dr Ashvini Kumar, Sr Director, Renewable Energy, TERI; Mr Shirish Garud, Sr Fellow, TERI; Prof Viresh Dutta, Centre for Energy Studies, IIT Delhi; Dr Satyendra Kumar, CTO & Chairman, VS Saurya EnerTech Pvt Ltd; Mr Sujoy Ghosh, Country Head India, First Solar; Mr Parth Bhatt, Sr Engineer R&D, Waaree Energies Ltd

Part II – Technical Session

Session chair: Mr Ritesh Kumar Singh, Joint Secretary, MoEFCC; Mr Ashish Khanna, CEO & ED, Tata Power Solar Systems; Mr Sunil Jain, CEO & ED, Hero Future Energies Pvt Ltd; Mr V Ramakrishnan, Director, TORP Systems Pvt Ltd; Mr Agostinho Miguel Garcia, Principal Consultant, SunBD; Mr Rritu Saurabha, Director, YES Bank



(left to right) Dr Ashvini Kumar, Mr Viresh Dutta, Mr Satyendra Kumar, Mr Sujoy Ghosh, and Mr Parth Bhatt

Stakeholders from across the solar value chain—policymakers, manufacturers, academia, and solar energy companies came together in this thematic track to discuss some of the key technological advances as well as challenges emerging in making the solar sector greener. The discussions were divided into two broad themes—one on technical issues in resource use in the solar PV value chain, and the other on business models and policies fostering this resource efficiency.

CLEANING AIR IN INDIAN CITIES: BLENDING POLICY AND TECHNOLOGICAL ENFORCEMENT

Chair: Dr Urvashi Narain, Lead Economist (The World Bank) and Professor Mukesh Khare, IIT Delhi

Speaker: Dr Anil Kumar, Director of Department of Environment, Government of Delhi; Shri D R Kumaraswami, Chief Environmental Officer, Karnataka State Pollution Control Board; Dr B B Awasthi, Regional Officer, Uttar Pradesh Pollution Control Board; Dr Prashant Gargava, Additional Director, Central Pollution Control Board; Mr Ravi Babu, General Manager (Environment), NTPC; Mr Sumit Sharma, TERI; Dr Markus Amann, IIASA

Despite multiple central and state government initiatives, pollution levels are on the rise. There is a need for discussion and reassessment, including city-level discussions, to understand what has worked and what has not (across sectors). As an important part of public health service, the role of forecasting air quality was emphasized not just as a crucial practice, but also as necessary information, thus enabling individuals, too, to rise to the occasion.



THEMATIC TRACKS

PROMOTING ENVIRONMENTALLY SOUND TECHNOLOGIES AND BEST PRACTICES

Speakers: Rajnesh Trivedi, Sustainable Development Banking, Yes Bank; Krishan Dhawan, Chief Executive Officer, Shakti Sustainable Energy Foundation; René Van Berkel, Unit Chief, Industrial Resource Efficiency with the United Nations Industrial Development Organization (UNIDO)



This thematic track part of the WSDS 2018, was presented in the context of Japan-India Technology Matchmaking Platform (JITMAP)—a platform that accelerates the matching of relevant stakeholders from both countries and promotes the dissemination of Japanese low-carbon technologies (LCTs) in India. With the burgeoning role of Indian SMEs in the nation's job creation, delegates agreed upon the need to bring together the technological needs of Indian SMEs across industrial clusters, while also showcasing the benefits from the infusion of new technologies.



MR KRISHAN DHAWAN

Chief Executive Officer, Shakti Sustainable Energy Foundation

“Our focus is to help India meet its economic goals sustainably ... We will need technologies developed and perfected overseas.”

CORPORATE GREEN LEADERSHIP: EXPERIENCES AND SCALING UP

Moderator: Mr Ajay Shankar, Distinguished Fellow, TERI; Dr Daniel Bradley, Team Leader - Low Carbon Growth - British High Commission, India; Mr Punit Desai, Infosys; Mr Sanjay Jain, Dalmia Cements; Mr Gaurav Swaroop, Vedanta; Mr Manish Mishra, Tata Steel; Ms Ritu Lal, Amplus Solar

During this session, experts focused on the benefits of industry-led coalitions on green initiatives and their impact on renewable energy, energy efficiency, and climate-related financial disclosures. The panel also discussed the challenges faced by the coalitions in scaling up the initiatives. Dr Daniel Bradley underscored the importance of low-carbon agenda and described Tata Steel as the first Indian company to endorse climate-related financial disclosure initiatives. Mr Punit Desai's company was able to generate electricity at ₹3/unit (as against 7-8) through green initiatives and energy-efficient buildings.

The Delhi International Airport is the first carbon-neutral airport in the Asia Pacific region and has also set up the first, onsite solar power plant in India.



THE THIRD POLE—A MELTING POT OF CLIMATE CHANGE THREATS AND ACTIONS

Perspectives from the Himalayan Adaptation, Water and Resilience Research (HI-AWARE)

Panelists: Prof Arabinda Mishra, ICIMOD; Mr Murali Kallur, Senior Programme Officer HI AWARE, IDRC; Mr Philippus Wester, ICIMOD; Mr Abu Sayed, BCAS; Mr Christian Siderius, Wageningen University and Research; Mr Eklavya Prasad, MPA; Ms Suruchi Bhadwal, Senior Fellow, TERI

The session focused on the lessons learnt from pilots under the HI-AWARE programme aiming to build adaptation capacities of vulnerable communities in the Indus, Ganges, and Brahmaputra river basins. Prof Arabinda Mishra highlighted that the Hindu Kush Himalayan region was an 'information blackhole' since the project began with very poor availability of data or research evidence. Mr Abu Sayed spoke about the pilot on climate and flood-resilient housing in the lower Teesta Basin in northwestern Bangladesh and Mr Eklavya Prasad mentioned the Faydemand Shauchalaya or beneficial toilet in the west Champaran district of Bihar that converts human excreta into manure. Dr Ajay Mathur stressed how pilots provide a set of lessons to be put forward to policymakers for upscaling.



(left to right) Ms Preeti Soni, Mr David Molden, Mr Anindya Chatterjee, Mr P D Rai, and Mr Mustafa Ali Khan

AFFORDABLE AND EFFICIENT COOLING: MAXIMIZING CLIMATE BENEFITS WITH REFRIGERANT CHANGE

Panelists: Dr Ajay Mathur, Director General, TERI; Shri Gyanesh Bharti, Joint Secretary, MoEFCC; Dr Hussamuddin Admadzai, Senior Advisor, Swedish EPA; Shri Saurabh Kumar, Managing Director, EESL; Mr Randal Newton, Vice President, Ingersoll Rand; Frances Beinecke, Trustee, NRDC Action Fund

During the session, Dr Ajay Mathur highlighted the benefits of enhancing energy efficiency while reducing global warming. He added how the Kigali Amendment to the Montreal Protocol enabled the option of addressing HFC phaseout. Dr Hussamuddin Admadzai shared highlights in Sweden's journey in phasing out ozone-depleting substances 30 years ago when alternatives were unavailable. Ms Frances Beinecke spoke about how India is critical to the success of the Kigali Agreement. Mr Saurabh Kumar shared his business model which stimulated domestic manufacturing and adoption. Mr Randal Newton spoke about the collaboration between chemical manufacturers and refrigerant and the air conditioning industry to develop innovative and safe refrigerants with lower GWP.



MR SUBHASH CHANDRA

Joint Secretary, Ministry of Mines

“In India, we are faced with a paradox that forests and mineral resources are overlaid in the same geographical location and these are the same areas where most of the poor population live. The challenge before us is to manage these resources and, at the same time, contribute to the economic and social development of the people living there.”



MR ARVIND KUMAR

Adviser, TERI

“Data can be used to challenge and to correct inefficient transport system. Without reliable and valuable data, it will become impossible to compete in international markets.”

SMART MICRO-GRIDS: A NEW MANTRA FOR DISTRIBUTED GENERATION

Panelists: Dr Sanjay Bajpai, Scientist 'G', Dept of Science and Technology; Nils Ragnar Kamsvåg, Norwegian Ambassador to India; Mr Joerg Gaebler, GIZ; Mr Jiwan Acharya, Senior Energy Specialist, Asian Development Bank; Mr G Ganesh Das, Head—Strategy, Tata Power Delhi Distribution Ltd; Dr Mohan Kolhe, Professor, University of Agder, Norway; Dr Arun Kumar Verma, IAS, Joint Secretary, Ministry of Power; Mr Reji Pillai, President, India Smart Grid Forum, Delhi; Ms Vaishali Dash, Senior Research Engineer, Centre for Study of Technology and Policy, Bengaluru; Dr Rahul Walawalkar, Executive Director, India Energy Storage Alliance, Pune; Dr Ashok Das, Founder & CEO, SunMoksha, Odisha; Jeevan Kumar Jethani, Scientist 'E', Ministry of New and Renewable Energy, Government of India



Panelists at the session emphasized that micro-grids are complementary to grid-connected power and not an alternative. Dr Sanjay Bajpai emphasized that the challenge is to make renewable energy-based micro-grids affordable. Dr Kolhe presented his implementation of micro-grids in Norway's villages under the SEMIAH (Scalable Energy Management Infrastructure for Aggregation of Households) project and Dr Das presented his experiences in a remote village in Odisha where electricity access also created employment opportunities. Mr Reji Pillai predicted that smart contracts executed through block chain will become a reality to sell excess power from micro-grids between consumers who will become 'prosumers'.

THEMATIC TRACKS

STRENGTHENING AN EVIDENCE-BASED POLICY FRAMEWORK FOR SUSTAINABLE TRANSPORT

Welcome Remarks: Prabir Sengupta, Distinguished Fellow, TERI

Special Address: Prof Yoshitsugu Hayashi, Professor of Chubu University, Emeritus Professor of Nagoya University, Japan

Keynote Address: Mohd Jamshed, Member, Traffic Railway Board and Secretary to Government of India

Vote of Thanks: Mr TP Sankar, Fellow, Knowledge Management, TERI

Session Chair: Mr Shri Prakash, Distinguished Fellow, TERI

Speakers: Mr Arvind Kumar, Adviser, TERI; Mr Mario Barreto, International Transport Forum/OECD, Paris; Prof Dinesh Mohan, Emeritus Fellow, IIT-D, New Delhi; Ms Ruchi Varma, Programme Manager—Urban Development, Open Cities Institute; Ms Palak Thakur, Research Associate, Centre for Sustainable Mobility, TERI



The Indian transportation sector is an important pillar of the economy, contributing close to 7% of the GDP. Despite this, the transport policy-planning is not an easy task in India. While the oil and gas sector meets the alternative fuel demands of the domestic, commercial, and industrial sectors, the possibility and potential of alternative fuels for the transport sector has not really been realized. According to the panelists, an efficient data management system is required to streamline the industry through policy interventions.

GOVERNANCE CHALLENGES AND POLICY SOLUTIONS FOR COMBATING LAND DEGRADATION

Panelists: Mr B M S Rathore, Chief Policy Advisor, ICIMOD

Chairperson: Mr Ajay Kumar Lal, Joint Secretary, Ministry of Law and Justice, GoI; Mr Yuri Afanasiev, UN Resident Coordinator and UNDP Resident Representative; Chencho Norbu, Secretary, National Environment Commission of Bhutan; Dr Dirk Walthert, Project Director, ProSoil (India), GIZ; Mr Jigmet Takpa, Joint Secretary International Cooperation and Sustainable Development, Ministry of Environment, Forest and Climate Change; Dr J V Sharma, Director, Forestry and Biodiversity Division, TERI

Home to 17% of world's population and 18% of the world's cattle, India possesses 2.5% of the world's land. Around 2.5% of India's annual GDP is lost to land degradation. It is, therefore, imperative for India to combat the degradation of land, an asset at risk.

Mr Ajay Kumar Lal raised the critical aspect of India's land degradation problem and linked it to agricultural productivity, which needs to be increased by 75% to ensure access to food for India's growing population. Mr B M S Rathore called for protecting land as a "people's movement" which necessitates strengthening institutions and communication. Unprocessed urban solid waste, desertification, improper agricultural practices, and use of fertilizers, are some of the challenges compromising land health.



TRANSITIONING TO A LOW-CARBON ECONOMY: ETC INDIA LAUNCH

Moderator: Mr A K Saxena, Director, Electricity & Fuels Division, TERI

Speakers: Dr Ajay Mathur, Director General, TERI; Mr A K Bhalla, Secy Power; Mr Rakesh Nath, Former Member, Aptel; Mr Nitin Prasad, CEO, Shell India; Mr Gurdeep Singh, Chairman & MD, NTPC

This session witnessed the launch of Energy Transitions Commission India (ETC India), a high-level, multi-stakeholder platform on energy and electricity sector transitions in India, to identify pathways for change in energy systems. ETC India is the first country-specific Commission that will act as a model for other emerging economies as they seek

to move to renewable energy sources. According to Dr Ajay Mathur, the launch will enable strong engagement and continuous interactions with policymakers at various levels of government, industry and associations, civil society, and media to test the analysis and hypothesis formulated through ETC activities in India.



(left to right) Mr A K Saxena, Mr Rakesh Nath, Dr Ajay Mathur, Mr A K Bhalla, Mr Gurdeep Singh, and Mr Nitin Prasad

CULTURAL EVENING AND DINNER

