



Confederation of Indian Industry



CII-ITC Centre of Excellence
for Sustainable Development

CARBON NEUTRAL EVENT



12TH SUSTAINABILITY SUMMIT

2030 Agenda:
Driving Inclusive Growth

6-7 September
2017

Le Méridien New Delhi

Proceedings



**CII-ITC Centre of Excellence
for Sustainable Development**

VISION

Be a global leader, in thought and action, to drive transformation, towards sustainable development.

Mission

To catalyse innovative ideas and solutions in India, and globally, to enable business, and its stakeholders, in sustainable value creation.

SPONSORS

ELITE



MAJOR



PRINCIPAL



EVENT



SPONSORS

SESSION



SUPPORTING



NETWORKING



CONTRIBUTING



PRINT MEDIA



ONLINE MEDIA



IN PARTNERSHIP WITH

IN PARTNERSHIP WITH



सत्यमेव जयते

Ministry of Housing and Urban Affairs
Government of India



सत्यमेव जयते

Ministry of Science and Technology
Government of India



Copyright @ 2017 Confederation of Indian Industry. All rights reserved.

No part of this publication may be reproduced, stored in, or introduced into a retrieval system or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), in part or full in any manner whatsoever, or translated into any language, without the prior written permission of the copyright owner. The document contains the opinion of the speakers at the 12th Sustainability Summit organized by CII-ITC Centre of Excellence for Sustainable Development on 06-07 September 2017 at New Delhi. We have made every effort to ensure accuracy of the information and material presented in this document. Nonetheless, all information, estimates and opinions contained in this publication are subject to change without notice, and do not constitute professional advice in any manner. The document doesn't necessarily reflect the view of CII and CII-ITC Centre of Excellence for Sustainable Development. Neither CII, nor any of its office bearers or analysts or employees accept or assume any responsibility or liability in respect of the information provided herein. However, any discrepancy, error etc. found in this publication may please be brought to the notice of CII for appropriate correction.

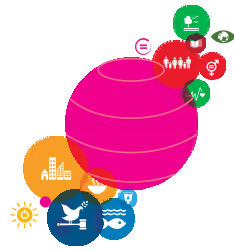
Published by CII-ITC Centre of Excellence for Sustainable Development, Delhi | Gurugram | Mumbai, India.

Tel.: +91 11 41502301/+ 91 124 4346 350, Email: sustainability.summit@cii.in, Website: www.sustainabledevelopment.in.



PROGRAMME





12TH SUSTAINABILITY SUMMIT

**2030 Agenda:
Driving Inclusive Growth**

DAY 01, WEDNESDAY, 6 SEPTEMBER 2017

0930 hrs

Registration

1045 – 1200 hrs

PLENARY I

CLEAN ENERGY:

A GAME CHANGER IN ATTAINING INCLUSIVE GROWTH

Access to affordable, reliable and sustainable energy is crucial to achieving many of the SDGs—from poverty eradication through advancements in health, education, water supply and industrialization to mitigating climate change. The transition to clean energy is crucial to address the impacts of climate change. After the Paris Agreement, majority of countries are committed to scaling up renewable energy and energy efficiency. India is moving towards realising the clean energy vision of Prime Minister Narendra Modi to achieve 175GW by the year 2022. The RE capacity has gone from 33.8gw to 43gw, overtaking hydroelectric capacity. To achieve the targets, there is a need to overcome the twin challenge of finance and technology. The session will bring together stakeholders who will discuss the current rate of progress that is required to achieve the goal set in the Paris Agreement and in translating SDG 7 into action.

Session Chairman & Moderator

- **Mr K S Venkatagiri**, Executive Director, CII-Soharbj Godrej Green Business Centre

Lead Panellist

- **Mr K S Popli**, Chairman & Managing Director, Indian Renewable Development Agency Limited
- **Ms Henriette Faergemann**, Counsellor Environment, Energy and Climate Change, EU Delegation to India
- **Mr Sanjeev Aggarwal**, Founder & CEO, Amplus Solar
- **Ms Surbhi Goyal**, Senior Energy Specialist, World Bank
- **Mr Roy John**, Chief Engineer–Operations, ITC Limited

Opening remarks

- **Mr Sanjiv Puri**, CEO & Executive Director, ITC Limited

Address

- **Mr Chandrajit Banerjee**, Director General, Confederation of Indian Industry

Address

- **Ms Shobana Kamineni**, President, CII and Executive Vice-Chairperson, Apollo Hospitals Enterprise Limited

Special address

- **H.E. Mr Tomasz Kozlowski**, Ambassador of European Union to India & Bhutan

Address by Guest of Honour

- **Dr Mahesh Sharma**, Minister of State (I/C) for Culture and Minister of State for Environment, Forest & Climate Change

1300 – 1400 hrs

PLENARY II TACKLING CLIMATE CHANGE WITH NATIONALLY DETERMINED CONTRIBUTIONS

155 parties have committed to national climate plans known as Nationally Determined Contributions (NDCs) under the Paris Agreement on climate change, where countries are looking for ways to convert these commitments into action. The Sustainable Development Goals (SDGs) and the Paris Agreement together offer an opportunity to end extreme poverty, create climate-compatible development and avoid dangerous impacts of climate change. Translating the NDCs into reality is a complex and demanding process. It requires climate targets to be integrated into sector policies, budget policies and investment programmes. Dialogues with the industry and engaging them through public-private partnerships is important for the implementation of NDCs. Countries need to raise their national climate protection targets to reduce negative impacts of climate change. The multi-stakeholder session will discuss the action taken to make concrete progress in mitigating climate change and whether those actions are on the right track to meet the Paris Agreement.

Session Chairman & Moderator

- **Mr Tejpreet S Chopra**, President & CEO, Bharat Light & Power Group

Keynote Address

- **Mr Ajay Narayan Jha**, Secretary, Ministry of Environment, Forest & Climate Change

Lead Panellist

- **Mr Rajiv Mishra**, Managing Director, CLP India
- **Mr Randal Newton**, Vice President–Enterprise Engineering, Ingersoll Rand
- **Mr Mahendra Singhi**, Group CEO & Whole Time Director, Dalmia Cement (Bharat) Ltd.
- **Mr Anirban Ghosh**, Chief Sustainability Officer, Mahindra & Mahindra Limited

1400 – 1430 hrs **Lunch**

1430 – 1545 hrs

PARALLEL SESSIONS

PLENARY III

BUSINESS ETHICS MANAGEMENT: PREVENTION & DETECTION

Ethical considerations have become important in business practices as unethical actions and decisions will not yield long-term benefits and sustenance. Successful organizations are now embracing inclusive solutions through collaborative means. With India getting integrated with the global economy, the investor community, both domestic and international, is demanding greater disclosure and transparency on business decisions and increased shareholder value from corporates in India. For this, various changes have been brought to legislations and regulations to foster goals of good corporate governance. Siemens in association with CII has launched an integrity initiative to support organisations and projects fighting corruption and fraud. The SDGs can only be achieved if all stakeholders recognize the need to fight corruption and embraces the principles of transparency, accountability and good governance. This session will engage various stakeholders to present the collaborative efforts on adopting responsible practices which promote corrupt-free businesses in the country.

Session Chairman & Moderator

- **Dr Mukund Govind Rajan**, Former Chief Ethics Officer, TATA Group and Chairman–Tata Global Sustainability Council

Lead Panellist

- **Mr B B Chatterjee**, Executive Vice President & Company Secretary, ITC Limited
- **Mr Lalit Bhasin**, President, Bar Association of India; President, Society of Indian Law Firms and Managing Partner, Bhasin & Co.
- **Mr Sergey Kapinos**, Regional Representative, United Nations Office on Drugs & Crime
- **Mr Neville Gandhi**, Regional Compliance Officer, Siemens Limited

PLENARY IV CIRCULAR CITIES ARE SMARTER CITIES

This is an era of future exhaustion of fossil fuels and much needed commodities is an accepted reality. At the same time, waste management puts strain on the environment. Rather than perceiving waste as a burden, one should consider its wide variety of useful properties, such as building materials from which new and alternative products can be created. The circular city is where waste, commodities and energy is managed in smarter and more efficient ways. A circular economy shifts a city from linear industrial systems to cyclical, regenerative systems. The session will discuss the approach to circular cities that leads to less pressure on our environment, while creating new business models, innovative designs and new alliances and cooperation between different stakeholders.

Session Chairman & Moderator

- **Mr Joe Phelan**, Director – WBCSD India

Lead Panellist

- **Ms Sangeeta Prasad**, CEO, Integrated Cities & Industrial Clusters, Mahindra Lifespace Developers Ltd.
- **Ms Wilma Rodrigues**, Founder & CEO, Saahas Zero Waste
- **Mr Chanakya Chaudhary**, Group Director–CC & Regulatory Affairs, Tata Steel Limited
- **Dr Rachna Arora**, Deputy Team Leader & Coordinator, European Union – Resource Efficiency Initiative, GIZ

1545 – 1600 hrs

Tea / Coffee

1600 - 1730 hrs

PARALLEL SESSIONS

PLENARY V SUSTAINABLE HIMALAYAN ECOSYSTEM: MULTISTAKEHOLDER PARTNERSHIPS FOR CLIMATE RESILIENCE

Mountain ecosystems are of fundamental importance to environmental functioning and sustainability. Businesses play a key role in helping to realize the tremendous potential for sustainable economic growth and resilience in the Indian Himalayan Region in line with sustainable development and climate resilience objectives. This relationship has been repeatedly addressed in the SDGs and the Paris Climate Agreement. These targets can only be reached with strong multi-stakeholder partnerships with and commitments from the government, private sector and development organisations.

The Government of India has prioritised several missions, programmes, schemes, and related policies of Himalayan States through Ministry of Environment, Forests and Climate Change; Ministry of Skill and Entrepreneurship; Ministry of Development of North Eastern Region, Department of Science and Technology and other related ministries. In addition, the National Institution for Transforming India (NITI Aayog) is steering an action agenda for Sustainable Development in Indian Himalayan Region. ICIMOD in partnership with CII will organise this plenary that will focus on sharing and exchanging innovative ideas to foster multi-stakeholder partnerships for sustainable development in the India Himalayan Region. It aims to promote and stimulate private sector interest and involvement; leverage and position multi-stakeholders' strengths towards partnerships in the context of SDGs for investments; and seeking business opportunities for companies that depend on mountain resources. The session will identify specific key mutual areas of interests for developing programmes to work together with the private sector by establishing multi-stakeholder partnerships related to SDGs activities supporting national priorities. In addition, partnership with the targeted corporates will be discussed to develop joint project proposal for supporting business cases and mobilise investments for sustainable development of the Indian Himalayan Region.

Opening Remarks

- **Ms Seema Arora**, Deputy Director General, CII

Session Chairman & Moderator

- **Mr Basanta Raj Shrestha**, Director – Strategic Cooperation, ICIMOD

Keynote Address

- **Dr Amita Prasad**, Additional Secretary, Ministry of Environment, Forest & Climate Change

Lead Panellist

- **Dr Ashok Kumar Jain**, Advisor, NITI Aayog
- **Ms Jyotsna Sitling**, Joint Secretary, Ministry of Skill Development and Entrepreneurship
- **Dr Sachin Kumar Sharma**, Scientist-C, Patanjali Research Foundation
- **Dr Suhas T Buddhe**, Chairman & Managing Director, Biocare India Pvt. Ltd.
- **Mr Akshay Kumar**, CEO, Mercury Himalayan Explorations Limited
- **Dr Sejal Worah**, Programme Director, WWF-India

Concluding Remarks

- **Mr Brij Mohan Singh Rathore**, Chief Policy Advisor – Natural Resource Management, ICIMOD

PLENARY VI

PARTNERSHIPS FOR SUSTAINABLE WATER SOLUTIONS

Sustainable Development Goal 6 recognises the centrality of water resources to sustainable development and the vital role that improved drinking water, sanitation and hygiene plays in progress in the areas of health, education and poverty reduction. Water stress is affecting more than 2 billion people around the globe today and is projected to rise. India has invested significantly in water infrastructure that has led to growth and prosperity. However, more recently, attempts to augment India's water supply have been challenged by mounting population, over-consumption, industrial competition, climate change, and pollution. In order to tackle water dilemma, India must look beyond technological fixes and short-term supply side measures, and seek opportunities for cooperation across scales to improve its water accounting. The session will draw attention on the actions needed to develop sustainable water solutions through the partnership between businesses and governments that will successfully implement and monitor the water-related SDGs over the next 15 years.

Session Chairman & Moderator

- **Mr N K Ranganath**, Co-Chairman, CII National Committee on Water and Managing Director, Grundfos Pumps (I) Pvt. Ltd.

Lead Panellist

- **Mr Suresh Babu**, Director-Rivers, Wetlands & Water Policy, WWF-India
- **Dr Anju Gaur**, Senior Water Resources Specialist, World Bank
- **Mr Sandeep Shrivastava**, Senior Vice President, Ambuja Cements Limited
- **Mr Naveen Chahal**, Director & CEO, Water & Soil Technologies, UPL Ltd.

1730 – 1830 hrs

SPECIAL PLENARY

Opening Remarks

- **Mr Sanjiv Puri**, CEO & Executive Director, ITC Limited

Address

- **Mr Chandrajit Banerjee**, Director General, Confederation of Indian Industry

Address by Chief Guest

- **Shri Nitin Jairam Gadkari**, Union Minister for Road Transport, Highways, Shipping, Water Resources, River Development and Ganga Rejuvenation

PLENARY VII

SUSTAINABLE LIVING WITH GOOD HEALTH, NUTRITION & WELLNESS

Good health starts with nutrition. Without the security of daily food (nutrients, calories, vitamins, minerals, and micronutrients), humans cannot live, learn, prosper or lead healthy and productive lives. As the global population is expected to grow from 7.4 billion people in 2015 to more than 9.7 billion people in 2050, along with depleting natural resources, there is an opportunity for people to adopt actions for sustainable living. This can help to reduce the carbon footprint or environmental impact by altering to sustainable lifestyle. Governments are paying attention to the importance of linking policies and investments that integrate agriculture with improved health and nutrition. Collaborative actions by public and private sector through comprehensive strategy will help to reduce malnutrition and build strong and resilient individuals, families, communities, nations and promote sustainable living. The session will draw emphasis on how SDGs opens a window of opportunity to resolve the world's nutrition challenges and walk on the path of sustainable living.

Session Chairman & Moderator

- **Mr B Rajagopal**, President, DSM India

Lead Panellist

- **Mr Pawan Agarwal**, Chief Executive Officer, Food Safety and Standards Authority of India (FSSAI) and Additional Secretary, Ministry of Health & Family Welfare
- **Dr Randeep Guleria**, Director, All India Institute of Medical Sciences (AIIMS)
- **Ms Sonali Mehta Rao**, Co-founder & Chief Growth Officer, Awaaz De

PLENARY VIII

BOOSTING GROWTH WITH RESPONSIBLE MINING

Mining industry plays an important role in meeting the increasing demand for minerals and metals to sustain high economic growth rate of the country. When managed responsibly, it can also help reduce poverty through job creation, induced economic activity and the provision of basic services. These attributes make the industry a major potential contributor to the SDGs. Being an extractive industry, mining has many environmental, social and economic implications. Therefore, the mining industry must ramp up its engagement, partnership and dialogue with other industry sectors, government, civil society and local communities to address the environmental and social challenges of mining. This session will focus on initiatives and success stories of companies that are choosing to pursue a path of sustainable mining and incorporating the SDGs into their own practices and operations.

Session Chairman & Moderator

- **Mr S Vijay Iyer**, Managing Director, Rio Tinto India

Lead Panellist

- **Mr Pankaj Kulshrestha**, Regional Controller of Mines, Indian Bureau of Mines
- **Mr Rajeev Singhal**, Vice President–Raw Materials, Tata Steel Limited
- **Mr Sanjay Upadhyay**, Advocate, Supreme Court of India and Honorary Managing Trustee, The Environment Law & Development Foundation
- **Mr R K Bansal**, Sustainable Mining Expert

1930 hrs

Cocktails & Dinner

DAY 02, THURSDAY, 7 SEPTEMBER 2017

1015 – 1130 hrs



INAUGURAL - Day 2

Welcome

Ms Pamposh Bhat, India-EU Climate and Clean Energy Dialogue Project Coordinator, Adelphi

Opening Remarks

Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group

Special Address

H. E. Mr Tomasz Kozlowski, Ambassador of European Union to India & Bhutan

Inaugural Address

Mr Yaduvendra Mathur, Additional Secretary, NITI Aayog

Concluding Remarks

Ms Seema Arora, Deputy Director General, Confederation of Indian Industry

1130 – 1300 hrs

PLENARY IX WOMEN EMPOWERMENT & SAFETY AT WORK PLACE

The stand-alone Goal 5 of the SDGs is to achieve gender equality and to empower all women and girls. One of the targets in this goal is to eliminate all forms of violence against all women and girls in the public and private spheres, including sexual exploitation. Sexual harassment is often a hidden issue. Although both women and men can be victims of sexual harassment, most victims are women. A recent report from Fair Wear Foundation found that 60% of factory workers have experienced some form of workplace harassment. There is an increasing need for businesses to demonstrate that their workplace meets the high ethical standards, in addition to other production values. BSR in partnership with Confederation of Indian Industry (CII) have developed a toolkit

under the **HERrespect** programme to provide guidance for companies seeking to strengthen their own policies and activities that prevent and address sexual harassment. The session will have a multi-stakeholder views on the measures to ensure women empowerment with special focus on prevention of sexual exploitation at workplace in India and will launch the toolkit.

Signing of Letter of Intent between Business for Social Responsibility & CII-ITC Centre of Excellence for Sustainable Development

- **Ms Christine Daa Svarer**, Director, HERproject, Business for Social Responsibility (BSR)
and

- **Ms Seema Arora**, Deputy Director General, Confederation of Indian Industry

Session Chairperson & Moderator

- **Ms Vanitha Datla, Chairwoman**, Indian Women Network, CII – Southern Region and Vice Chairperson, Elico Limited

Keynote Address

- **Ms Lalita Kumaramangalam**, Chairperson, National Commission for Women

Lead Panellist,

- **Ms Christine Daa Svarer**, Director, HERproject, Business for Social Responsibility (BSR)
- **Ms Shailaja Bajpai**, Consulting Editor, Indian Express
- **Mr Antony Alex**, CEO, Rainmaker
- **Ms Abha Singhal Joshi**, Lawyer

HERrespect Business Toolkit Launch

1300 – 1400 hrs

Lunch

1400 – 1530 hrs

PLENARY X CIRCULAR ECONOMY BOOSTS BIODIVERSITY

Nature, as a perfect circular system, is an important inspiration for the circular economy. Today, people are aware of the plethora of goods and services that nature gives for free. The circular economy model is conceived as a continuous positive development cycle that preserves and enhances natural capital, optimises resource yields, and minimises system risks by managing

finite stocks and renewable flows. Investing in natural solutions contributes to resource efficiency roadmap and has a positive impact on biodiversity, society and the economy. Industries are initiating to address its impact on nature and embrace the restorative imperatives contained within circular economy models. The session will bring together businesses and experts to share innovative business models and nature-based solutions where investing in nature offers multiple economic, social and environmental benefits.

Session Chairman & Moderator

- **Mr Hem Pande**, Former Secretary, Government of India

Lead Panellist

- **Mr Ravi Singh**, Secretary General & CEO, WWF-India
- **Mr T Rabikumar**, Secretary, National Biodiversity Authority
- **Mr Vijay Kalra**, CEO, Mahindra Manufacturers Limited and Chief – Manufacturing Operations, Mahindra & Mahindra
- **Dr Konrad Uebelhoer**, Director, Indo German Biodiversity Programme, GIZ India

1530 – 1600 hrs

Networking break

1600 – 1715 hrs

MASTER CLASS ON INTEGRATED REPORTING

Integrated reporting is the next big thing in terms of corporate disclosures worldwide. Contrary to current disclosures that emphasise primarily on financial aspects while non-financial information gets captured either in a separate report or is scattered across various sources - integrated reporting focuses on 6 Capitals (financial and non-financial) and the inter-linkages between them that all come out in one single report. While targeting the main stakeholder i.e. investor, integrated reporting prescribes 7 Guiding Principles and 8 Content Elements for communicating value created.



Confederation of Indian Industry



CII-ITC Centre of Excellence
for Sustainable Development



7 SEPTEMBER 2017: DESIRE HALL, LE MÉRIDIEN, NEW DELHI

1015 – 1130 hrs

INAUGURAL

Welcome

- **Ms Pamposh Bhat**, India-EU Climate and Clean Energy Dialogue Project Coordinator, Adelphi

Opening Remarks

- **Mr Tejpreet S Chopra**, President & CEO, Bharat Light & Power Group

Special Address

- **H.E. Mr Tomasz Kozlowski**, Ambassador of European Union to India & Bhutan

Inaugural Address

- **Mr Yaduvendra Mathur**, Additional Secretary, NITI Aayog

Concluding Remarks

- **Ms Seema Arora**, Deputy Director General, Confederation of Indian Industry

1130 – 1245 hrs

PLENARY XI GREEN COOLING AND SUSTAINABLE REFRIGERATION

This session builds on the results of the successful EU India green cooling conference earlier this year in Delhi. In addition to the role that financing mechanism can play, the session will introduce examples of training and qualification in the service sector. Proper servicing and maintenance can be a key to transit to sustainable technologies in the cooling and refrigeration sector. This will generate not only environmental but also social benefits through a process of professionalisation. The session will further explore how partners like the EU and India can work together to implement the Kigali Amendment and what role international cooperation can play.

Session Moderator

- **Mr Cornelius Rhein**, Policy Officer, European Commission, DG Climate Action

Lead Panellist

- **Mr Marco Buoni**, Vice-President-International Affairs, Air Conditioning and Refrigeration European Association
- **Mr Seemant Sharma**, Director, Product Portfolio Management, Johnson Controls - Asia
- **Dr R S Agarwal**, Emeritus Chair, Professor of Mechanical Engineering, IIT-D

1245 – 1400 hrs

PLENARY XII STEPS TOWARDS DEVELOPING MID-CENTURY LOW EMISSION STRATEGIES

This session uses long term models and scenarios to consider the longer-term strategies that are necessary worldwide to achieve the goals of the Paris Agreement and how this translates into possible areas for EU-India cooperation. To keep on track with the 2C and 1.5C degrees goals, what steps need to be taken within countries to ensure a science-based process, what technologies are crucial, and what is the role of international cooperation therein? What are the implications for concrete cooperation activities that EU and India could initiate today?

Session Moderator

- **Mr Jai Kumar Gaurav**, Senior Project Manager, Adelphi

Lead Panellist

- **Dr Navroz Dubash**, Senior Fellow, Centre for Policy Research
- **Dr Ritu Mathur**, Senior Fellow & Director, TERI
- **Mr B N Satpathy**, Consultant, NITI Aayog
- **Dr Vaibhav Chaturvedi**, Senior Fellow, Council on Energy, Environment & Water (CEEW)

1430 – 1600 hrs

PLENARY XIII
CITIES & CLIMATE CHANGE
By Covenant of Mayors for Climate & Energy - India

The session on Cities Climate Action will target national and local institutions, mayors, cities and urban development officers and professionals, private sector and research/academy environment through showcasing and discussion of local climate strategies and actions undertaken in Indian cities. Selected Indian mayors will present and illustrate their city planning, policies and implementation experience in the various fields of Climate Action (Mitigation - Adaptation - Resilience Strategy).

Opening Remarks

- **Ms Pamposh Bhatt**, Coordinator, India-EU Clean Energy and Climate Partnership

Welcome Remarks

- **Ms Henriette Faergemann**, Counsellor Environment, Energy and Climate Change, EU Delegation to India

Address

- **Ms Debolina Kundu**, Associate Professor, National Institute of Urban Affairs

Cities for Climate Action:
Showcase of Good Practices from Indian Cities

Facilitator

- **Mr Anand Iyer**, Chief Project Manager, National Institute of Urban Affairs

Lead Panellist

- **Mr Banchhanidhi Pani**, Municipal Commissioner, Rajkot Municipal Corporation
- **Ms Nanda Jichkar**, Mayor, Nagpur Municipal Corporation
- **Mr Ramgopal Mohley**, Mayor, Varanasi Municipal Corporation
- **Mr Kamlesh Yagnik**, Chief Resilience Officer, Surat Municipal Corporation

The Covenant of Mayors for Climate and Energy – India: Objectives and First Steps for Building the Network

- **Mr Pier Roberto Remitti**, Program Director, International Urban Cooperation (IUC)/India

1600 – 1715 hrs

PLENARY XIV TECHNOLOGY AS TOPIC OF INTERNATIONAL COOPERATION

Innovation and technology – deploying existing and new technologies on a substantial scale – will be a key enabler for and driver of achieving the SDGs and the Paris Agreement’s goals both in the fields of mitigation and adaptation. Global cooperation in the development and deployment of climate responsive technologies focusing on transformative change would pave the way for resilient and low carbon infrastructure. The EU and India has already cooperating on several crucial fields such as renewables for energy generation, elements of transport infrastructure and resilience and adaptation of agriculture and forestry. The session will address some technology challenges and would provide insights on existing examples of ongoing technology transfer efforts and on how further cooperation on climate responsive technologies between EU and India should look like.

Session Moderator

- **Mr Zsolt Lengyel**, Senior Consultant, Climate Change & Energy, NIRAS

Lead Panellist

- **Mr Karsten Krause**, European Commission, Directorate General, CLIMA
- **Dr P C Maithani**, Adviser, Ministry of New & Renewable Energy
- **Dr Sudhanshu KK Mishra**, Deputy General Manager, Banker Institute of Rural Development (BIRD), National Bank for Agriculture and Rural Development (NABARD)
- **Ms Tania Friederichs**, R&I Counsellor for India & Bhutan, Delegation of European Union to India
- **Mr Sachin Kamble**, Assistant General Manager, NABARD
- **Ms Anju Bhalla**, Joint Secretary, Department of Science & Technology

1715 – 1830 hrs

PLENARY XV COOPERATION BETWEEN INDIA & EU: WHAT’S NEXT ?

Session Moderator

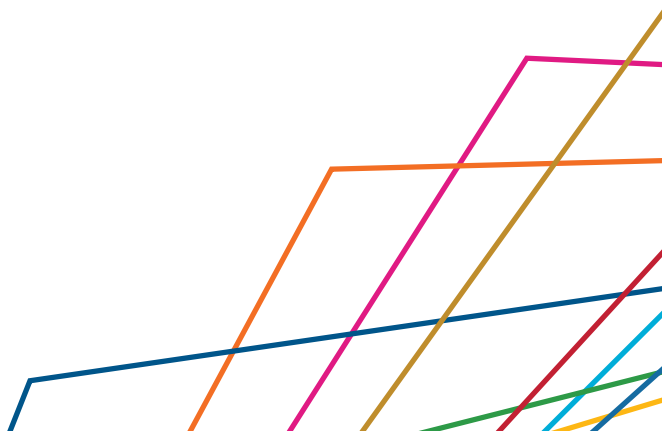
- **Ms Dian Phylipsen**, Director - Climate Change, SQ Consult B.V.

Lead Panellist

- **Ms Henriette Faergemann**, Counsellor Environment, Energy and Climate Change, EU Delegation to India
- **Dr Akhilesh Gupta**, Head & Scientist G, Department of Science & Technology
- **Mr Sanjay Vashist**, Director, Climate Action Network in South Asia (CANSA)
- **Mr Damandeep Singh**, Director – CDP India
- **Dr Ashish Chaturvedi**, Director, Climate Change, GIZ-India



PLENARY I



Clean Energy: A Game Changer in Attaining Inclusive Growth

The transition to clean energy is crucial to address the impacts of climate change. After the Paris Agreement, majority of countries are committed to scaling up renewable energy and energy efficiency. India is moving towards realising the clean energy vision of Prime Minister Narendra Modi to achieve 175GW by the year 2022. The RE capacity has gone up from 33.8gw to 43gw, overtaking hydroelectric capacity. To achieve the targets, there is a need to overcome the twin challenge of finance and technology.

Challenges

India's energy needs are rising fast. Going ahead, the conventional way will cause energy security risk and larger environmental degradation.

- In India, much of the population lacks access to clean and affordable energy.
- Prices in solar energy has been falling continuously over last two years making it an attractive alternative against conventional energy.

Implementation Strategy

40–200 bn dollars investment will be made in renewable energy and the amount would be 50% each in both developed and developing economies. Reduction of cost in solar should be transferred to all stakeholder and the penetration of RE in India can be more than 50% as evident from few states who have already shown it with example.

Investment has been noted in EU countries towards designing of first off-shore wind project, solar park programmes, energy efficiency. EU countries have demonstrated reducing dependence on conventional energy over the years. At the social side renewable energy has the potential to create two times more jobs than conventional energy.

The World Bank has been in the field of energy efficiency and renewable energy for more than a decade now and many socio projects have been funded by them which contribute to the energy sector. There is a need to connect SDGs work with energy sector. Optimal use of resource such as land, water will be the key as both are scarce and in future can trouble the solar sector. Energy mix will always need attention as single source will always be a threat to energy security of the country. More visibility is required in the sector so that more investment can be attracted. She emphasised that hybrid system should be looked upon more diligently for future investment.

Solutions

The session brought together global stakeholders who discussed the current rate of progress required to achieve the goals set in the Paris Agreement and in translating SDG 7 into action.

EU and India partnership towards combating climate change is very crucial. Though between EU and India technology transfer and long-term public fund availability has been discussed at length however significant private money transfer will be critical. On the negative side e-waste handling due to so much renewable energy installation should be thought at the outset.

The panel concluded by saying that micro grids can help connect rural sector with Indian growth. Solar energy has the capacity to create huge job opportunity in the country and that will be beneficial in the long run. Power sector regulations make it hard for the industry to think of investment. In addition to this, land availability and its acquisition are also areas that have to be looked at from the investment perspective in the long term.



From (L to R): Mr Sanjeev Aggarwal, Founder & CEO, Amplus Solar; Mr Roy John, Chief Engineer–Operations, ITC Limited; Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India; Mr K S Popli, Chairman & Managing Director, Indian Renewable Development Agency Limited; Ms Surbhi Goyal, Senior Energy Specialist, World Bank; and Mr K S Venkatagiri, Executive Director, CII-Soharbi Godrej Green Business Centre



Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India



Mr Sanjeev Aggarwal, Founder & CEO, Amplus Solar



From (L to R) Mr Roy John, Chief Engineer—Operations, ITC Limited; Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India; and Mr K S Popli, Chairman & Managing Director, Indian Renewable Development Agency Limited



INAUGURAL - DAY 1

Dr Mahesh Sharma, Minister of State (I/C) for Culture and Minister of State for Environment, Forest & Climate Change emphasised that last 70 years of independence could be deemed successful if and only if growth and development reaches last rung of the ladder of our society. Indian youth population has the ability to give back to the society. There has to be commitment to the 5Ps-people, planet, peace, prosperity and partnership. A holistic approach is needed for the progress of social and economic development of the country. The vision of Shri Narendra Modi is a poverty-free; terrorism-free, communalism-free, casteism-free nation on its completion of 75 years of independence.

The 12th Sustainability Summit, an annual flagship event of Confederation of Indian Industry (CII), focused on Driving Inclusive Growth and on the collective journey of stakeholders in achieving SDGs by 2030. The UN adopted 17 Global Goals or Sustainable Development Goals (SDGs), in September 2015, in New York. The shift from pledges to practice; 2030 development goals and targets show the path to achieving inclusive and sustainable development. Business has an important and definitive role to play in achieving SDGs.

‘EU’s strong commitment and cooperation on partnering with India in terms of renewable energy, clean energy and climate change action’, reiterated **His Excellency, Mr Tomasz Kozlowski, Ambassador of European Union to India and Bhutan**. Bilateral trade relations in goods and services between EU and India has doubled in the last decade. Focus is needed on innovation fuel by technology to foster clean energy and achieve sustainable development characterized by inclusiveness.

Ms Shobana Kamineni, Past President, CII and Executive Vice-Chairperson, Apollo Hospitals Enterprise Limited highlighted CII’s theme for 2017-18, ‘India together:

inclusive, ahead, responsible’, by putting forth the concept of thriving imbalance. Combating social inequalities to achieve inclusiveness must transcend geographies, borders, caste, disability and the larger challenges of society. Need for creating 6 million new jobs for the youth of the country who enter the workforce on an annual basis. This has its own set of challenges in training, skilling, re-learning, pay parity, economic opportunities to women especially to the rural female populace to align with the objectives of achieving the goals of sustainable development.

Aligning with the objectives of UNSDGs, **Mr. Sanjiv Puri, CEO and Executive Director, ITC Limited** said, ‘issues of sustainable development have taken the centre-stage in corporate strategy and policy making.’ In light of recent natural disasters across the world, issue of climate change must necessarily be seen as a potential threat impeding the progress of mankind. There is a need for a new growth model that not just has economic value but also creates sufficient livelihoods. Economic growth and sustainable development work in tandem. Businesses need to develop sustainable strategies for creating shareholder’s value alongside serving larger societal needs and values.

Addressing the need to keep pace with the changing requirements of corporates to address the issue of inclusive growth, **Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry** highlighted that CII has engaged with government to facilitate policies that encourage the integration of sustainability in business. At CII, sustainability issues are addressed through its three centres of excellence; namely, Green Business Centre, CESD, Water Institute. It is a continuous mission to work on issues that help transform India’s ecosystem and also achieve sustainable goals, endeavours of corporate, government and civil society.



From (L to R): Mr Sanjiv Puri, CEO and Executive Director, ITC Limited, Mr Tomasz Kozlowski, Ambassador of European Union to India and Bhutan, Dr Mahesh Sharma, Minister of State (I/C) for Culture and Minister of State for Environment, Forest & Climate Change, Government of India; Ms Shobana Kamineni, Past President, CII and Executive Vice-Chairperson, Apollo Hospitals Enterprise Limited, and Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry



Dr Mahesh Sharma, Minister of State (I/C) for Culture and Minister of State for Environment, Forest & Climate Change, Government of India



Ms Shobana Kamineni, Past President, CII and Executive Vice-Chairperson, Apollo Hospitals Enterprise Limited



Mr Sanjiv Puri, CEO and Executive Director, ITC Limited



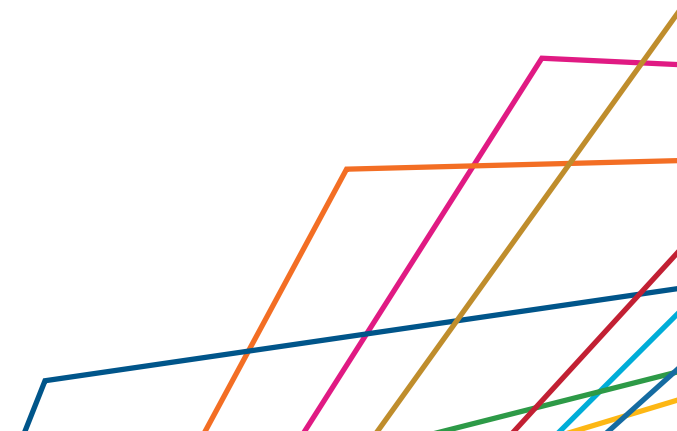
Mr Tomasz Kozlowski, Ambassador of European Union to India and Bhutan



Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry



PLENARY II



Tackling Climate Change with NDCs

155 parties have committed to national climate plans known as Nationally Determined Contributions (NDCs) under the Paris action. The Sustainable Development Goals (SDGs) and the Paris Agreement together offer an Agreement on climate change, where countries look for ways to convert these commitments into opportunity to end extreme poverty, create climate compatible development and avoid dangerous impacts of climate change. Translating the NDCs into reality is a complex and demanding process. It requires climate targets to be integrated into sector policies, budget policies and investment programmes.

Challenges

At the national level: Sustainable development is part of Indian ethos. Development in the country is guided by this paradigm and as a result sustainability and development should go hand in hand. Rivers and forests are common property which is entrusted with states and public at large is the beneficiary. Supreme Court protects these rights and directs for forest conservation from time to time although enforcement related challenges exist with the legal and regulatory regime.

Financial challenge: Large number of people in the country still have no access to electricity and even the electrified villages do not have electricity in each household. Financial sustainability is a key element of sustainability and solar panel prices are not falling as rapidly as in the past which is another challenge to achieving sustainability in the renewables sector, especially the solar power.

Challenges for the industry: It has been at the forefront of actions but company level actions need to be scaled up. Standards need to be met by the industry to be on par with the international levels and a faster pace compared to the past is required. On the quality of forest covers; densely and moderately covered forests are on the rise but

encroachment in the forest areas is a big challenge. Plantation efforts outside the forest areas are on rise and paper/pulp industry has started raising their own plantations.

India is ahead in terms of intellectual capacity but lags in implementation nevertheless there is opportunity of leapfrogging for India.

Implementation Strategy

Requires a strong institutional foundation for NDCs and inter-ministerial working groups formed under the leadership of Prime Minister (PM).

- Ujala scheme aims at LEDs and super-efficient fans. *PM Ujjwala Yojna* provides affordable LPG to 'below poverty line' households. All such schemes are earlier paths to meeting NDCs.
- India is one of the signatories to Montreal Protocol and will start phasing out the use of HFCs, which are high GHGs, by 2028. 0.5 deg C drop in global temperature would result from the Montreal Protocol commitments.
- Forest cover in the country has increased since 2005 and target is to achieve 33% geographical area under forests. Central government has allocated 45-50 thousand crore rupees for afforestation efforts under the CAMPA programme. Forest area in the country is one of the criteria for federal fiscal reserves and India is one of the few countries with such provision. He emphasised that climate change is a global challenge and implementation of NDCs is conditional on the financial, technological, capacity building support from the developed countries.

Solutions

Annual Sustainability Summit is an important forum for bringing all the stakeholders together and finding synergies for sustainable development. The need for low carbon

technologies in sector such as cement and paper are important. Industry will support the government in achieving the NDCs and cement sector is proactive in climate-friendly technologies and energy efficiency.

Dialogues with the industry and engaging them through public private partnerships is important for the implementation of NDCs. Countries need to raise their national climate protection targets to reduce negative impacts of climate change. The multi-stakeholder session discussed the action taken to make concrete progress in mitigating climate change and whether those actions are on the right track to meet the

Paris Agreement.

Going forward, more aggressive targets needed in the next decade to meet NDCs. Energy efficiency needs to be encouraged in the industry. Panel agreed that making climate commitments personal to employees in industry could go a long way in meeting the targets. Industry will have a leading role in implementing NDCs and more partnership would be required in future amongst the government and industry members. Leapfrogging opportunities are immense for the nation in the sectors such as buildings, energy storage, and electric vehicles.



From (L to R): Mr Rajiv Mishra, Managing Director, CLP India, Mr Mahendra Singhi, Group CEO & Whole Time Director, Dalmia Cement (Bharat) Ltd., Mr Ajay Narayan Jha, Secretary, Ministry of Environment, Forest & Climate Change, Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group, Mr Randal Newton, Vice President—Enterprise Engineering, Ingersoll Rand, and Mr Anirban Ghosh, Chief Sustainability Officer, Mahindra & Mahindra Limited



Mr Ajay Narayan Jha, Secretary, Ministry of Environment, Forest & Climate Change



Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group



From (L to R): Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group, Mr Randal Newton, Vice President–Enterprise Engineering, Ingersoll Rand, and Mr Anirban Ghosh (speaking), Chief Sustainability Officer, Mahindra & Mahindra Limited



PLENARY III

Business Ethics Management: Prevention & Detection

Ethical considerations are gaining importance in business practices as unethical actions and decisions do not yield long-term benefits and sustenance. Successful organisations are now embracing inclusive solutions through collaborative means. As India gets integrated with the global economy, the investor community, both domestic and international, is demanding greater disclosure and transparency on business decisions and increased shareholder value from corporates. For this, various changes have been brought to legislation and regulations to foster goals of good corporate governance. This session engaged various stakeholders to present the collaborative efforts on adopting responsible practices which promote corrupt-free businesses in the country.

Key Challenges

There is need for an integrated approach to business ethics, wherein the four pillars of good governance—transparency, accountability, fairness, and leadership, help foster good corporate governance.

Focus of the discussion revolved around global corporate fiascos and their negative impact on the company and economy of the country to emphasise the need of ethics in business operations. Challenges are enormous and reflect at the legislative, policy and industry level.

Looking into the legislative side; it was discussed that

- the companies generally are compliant with the laws and regulations of the land, but often it is the supply-chain components which do not adhere to these compliances. Large corporate entities need to bear in mind that not all components of supply-chain are on equal footing with respect to resources.
- Where do we make a distinction between ethics and law? Is ethics and law the same or different? Do ethics formulate law or laws regulate ethics?
- Laws are required to regulate the individual conduct in

conformity with social expectations.

- There is an increasing tendency to dilute the effectiveness of existing laws such as *Whistle-blower Protection Act*, and *Prevention of Corruption Act*.

Two essential but contrasting aspects of business ethics management were highlighted while discussing the challenges faced by the industry.

- Business ethics in a company depends upon the tone at the top and formulation of policies by them; and that
- Policies cannot be formulated for ever-changing dynamic business environment, thus, in a way limiting the role of top management. Also,
- Corruption undermines public morale, confidence in public institutions, hinders economic development, and increases unfair market. These problems affect the business environment at large.

Corruption has become the mode of business operations in the present day and sometimes senior managerial personnel do not hesitate to involve in unethical practices to win and retain business.

- The present-day consumer and citizens are empowered because of access to information. The impact of empowered consumer is evident by the fall in stock prices of companies found involved in misconduct.
- Exemplary personal conduct is necessary in ethics, more so in business ethics. Therefore, each individual need to be integrated with the top management in managing business ethics and impregnate ethical behaviour in the psyche of personnel.

Solutions

Solutions to the problem focussed on many aspects including the recent amendments in legislations regulating corporate entities that can help bring a positive change in the corporate

governance standard of the country as a whole. Siemens in association with CII has launched its global integrity initiative in India to support organisations and projects fighting corruption and fraud. The SDGs can only be achieved if all stakeholders recognise the need to fight corruption and embrace the principles such as transparency, accountability and good governance. Speakers highlighted that:

- Ethics must not be looked upon simply as being morally important; rather in the contemporary business environment it is linked with sustainability and has become a dynamic concept. Ethics is equally important when seen from the lens of social responsibility.
- There is a need to distinguish between the position of ethics and law in society that are supported by way of sanctions whereas ethics do not have sanctions. Laws are required to regulate the individual conduct in conformity with social expectations. Ethics is required to regulate individual conduct, where laws end.

- Provisions of United Nations Convention against Corruption (UNCAC) is legally binding and therefore countries have adopted the same in their respective local legislation. The amendments to legislation in India are exemplary and it reflects India's commitment to fight corruption.
- Companies should come up with voluntary reports and other innovative mechanisms to engage consumers in promotion of ethics;
- That start-ups should focus on formulating policy centring around ethics

The speakers opined that India is still in the developing stage of corporate governance and in order to become a global manufacturing leader, it needs to incorporate best global practices and standards. Archaic laws need to be re-written and executive authorities implementing legislation such as *Prevention of Corruption Act*, or *Whistle-blower Protection Act* need to be strengthened.



From (L to R): Mr Sergey Kapinos, Regional Representative, United Nations Office on Drugs & Crime, Dr Mukund Govind Rajan, Former Chief Ethics Officer, TATA Group and Chairman–Tata Global Sustainability Council, Mr Lalit Bhasin, President, Bar Association of India, President, Society of Indian Law Firms and Managing Partner, Bhasin & Co., Mr B B Chatterjee, Executive Vice President & Company Secretary, ITC Limited, and Mr Neville Gandhi, Regional Compliance Officer, Siemens Limited



Mr B B Chatterjee, Executive Vice President & Company Secretary, ITC Limited and Dr Mukund Govind Rajan, Former Chief Ethics Officer, TATA Group and Chairman–Tata Global Sustainability Council



Mr B B Chatterjee, Executive Vice President & Company Secretary, ITC Limited



Mr Lalit Bhasin, President, Bar Association of India, President, Society of Indian Law Firms and Managing Partner, Bhasin & Co.



Mr Sergey Kapinos, Regional Representative, United Nations Office on Drugs & Crime



PLENARY IV

Circular Cities are Smarter Cities

A circular city is, where waste, commodities and energy is managed in smarter and more efficient ways. Waste management puts strain on the environment. Rather than perceiving waste as a burden, one should consider its wide variety of useful properties, such as building materials from which new and alternative products can be created. A circular economy shifts a city from linear industrial systems to cyclical, regenerative systems. The session discussed the approach to circular cities that leads to less pressure on our environment, while creating new business models, innovative designs and new alliances and cooperation between different stakeholders.

Key Challenges

Panellists set the context of the session by highlighting the challenges arising due to shortages as well as availability in abundance of things in the ecosystem in some of the most developed cities in India. For both, shortage of power, water; and excess of things such as human waste, industrial waste deteriorate the quality of life. Hence there is a need to rethink of the possible solutions. Highlighting the circularity of the nature the panellists emphasized that livelihood, living and better life are the three facets of any circular economy.

Cities espouse companies to create an ecosystem to trade and generate jobs and livelihood for the people. Higher purchasing power translates into better living conditions; expectations for better facilities and hence better life.

Both, decentralised waste management and resource recovery are at the heart of circular cities concept. Looking at the present situation of waste management in India and specifically in city such as Bangalore, it seems that the city can only be called smart when 90% of the waste can be recovered and incorporated back into their lives.

Pointing out to the livelihood patterns associated with waste collection and segregation, speakers questioned the current

realities around informal sector being largely involved in it. While legislation has to an extent targeted the right issues, industry needs to take responsibility to channelise proper recycling and management to close the loop. Working around waste management is a win-win situation for everyone-making business sense for companies to recycle waste and also create livelihoods.

India is expected to grow exponentially in the coming decades, for which it is important to understand the concept of circular cities. The panellists concluded by equating circular city concept to symbiotic relationship between entities; each one of them dependent on the other.

Implementation Strategy-Case Study

Correlating the circular cities concept to the way, city of Jamshedpur was established under the aegis of TATA steel Limited, it is to be considered that cities are smart when people have a good living index. For example, the city of Jamshedpur was developed keeping in mind the needs of the people living in it who formed the major stakeholders. So needs that arise over a period of time forms the basis of circular cities that enable the process of establishing basic facilities.

At the company level, TATA has created solutions for recycling industrial waste, reducing water consumption, facilitating job creation, all of which makes business sense for the company. Moving forward, they have embarked on the principles of 'reduce, recycle, reuse'. Much of the infrastructure that is being developed in and around Jamshedpur is now a product of initiatives around these 3R's.

In circular cities it is value for both: people and company.

Way Forward

There is a need to look at different alternatives of construction

materials which will form the next generation foundation of infrastructure development in India. With the population growing at this pace, from 390 million now to 600 million by 2030, India will face the major challenge around managing construction waste.

Secondly, on the decentralisation of waste in India, especially, the construction waste while planning the smart cities. Also, India lags in quality data around material flows in and out

of the city that goes into making effective decisions around these issues.

The concept of circular cities and circular business transcends with nature and this is how we put back life into the boardroom. Circular cities should be looked as a concept to convert problems into opportunities, focusing on water, energy and waste as major drivers to build a better life.



From (L to R): Mr Chanakya Chaudhary, Group Director–CC & Regulatory Affairs, Tata Steel Limited, Ms Sangeeta Prasad, CEO, Integrated Cities & Industrial Clusters, Mahindra Lifespace Developers Ltd., Mr Joe Phelan, Director–WBCSD India, Ms Wilma Rodrigues, Founder & CEO, Saahas Zero Waste, and Dr Rachna Arora, Deputy Team Leader & Coordinator, European Union – Resource Efficiency Initiative, GIZ



Ms Sangeeta Prasad, CEO, Integrated Cities & Industrial Clusters, Mahindra Lifespace Developers Ltd.



Mr Chanakya Chaudhary, Group Director-CC & Regulatory Affairs, Tata Steel Limited



Mr Joe Phelan, Director-WBCSD India



Ms Wilma Rodrigues, Founder & CEO, Saahas Zero Waste



Dr Rachna Arora, Deputy Team Leader & Coordinator, European Union - Resource Efficiency Initiative, GIZ



PLENARY V



Sustainable Himalayan Ecosystem: Multistakeholder Partnerships for Climate Resilience

Mountain ecosystems are of fundamental importance to environmental functioning and sustainability. Businesses play a key role in helping to realise the tremendous potential for sustainable economic growth and resilience in the Indian Himalayan Region in line with sustainable development and climate resilience objectives. This relationship has been repeatedly addressed in the SDGs and the Paris Climate Agreement.

Challenges

Himalayan ecosystem plays a critical role in supporting unique biodiversity along with livelihood to 1.3 billion people. Himalayan region will help in sustainable use and conservation of Himalayan ecology. Challenge is also related to the use of medicinal plant.

Himalaya is water tower of Asia and Indian Himalayan region (IHR) occupies about 16% area for the total Himalaya while the panel highlighted key issues in the IHR such as drinking water quality, waste disposal, unused hydropower capacity, skill development, etc.

Eco-tourism could be a terrific opportunity in Himalayan region which will also help in livelihood enhancement of local people. But at the same time lack of long-term vision of private as well as government sector is resulting into degradation of natural areas.

Implementation

Government of India has prioritised several missions, programmes, schemes, and related policies of Himalayan states through Ministry of Environment, Forests and Climate Change; Ministry of Skill and Entrepreneurship; Ministry of Development of North Eastern Region, Department of Science and Technology and other related ministries. In addition,

the National Institution for Transforming India (NITI Aayog) is steering an action agenda for Sustainable Development in Indian Himalayan Region. ICIMOD in partnership with CII is working on innovative ideas to foster multi-stakeholder partnerships for sustainable development in the India Himalayan Region. It aims to promote and stimulate private sector interest and involvement; leverage and position multi-stakeholders' strengths towards partnerships in the context of SDGs for investments; and seek business opportunities for companies who depend on mountain resources.

Solutions

Agriculture done in Himalayan region is organic agriculture by default and there is a need for specific policies to take the organic agriculture to the next level. In addition to this, certification of product and providing reasonable price to product coming for organic agriculture and horticulture will help in addressing challenges of the farmers.

- Creating awareness on benefits of local medicinal plants through skilling and developing research and development facility for evaluating medicinal value of the plants.
- Developing a Himalayan eco-mark for products of Himalayan region will help in better marketing.

The session identified specific key mutual areas of interests for developing programmes to work together with the private sector by establishing multi-stakeholder partnerships related to SDG activities supporting national priorities. The session was concluded with action plan for ICIMOD. This included partnership on addressing policy, implementation of specific action plan for the Himalayan region, developing out-of-the-box measures and financials to address the concerns of area and implementing action plans.



From (L to R): Mr Brij Mohan Singh Rathore, Chief Policy Advisor – Natural Resource Management, ICIMOD, Dr. Sejal Worah, Programme Director, WWF-India, Dr Suhas T Buddhe, Chairman & Managing Director, Biocare India Pvt. Ltd., Dr Amita Prasad, Additional Secretary, Ministry of Environment, Forest & Climate Change, Mr Basanta Raj Shrestha, Director – Strategic Cooperation, ICIMOD, Dr Ashok Kumar Jain, Advisor, NITI Aayog, Ms Jyotsna Sitling, Joint Secretary, Ministry of Skill Development and Entrepreneurship, Mr Akshay Kumar, CEO, Mercury Himalayan Explorations Limited, Dr Sachin Kumar Sharma, Scientist-C, Patanjali Research Foundation



Mr Basanta Raj Shrestha, Director – Strategic Cooperation, ICIMOD



Dr Amita Prasad, Additional Secretary, Ministry of Environment, Forest & Climate Change



Dr Ashok Kumar Jain, Advisor, NITI Aayog



Dr Suhas T Buddhe, Chairman & Managing Director, Biocare India Pvt. Ltd.



Mr Brij Mohan Singh Rathore, Chief Policy Advisor – Natural Resource Management, ICIMOD



Mr Akshay Kumar, CEO, Mercury Himalayan Explorations Limited



PLENARY VI

Partnerships for Sustainable Water Solutions

Water stress affects more than 2 billion people around the globe today and is projected to rise. India has invested significantly in water infrastructure that has led to growth and prosperity. However, more recently, attempts to augment India's water supply have been challenged by issues such as, mounting population, over-consumption, industrial competition, climate change, and pollution. In order to tackle water dilemma, India must look beyond technological fixes and short-term supply side measures, and seek opportunities to cooperate across scales to improve its water accounting.

Key Challenges

The panellists in the session discussed implementation and monitoring of initiatives that will change the way water is used and reused including a way that is more sustainable. Looking at it from the policy perspective it seems:

- Through various projects World Bank is trying to set examples. One of the panellists mentioned that there are no shortages of plans and policies in India. The main challenge is effective implementation and being accountable. The world is trying to address transparency in projects through technology.
- SDG 6 which recognises the centrality of water resources to economic and human development. Approximately 2 billion people do not have access to clean drinking water. The main reasons of polluted water bodies, especially rivers, is primarily raw sewage followed by industrial pollution. The cost of water usage is not charged in India. Main issue is the behaviour, mind-set and the lack of will among stakeholders to take decisions in India.
- *Under ownership* it was discussed, how do we build on existing examples and mainstream them. It was highlighted that in some way the government has alienated the water users from decision-making process. There is a need to create systems to empower the local communities, water users, wetlands to take decisions.

- *Under footprints*, it was highlighted that sewage is growing. STP is very important but would not solve the issue of sewage in the country. There could be a mechanism to honour cities that have reduced their water footprint, which is similar to smart city challenges.
- Since one company has operations in coastal areas and dry states, fresh water availability is a big issue.
- Discussing implementation from industry's point of view, one panellist highlighted that irrigation efficiency is one of the challenges and corporates must lend ideas and models on how to address this challenge.
- They talked about water as an issue that has to be looked at in terms of the huge population base in India and climate change (deforestation, global warming, droughts and floods). 55% of water supply in India comes from ground water resources.

Key Issues: On-The-Ground Implementation

- In 2012, one company did an assessment of water recharges. Outcome of the assessment held that the company is 2 times water positive, that is, recharging twice of what the company is consuming. This was a result of two decades of work in terms of having those recharges through check dams, percolation wells, and roof rain water harvesting structures in the community.
- Even though the company is a CO₂ emitter but it is water positive which is the biggest lever for the company along with other crop initiatives like better cotton initiative. Last 15 years the company has been trying to calculate the salinity's progress because in the coastal regions it has a direct impact. Once the company started monitoring the salinity which it has done 4-5 times over the last 15 years, it was observed that salinity line is shifting towards the sea side by 8 kms. Another indicator of fresh water availability increase is by the fact that in these regions, one was able to grow 3 fresh water crops

now in comparison to just one crop earlier.

National Hydrology Project:

- aims at regulating water use, water supply, how is it being used all over the country at state level
- all the states have committed to the ministry to join the central platform

At the central level, it has set grants to the state to join the national platform so that they can do mapping, river-basin-based flood forecasting, water accounting and eventually finding solutions.

Solutions

- Work done by Indian members of WBCSD. A Geneva-based organisation which brings together a membership of over 200 global corporates who are committed to the principle that businesses can achieve SDGs.
- Some World Bank projects are associated with irrigation

and water resources sector.

- India Water Leadership Group's work of over 3 years in the area of on-the-ground, tangible initiatives in terms of supporting better use and planning of water focusses on two main topics:
 1. Development and spreading awareness of the use of India Water Tool
 2. Water Smart agriculture, where number of companies shared and showcased the initiatives in the field of agriculture

India Water Tool initiative is through a collaboration with 20-member companies along with partners like CII-Triveni and World Resource Institute. The tool is based on datasets which are customised as per the Indian context. Main objective of this initiative was assessment of risks around availability as well as quality of water for corporations. The scope of this initiative has expanded and version 3 was scheduled for



From (L to R): Mr Sandeep Shrivastava, Senior Vice President, Ambuja Cements Limited; Dr Anju Gaur, Senior Water Resources Specialist, World Bank, Mr N K Ranganath, Co-Chairman, CII National Committee on Water and Managing Director, Grundfos Pumps (I) Pvt. Ltd., Mr Suresh Babu, Director-Rivers, Wetlands & Water Policy, WWF-India, and Mr Naveen Chahal, Director & CEO, Water & Soil Technologies, UPL Ltd.

launch in October 2017. The version incorporates additional datasets and improvements in the tool. This will allow the tool to be used as a planning mechanism, evaluate water balances and utilisation. Contribution of these datasets are from NASA and US Geological survey. Indian companies should be aware of this tool and must utilise it. Data that gets generated eventually gets added to the already available statistics so that it finds scope for improvement.

Water smart agriculture addresses how water gets utilised. There are two sides to this—making water available and demand side issues. Demand side issues are difficult to implement but are becoming extremely important, especially in the context where there is an absence to a true value

measure for water usage. Since pricing mechanism is not there, it is important to have smart ways for water usage.

12 WBCSD member companies have volunteered to put together an optimised solution by sharing their good practices on how they addressed issues related to agriculture. It also encouraged collaboration among these companies.

The session drew attention on the actions needed to develop sustainable water solutions through the partnership between businesses and governments that will successfully implement and monitor the water-related SDGs over the next 15 years.



Mr N K Ranganath, Co-Chairman, CII National Committee on Water and Managing Director, Grundfos Pumps (I) Pvt. Ltd.



Mr Sandeep Shrivastava, Senior Vice President, Ambuja Cements Limited



Dr Anju Gaur, Senior Water Resources Specialist, World Bank



Mr Suresh Babu, Director-Rivers, Wetlands & Water Policy, WWF-India





SPECIAL PLENARY

Special Plenary

If we take agricultural growth rate to 50% with the support of irrigation, the rural economy will be boosted, emphasized Shri Nitin Jairam Gadkari, Union Minister of Road Transport, Highways, Shipping; Water Resources, River Development, and Ganga Rejuvenation at the special plenary 12th Sustainability Summit, organised by CII-ITC Centre of Excellence for Sustainable Development, in Delhi. Like powergrid, India can also have watergrid connectivity to ensure water available to the last person. Expressing his happiness at being given charge of the water ministry, he explained the benefits of conversion of waste into wealth by citing examples of using recycled waste water.

The 12th Sustainability Summit, an annual flagship event of Confederation of Indian Industry (CII), focused on 'Driving Inclusive Growth' and on the collective journey of stakeholders in achieving SDGs by 2030. The UN had adopted

17 Global Goals or Sustainable Development Goals (SDGs), in September 2015, in New York. As we move from pledges to practice, the 2030 development goals and targets show us the path to achieving inclusive and sustainable development. Business has important and definitive role to play in achieving SDGs.

The special plenary at the 12th Sustainability Summit 2017 was jointly addressed by Shri Nitin Jairam Gadkari, Union Minister of Road Transport and Highways; Minister of Shipping; and Minister of Water Resources, River Development, and Ganga Rejuvenation Government of India; Mr Sanjiv Puri, CEO and Executive Director, ITC Limited and Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry.

Acknowledging initiatives taken by the Ministry, especially the 'Green Highways' project that has been successful in creating



From (L to R): Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry, Shri Nitin Jairam Gadkari, Union Minister for Road Transport, Highways, Shipping, Water Resources, River Development and Ganga Rejuvenation, and Mr Sanjiv Puri, CEO & Executive Director, ITC Limited

sustainable livelihoods, Mr Sanjiv Puri, Chief Operating Officer, ITC Limited, added ITC's contribution towards this project. Stressing on the need to boost agriculture, he mentioned that it is a resource-intensive sector supported by our government but at present there is a need to align agriculture and market demands to commensurate yield with income of the farmers.



Shri Nitin Jairam Gadkari, Union Minister for Road Transport, Highways, Shipping, Water Resources, River Development and Ganga Rejuvenation

Director General, Confederation of Indian Industry, Mr Chandrajit Banerjee, appreciated Shri Gadkari's dynamic stewardship for innovative initiatives such as use of waste material for road construction to reduce costs and improve quality. He reiterated CESD's commitment in its role of an all-inclusive ecosystem player in upgrading business in India to sustainable competitiveness.



Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry



Mr Suresh Babu, Director-Rivers, Wetlands & Water Policy, WWF-India





PLENARY VII

Sustainable Living with Good Health, Nutrition & Wellness

Good health starts with nutrition. Without the security of daily food (nutrients, calories, vitamins, minerals, and micronutrients), humans cannot live, learn, prosper or lead healthy and productive lives. As the global population is expected to grow from 7.4 billion people in 2015 to more than 9.7 billion people in 2050, along with depleting natural resources, there is an opportunity for people to adopt actions for sustainable living. This can help reduce the carbon footprint or environmental impact by altering to sustainable lifestyle.

Challenges

Session began with some statistics on general health conditions in India including child and maternal health.

- India has the largest number of underweight people in the world, it is also among the top 5 countries with the

most number of overweight people.

- There are children who suffer from obesity, sleep issues, metabolic problems who go to private schools while those in government schools suffer from under nutrition and therefore nutrition management is essential in government schools.
- Nutrition management is a big challenge for policymakers also because preventive health has to also be affordable. Many families go below the poverty line due to illness in the family. Besides spend on the treatment, there are also 'out of pocket' expenses such as tests, clinical medicines etc.

Implementation

There is growing awareness of food safety in India and FSSAI keeps a check on whether the food is manufactured and



From (L to R): Dr Randeep Guleria, Director, All India Institute of Medical Sciences (AIIMS), Mr Pawan Agarwal, Chief Executive Officer, Food Safety and Standards Authority of India (FSSAI) and Additional Secretary, Ministry of Health & Family Welfare, Mr B Rajagopal, President, DSM India, and Ms Sonali Mehta Rao, Co-founder & Chief Growth Officer, Awaaz De

processed properly in consideration with research institutes and check the whole ecosystem around it.

Solutions

Government is paying attention to the importance of linking policies and investments that integrate agriculture with improved health and nutrition.

- Government of India is taking steps via Integrated Child Mission and Nutrition Mission to combat problems of the undernourished population and they have helped a large population and continue to do so.
- Increasing awareness for a +F logo indicates that the food is fortified as is seen in most milk packets. About 40 co-operatives and dairies, including some private ones

too fortify the milk with vitamins A and D to increase wellness and happiness among Indians.

Infectious diseases that can be controlled due to safe water, hygiene, sanitation and this is especially important for children. Collaborative actions by public and private sector through comprehensive strategy helps reduce malnutrition and builds strong and resilient individuals, families, communities, nations promote sustainable living. The session drew emphasis on how SDGs open a window of opportunity to resolve the world's nutrition challenges and walk on the path of sustainable living.

There is a need to focus on preventive health more than curing diseases and illnesses.



Dr Randeep Guleria, Director, All India Institute of Medical Sciences (AIIMS)



Mr Pawan Agarwal, Chief Executive Officer, Food Safety and Standards Authority of India (FSSAI) and Additional Secretary, Ministry of Health & Family Welfare



Ms Sonali Mehta Rao, Co-founder & Chief Growth Officer, Awaaz De



Mr B Rajagopal, President, DSM India



PLENARY VIII

Boosting Growth with Responsible Mining

Mining industry plays an important role in meeting the increasing demand for minerals and metals to sustain high economic growth rate of the country. When managed responsibly, it can also help reduce poverty through job creation, induced economic activity and the provision of basic services. These attributes make the industry a major potential contributor to the SDGs. Being an extractive industry, mining has many environmental, social and economic implications. This session focused on initiatives and success stories of companies that chose to pursue a path incorporating the SDGs into their own practices and operations.

Challenges at the Policy Level

Mining carries with it by definition, a disturbance to the environment. Mining must be done in a responsible and ecologically sensitive manner. Some of the below discussed factors among many makes mining very challenging:

1. Scale of mining: 75% of mining in this country is done in less than 10 hectares which is extremely small and this is what makes sustainability in mining sector very challenging.
2. Many regulatory agencies that do not have the capacity or the knowledge to be able to enforce laws, make job of miners extremely difficult even if they have the intent of being in full compliance with the laws and regulations.
3. Over the last several years because of constant focus on the sector around illegal mining and interventions by the Supreme Court, various committees that went into the question of mining laws, the focus has now shifted to transparency.
4. Good environmental compliance framework is actually good business and a lack of knowledge of this instrument might prove expensive.
5. It is complicated to distinguish if there is ignorance or willful disobedience of the compliance framework.

Regulating the mining sector in a transparent and effective manner is a big challenge for industries and the government. Judicial interpretation is a huge area of contestation and most often confronted with the National Green Tribunal (NGT). This has a bearing on actual practice on a daily basis that are often not understood well.

Implementation strategy

At policy level shows acts and rules that have been amended to bring about transparency in the system through star-rating system; provisions made to regulate small-scale mines particularly for major mineral; policies that have made mandatory for minor mineral concession rules for each state to notify.

For approval mechanisms IBM has come up with a solution and fixed timeline related to mining issues to be attended to within 45 days whether it is approved or rejected.

There is a need for improved coordination and better partnership between government, civil society, mining companies, agencies and associations that represent mining so that there is better sharing of information.

Solutions

Industry, however has to devise better ways towards responsible mining; to share the benefit with all the stakeholders and to adopt the participatory mechanism in their best practices.

- Perform responsible mining and not sustainable mining because by characteristic it damages the land and nature.
- In the iron ore belt of Karnataka and Goa, government has set up a carrying capacity based on ecology, forest, number of mines and fixed limit for individual mining. This concept is recent and it will be introduced in other parts of the country, such as Orissa. Forest department

is also working to figure out in advance; areas where mining can be done in forest areas.

- Voluntary disclosure: environmental audit was done in early 1990s. There is not much work done in terms of environmental audits in the mining projects. Star rating system is part of the compliance framework.
- Understanding rights in a mining landscape such as, tribal rights, environmental rights, livelihoods of locals, local development rights.
- Companies have to ensure that they use beneficiation technology so that low-grade ore can be used.
- To have water management, water harvesting schemes, water recycling to ensure that they have a much lower carbon footprint.
- To introduce skill development in the tribal areas that do not have a high human development index (HDI). Companies need to make interventions in the area of skill development and education.

- Industry must explore beyond the scope of CSR, health, education, skill development and must take innovative measures. Develop biodiversity policies.
- An initiative that calls for launching the code of responsible extraction where anybody who buys mineral for business must ensure that they buy from a responsible and certified source. Where they will ensure that the verification is done with respect to the responsible mining parameters taking care of occupational health, safety, environment, communities, and doing ethical work. Individual companies cannot actually address that and it has to be a government-led initiative. Pick up mining intensive areas like Singrauli, Goa, Bellary and some of the funds that are lying unutilised like CAMPA fund, DMF could be used to manage some of those cumulative impact.

Therefore, mining industry must ramp up its engagement, partnership and dialogue with other industry sectors, government, civil society and local communities to address the environmental and social challenges.



From (L to R): Mr R K Bansal, Sustainable Mining Expert, Mr Pankaj Kulshrestha, Regional Controller of Mines, Indian Bureau of Mines, Mr S Vijay Iyer, Managing Director, Rio Tinto India, Mr Sanjay Upadhyay, Advocate, Supreme Court of India and Honorary Managing Trustee, The Environment Law & Development Foundation, and Mr Rajeev Singhal, Vice President–Raw Materials, Tata Steel Limited



Mr S Vijay Iyer, Managing Director, Rio Tinto India



Mr Rajeev Singhal, Vice President-Raw Materials, Tata Steel Limited



Mr Sanjay Upadhyay, Advocate, Supreme Court of India and Honorary Managing Trustee, The Environment Law & Development Foundation



Mr R K Bansal, Sustainable Mining Expert



Mr Pankaj Kulshrestha, Regional Controller of Mines, Indian Bureau of Mines



INAUGURAL - DAY 2

INAUGURAL - DAY 2

This session emphasised on India-EU clean energy & climate partnership that focuses on supporting implementation of Paris Agreement and developing clear pathways. Identifying technologies needed by India and the sources of financing such technologies. This partnership is guided by SDGs and the Paris Agreement objectives of strengthening global response to the threat of climate change in the context of sustainable development and poverty eradication. This partnership will support India to increase its ability to adapt to adverse impact of climate change and foster climate resilience therefore making finance flow consistent with the pathway towards low GHG emissions and climate resilient development.

Key Challenges

The session began with a recognition to global warming as the most dominant concern in the contemporary public discourse. In spite of the steps taken by government of India, problem arise out of global warming and continue to exist.

This can be contributed to insufficient resources or lack of access to technology to cope with climate-change induced disaster, and country needs better understanding of issues, relevant technology, capacity building, networking and extensive consultation processes spanning every section of the society.

Implementation Strategy

EU and India adopted a joint declaration on clean energy and climate partnership that was endorsed by leaders at the 13th EU-India Summit in Brussels in March 2016. This declaration recognised the common interest to promote clean energy generation and increased energy efficiency for climate action, including global support to developing countries as reflected in the intended nationally determined contributions submitted by India. The EU-India's cooperation will include work on energy efficiency in buildings, development of renewable energy sources including solar and offshore



From (L to R): Ms Pamposh Bhat, India-EU Climate and Clean Energy Dialogue Project Coordinator, Adelphi, H. E. Mr Tomasz Kozlowski, Ambassador of European Union to India & Bhutan, Mr Yaduvendra Mathur, Additional Secretary, NITI Aayog, Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group, and Ms. Seema Arora, Deputy Director General, Confederation of Indian Industry

wind, smart grids, energy research and innovation. India-EU economic partnership is critical, considering the trade links and the possible impact of climate change.

There was a mention about the launch of the joint EU-India pathways. The EU has an energy policy level dialogue in place since few years. Renewable energy, energy efficiency and energy security are clearly identified priorities. The EU is also partnering with India on concrete initiatives on the agenda in India related to designing the first offshore wind plant. It was highlighted that cooperation with India on smart grids, bilateral cooperation being carried out included through support to International solar alliances. European investment bank has provided loans, credit lines for more than Euro 1 billion. Both sides are committed to effective implementation of the Paris Agreement in all its aspects including mitigation, adaptation, finance, technology development, capacity building and transparency of action. In Europe the energy sector employees more than 1 million people with a turnover of Euro 130 billion. This means that the investment in new technologies and energy sector takes into account social and economic dimensions while creating jobs. By 2030, European private sector will invest between Euro 500-600 billion thereby ending up facing huge challenges but big opportunities for the private sector.

It was also highlighted that NITI Aayog is mandated by government to drive the entire SDGs, monitoring framework agenda along with the Ministry of Statistics Program Implementation. Even the Vice Chairman of NA, in the recent past, participated and represented India in the voluntary national review on the implementation of the SDGs at the UN.

Conclusion

At the end the panellists deliberated that the SDGs are a great standard of governance. Success of Paris Agreement requires other signatories to act on their commitment as well. This includes provision of financial resources to the tune of 100 billion per year for developing countries. There is flexibility for each nation to develop the suitable indicators for each of these 169 targets of the 17 SDGs. EU and other stakeholders can work with NITI Aayog and build greater robustness in the indicators. Tracking the movement on the SDGs and on climate change issues would need more granular work across all stakeholders.

NITI Aayog has now come to an advanced stage of finalising India's National Energy Policy.



Ms Pamposh Bhat, India-EU Climate and Clean Energy Dialogue Project Coordinator, Adelphi



Mr Tejpreet S Chopra, President & CEO, Bharat Light & Power Group



H. E. Mr Tomasz Kozlowski, Ambassador of European Union to India & Bhutan



Mr Yaduvendra Mathur, Additional Secretary, NITI Aayog



Ms Seema Arora, Deputy Director General, Confederation of Indian Industry



PLENARY IX



Women Empowerment & Safety at Work Place

The stand-alone Goal 5 of the SDGs is to achieve gender equality and to empower all women and girls. One of the targets in this goal is to eliminate all forms of violence against all women and girls in the public and private spheres, including sexual exploitation. Sexual harassment is often a hidden issue. Although both women and men can be victims of sexual harassment, most victims are women.

Challenges

The top agendas for an Inclusive India includes: job creation; skill development and training; affirmative action; and women parity.

- Work-place violence and issues related to safety prevent women from entering into the workforce. It is the root cause that hinders other women empowerment activities. Industries most often neglect this issue and fail to realise the significant economic gains that they can get by addressing this issue.
- Workplace violence is a human right issue. Organisations also have to take matters of compliance and transparency very seriously. It is the only way in gaining trust and building credibility.
- Lack of awareness about the laws is one of the major problems that women face in India.
- India does not have enough facilities at workplace to retain women, Crèches could be one of the most empowering factor for retention of women at workplace.
- The challenge interestingly is that women feel that, with bank accounts the transparency has increased and they are not able to set aside money for themselves from their salaries.
- Legal space has evolved tremendously over the years for women. Unfortunately, women do not use it.

Implementation

There is an increasing need for businesses to demonstrate that their workplace meets the high ethical standards, in addition to other production values.

There is nothing more important than addressing and eradicating human right violations from our industries. In order to take a step towards addressing this important issue CII partnered with BSR to help MSME's in the textile sector strengthen their anti-sexual harassment commitments. CII initiated a project called HERrespect with the objective of promoting gender equality and tackling violence against women to promote harmonious relationships in workplace. The programme in India is largely based on the 2013 POSH Act and it is currently piloting in garment and textile companies in India.

The NCW has also asked for a review of the POSH Act where the number of people in the ICC (Internal Complaints Committee) now IC is increased to 5-8 people with a majority from outside the organisation. This was proposed because it is often difficult to find the top management guilty of committing the violation. 2013 POSH Act is welcomed but there are lot of implementation challenges to get the desired impact.

Discussion took place on different cases from the 1970 CB Muthamma case to the Neera Mathur VS LIC case to Madras high court judgement on the night shift rule to show that the judicial system has always struck down regressive laws to empower women. Even the Vishaka guidelines was given out after the Supreme Court trial and from that came the POSH Act. Despite the problems that women have faced and also the backlash to it, there has been a high acceptance of law as it brought about a high degree of neutrality and transparency.

Solutions

The session had multi-stakeholder views on the measures to ensure women empowerment with special focus on prevention of sexual exploitation at workplace in India and launched the toolkit.

From the perspective of a responsible industry, addressing the issue of work-place violence can lead to:

- Increased productivity
- Decreased rate of attrition
- Decreased absenteeism
- Retention of trained and skilled staff
- Reduced legal costs
- Increased self-confidence and safety at work

Under the project BSR in collaboration with CESD co-created a Toolkit for companies to address the issue of sexual harassment at workplace. This Toolkit is designed for self-directed use and it would help companies in:

- Promoting gender equality

- Tackling violence against women
- Creating harmonious workplace relationship
- Building the capacity of managers, ICC members, and workers
- Reflecting on social norms
- Supporting Indian business owners to operate within the law (Prevention of Sexual Harassment of Women at Workplace Act of 2013)
- Supporting factories to set up systems and processes that help ensure safe work environments for women by supporting training for all:
- It is meant for male/female workers and supervisors and managers

Media has played its part in bringing about awareness to the masses to address the issue of sexual harassment. It has been repeatedly bringing up issues of sexual harassment in the country. The impact it has generated is still unknown, as the number of cases that are reported on a daily basis are still high. Has it inhibited or encouraged people to commit the crime is still less known.



From (L to R): Mr Antony Alex, CEO, Rainmaker, Ms Shailaja Bajpai, Consulting Editor, Indian Express, Ms Lalita Kumaramangalam, Chairperson, National Commission for Women, Ms Christine Daa Svarer, Director, HERproject, Business for Social Responsibility (BSR), Ms Vanitha Datla, Chairwoman, Indian Women Network, CII – Southern Region and Vice Chairperson, Elico Limited, and Ms Abha Singhal Joshi, Lawyer



Ms Christine Daa Svarer, Director, HERproject, Business for Social Responsibility (BSR)



Ms Vanitha Datla, Chairwoman, Indian Women Network, CII – Southern Region and Vice Chairperson, Elico Limited



Mr. Antony Alex, CEO, Rainmaker



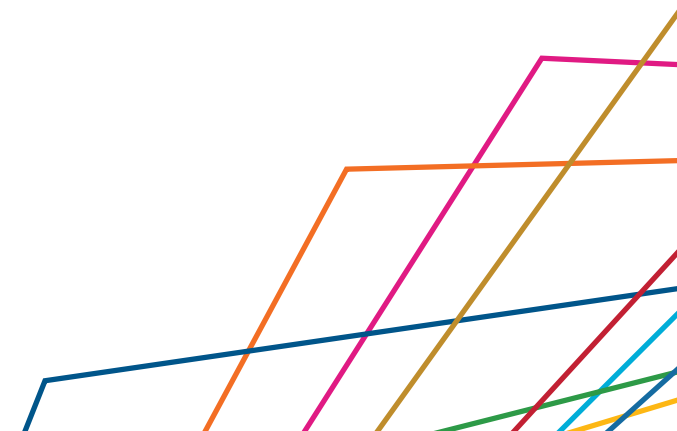
Ms Abha Singhal Joshi, Lawyer



Ms Shailaja Bajpai, Consulting Editor, The Indian Express



PLENARY X



Circular Economy Boosts Biodiversity

Nature, as a perfect circular system, is an important inspiration for the circular economy. Today, people are aware of the plethora of goods and services that nature gives for free. The circular economy model is conceived as a continuous positive development cycle that preserves and enhances natural capital, optimises resource yields, and minimises system risks by managing finite stocks and renewable flows. Investing in natural solutions contributes to resource efficiency roadmap and has a positive impact on biodiversity, society and the economy. Industries are initiating to address its impact on nature and embrace the restorative imperatives contained within circular economy models. The session will bring together businesses and experts to share innovative business models and nature-based solutions where investing in nature offers multiple economic, social and environmental benefits.

Challenges

Climate change is real as well as political. In India three pillars of sustainable development have to be addressed simultaneously-social, economical and ecological. Climate change is more like adaptation. More we adapt to the changes on the above three, more successful we will be. There is no waste in nature.

The biggest challenge is that damaging nature has its consequences and humans despite doing it are absolutely oblivious to it. There are 3 objectives of Convention on Biodiversity: 1. Conservation 2. Sustainable use of biodiversity 3. Access and Benefit. While talking conservation, mostly, people tend to overlook the second objective as the first and third go hand-in-hand. What is sustainable use, that is something that can be gauged how it should be used. Companies have to learn to live with and use nature and use it sustainably. Again, while talking about access to natural capital nobody cares for benefits sharing. Replicating best practices in today's time is a huge challenge.

There is a need to talk about rate of return if the concept of circular economy is to be taken forward. This is because environment is human-centric and their interaction with the non-living environment leads to ecology services. Communication of science, particularly, when it comes to natural capital is very important.

As per estimates, humans consume 25-30% of the net productivity of globe. Destroying biodiversity in a tantamount way is essentially destroying well-being of the poor and rich which is proven with the help of a study conducted in Terai region by WWF in late 1990s. Production is increasing everyday, so is the generation of wastes. There is a need to either make them last longer or recycle and reuse them. Technologies may become outdated but nature does not grow outdated. Challenge is how to build a system that takes into account the cost of conservation and sustainable use.

Pollution, over-exploitation and climate change are three major activities besides extinction of rare species and fragmentation of habitats. A conscious attempt is needed to be responsible towards consuming resources.

Implementation Strategy

Ecosystem functions in its own ways and provides provisioning functions, services such as food, raw material, medicines to human society and supporting services to provide assistance to other function of ecosystem services. Use of services is undertaken by community or by people who are at the lower end of the triangle. Hence the term is very relevant for developing economies and hence it leads to the terminology of GDP of the poor people of the circular economy is concerned.

In India, under corporate sustainability goals there is a forerunner to manage and govern these issues and CSR allows us to take these issues; and, cater to them that are

linked to the socio-environmental needs of conservation of biodiversity.

From slogan to pledges, now it is action that needs to be taken. In the boards and management reviews sustainability is talked much more than numbers. Sustainability is vital business strategy and Mahindra's sustainability framework agenda is action-oriented. People, planet and profit are not isolated and have bearing on each other. Clear interventions are made for carbon neutrality, where the discussion is on conservation, energy mix, water-positivity and security while analysing about conservation and harvesting. There is also talk of zero-waste and circular economy and at the same time promoting biodiversity.

In manufacturing organisations dealing with big workforce is always challenging. Now, that employees are involved in CSR and sustainability, people feel more attached to the companies. Profit, planet, people, all the three, need to follow the right direction.

Mahindra is monitoring consumption of boat, e-waste, paper, batteries, carton, plastic, oil. These are measured and how they can be reused and recycled and could be useful in checking air and water pollution is already under discussion. No use of thermocol, plastic bottles to consciously preserve the environment. The company is a member of IBBI and results of its projects are now visible with the warranty of the machines going down and the life of the machines going up.

Solutions

Nature is a model for circular economy. Companies and businesses need to use resources sustainably and also share the benefits. For businesses to survive natural resources are largely required and for sustainable management of natural resources such as forest, land, river, one needs to set the

right goals of environment management and conservation that need support to new services.

Another way to look at conserving the biodiversity is to make use of the available resources in the automobile sector and transform it into an electric sector. Vehicles need to be refurbished and how can this opportunity be capitalised needs to be found out along with new resources. Other forms of circular economy include how to capture heat for household and industry. While there is a need to look at economy as a whole there is also a need to look at society and get leaders to think about environment and its related issues.

In India, industries operate and support varied components of possible circular economy but there is a need for a more holistic growth and approach. How agriculture can boost biodiversity, and mobility and vehicle manufacturing and all these technical and digital information are keys to reach this objective.

Through education there is a need to instill biosphere consciousness as environmental awareness is not enough. For a real transformation to circular economy and sustainability there is a need for alternate economic growth and related activities and consumerism is the main pillar to it.

Industry needs to acknowledge who the provider of the resource is and share the benefit with them. This is how biodiversity can be sustained as well as boosted.



From (L to R): Dr Konrad Uebelhoer, Director, Indo German Biodiversity Programme, GIZ India, Mr Ravi Singh, Secretary General & CEO, WWF-India, Mr Hem Pande, Former Secretary, Government of India, Mr Vijay Kalra, CEO, Mahindra Manufacturers Limited and Chief – Manufacturing Operations, Mahindra & Mahindra, and Mr T Rabikumar, Secretary, National Biodiversity Authority.



Mr Hem Pande, Former Secretary, Government of India



Mr Ravi Singh, Secretary General & CEO, WWF-India



Mr T Rabikumar, Secretary, National Biodiversity Authority



Dr Konrad Uebelhoer, Director, Indo German Biodiversity Programme, GIZ India



Mr Vijay Kalra, CEO, Mahindra Manufacturers Limited and Chief – Manufacturing Operations, Mahindra & Mahindra

Master Class on Integrated Reporting

Integrated reporting is the next big thing in terms of corporate disclosures worldwide. Contrary to current disclosures that emphasise primarily on financial aspects while non-financial information gets captured either in a separate report or is scattered across various sources - integrated reporting focuses on 6 Capitals (financial and non-financial) and the inter-linkages between them that all come out in one single report.

Challenges

Integrated Reporting is an evolution of corporate reporting. It is important to understand this from a different lens; that is; what it is not than what it is. It is not improvement of financial reporting or sustainability reporting. It is not even AR and SR bound into one report.

Integrated Reporting is when parts of business are put together in a cohesive, uniform, manner and put it across to the investors. There is a need to understand how are Annual Reports and Sustainability Reports differ from Integrated Reporting? Do Sustainability Reports talk to the Annual Reports? Analysts wonder how do the two KPIs link to each other? In reality, Annual Reports and Sustainability Reports are the rear-view mirror of business performance.

Integrated Reporting is about the future of business and not the history. When material issues are identified to business using Integrated Reporting approach there is also a time-perspective added to the other frameworks of materiality. Another set of challenge is to know how to prepare the Integrated Reporting and whether it is to be considered a mandatory requirement? Subsequent sections attempt to answer some of these challenges.

Implementation Strategy

International Integrated Reporting Council (IIRC) has developed an international framework based on value

creation. Integrated Reporting is based on the concept of understanding businesses as value creating entities. In businesses value is eroded as compared to creating it and this is how industrialisation happened and this transition that happened in this century will be termed as a transition phase.

<IR> has not evolved overnight. We celebrated 10 years of financial crisis and in order to understand that it is a reference point for us. Capitalism needs to be redesigned and redefined in order to explain and understand IR. There is a need to look at other forms of capital as well.

Talking about financial crisis, instability and sustainability as triggers it is important to understand that non-financial aspects are impacting existence of business and their valuations. Stability of investments in the era of uncertainty since financial crisis was pointed out. A better understanding of where the risks and opportunities are and an expression of how the business model is designed to create value is equally important to know.

Solutions

CII's Investor Study on Integrated Reporting—the only investor study focused on India—looks at investor expectations on disclosures from Indian companies and whether integrated approach is a possible solution. The study is already done for 21 countries across the globe. While targeting the main stakeholder, that is, the investor, <IR> framework establishes sets of principles and content elements that govern the content of the report. Integrated Reporting prescribes 7 guiding principles and 8 content elements.

Guiding principles include: Strategic focus and future orientation; connectivity of information; stakeholder relationships; materiality; conciseness; reliability and completeness; consistency and comparability. While 8 content elements include: organisational overview and

external environment; governance; business model; risks and opportunities; strategy and resource allocation; performance; outlook; basis of preparation and presentation; and general reporting guidance.

How well we produce the Integrated Reporting is important. In response to the SEBI circular on Integrated Reporting which is by FY 2018, they hope that companies produce their IR and companies might want to comply with their voluntary requirement but what will still be missing from it is the quality information from it. It is not a compulsion but it is a process for business transformation and to get management on board to re-look at one's own business.

How to do IR?

First chapter should be based on Integrated Report before the Annual Report (of last FY) is done. After chairman's message, Chapter 1 on IR that puts different pieces of the business model. Deploy six capitals, explain the business model. Next level will be to incorporate different principles and elements of IR and six capitals into the Management Discussion & Analysis section. Structure of IR could be redesigned as per requirement of companies.

More mature form will be to have the AR in the form of IR. It will take at least one complete year to do it. It is not an indicator-based report. IR is principle-driven. TATAT Steel started their IR five years back and could come up with their first report only in 2015 and even 2016 report in their own words is a moderate attempt. SEBI has adopted IIRC's definition of IR and its framework, so companies could follow that. IR should be concise. It should report how an organisation's strategy, governance and performance and prospects of creating value over a period of time with three segments-short, medium or long-term be captured.

When CESD looks at IR of companies it looks at past performance of companies. Also, whether the company will survive in future to generate returns. So a future-perspective is important.

There will be primarily three buckets of information that must be different from AR and SR.

1. Information that already exists and needs absolutely no work
2. Information already available needs to be packaged and presented differently
3. Information that does not exist in AR and SR and needs to be put in IR

Some part of natural capital, social and relationship capital go beyond CSR capital and some parts of capital which are not there needs to be interconnected. How does it add to the top line of the financials. Report or reporting is a means to a larger goal of creating a value entity. SEBI circular is a soft law. Mandate for IR is only about time. There was a thought process to make IR a mandatory requirement right from the beginning but CII along with its members support could turn it into a voluntary requirement, for the time being. As per SEBI circular, annual reports that come out next year will be IR reports and must be available on company websites.



Mr Sachin Joshi, Chief Operating Officer, Confederation of Indian Industry



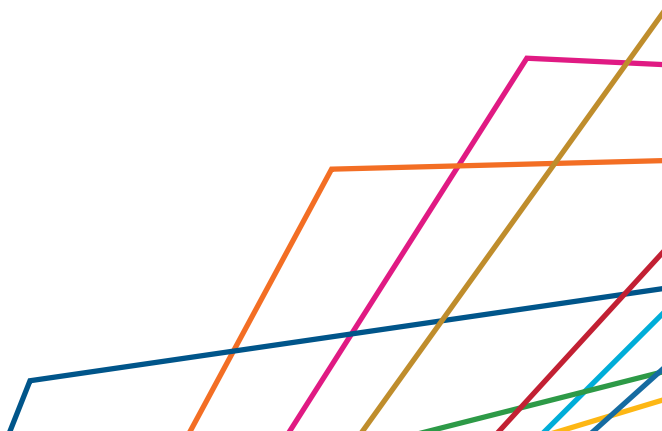
Master Class on Integrated Reporting



Master Class on Integrated Reporting



PLENARY XI



Green Cooling and Sustainable Refrigeration

This session built on the results of successful EU India green cooling conference earlier this year in Delhi. In addition to the role that financing mechanism can play, the session introduced examples of training and qualification in the service sector. Proper servicing and maintenance could be a key to transit to sustainable technologies in the cooling and refrigeration sector. The session further explored how partners like the EU and India could work together to implement the Kigali Amendment and what role international cooperation can play.

Challenges

To provide a perspective on legislation, starting with last year's achievement of the amendment in Montreal Protocol it was decided to include aspects of climate change and contributions of India in it. Importance of the amendments in meeting objectives of Paris agreement.

1. The growing demand with increase in compound annual growth rate (CAGR) will increase the power demand by the sector. This demand needs energy efficiency measures, load reduction measures and smart changes in use pattern.
2. Increasing demand also leads to a considerable rise in the global temperature because of the use of more refrigerants.
3. Cooling and refrigeration is a vital sector for all aspects of development. It is about:
 - Food security
 - Cooling comfort
 - Education
4. Growing market: the low penetration of air conditioners, for instance in India, implies potential growth to be managed in sustainable manner to reach our climate targets.
5. Developed countries have to move first, and also EU.

6. Energy Efficiency. Along with direct emissions from refrigerants, there are also indirect emissions through energy consumption in particular in hotter regions. Improving energy efficiency will help reduce these indirect emissions.

Another issue is how to replace ozone depleting refrigerants in sustainable manner and go directly to the real alternatives?

Currently there are 1.5 bn domestic refrigerators, 4m refrigeration trucks, 600m air-conditioning systems and there will be more of these systems in the future.

And, future air conditioning industry would see an increase in competence for:

1. Energy saving
2. Safety
3. Environment

It is important to understand that these sectors are consuming 10% of total energy and 17% of electricity consumption of the world, even more in hot countries, like India. And so, we need to improve the energy efficiency to control indirect global warming impact of the sector.

Refrigerants used in these systems have more than 1000 times impact on global warming compared to CO2 emissions.

The penetration of refrigeration and air conditioning is only about 5%, but this 5% penetration consumes 30-40% of the total power of the company in summers. Growing demand, owing to the growth in GDP, cannot be met by efficiency improvements alone.

Besides high-power consumption, HFCs estimated production and consumption would also lead to global temperature rise of 0.3 0 C to 0.50 C by the end of century. Kigali Amendment for phasedown of HFCs, 2016 is a step towards green cooling.

Two major issues highlighted in the Kigali discussion were:

1. Current low penetration and high growing demand. Some carbon space was needed.
2. Alternatives available are process patented as well as application patented.

India played an important role in it and also submitted a visionary Amendment proposal for phase down of HFCs in 2015 addressing needs of Article 5 Countries.

As an industry, there is a challenge of skill development given the vastness of India with respect to way the units are serviced. There are sectors which are seasonal in nature of job where people shift to other occupations in off season like window/split ACs, sectors which are commercial with more educated & trained technicians and sector where large equipments are maintained like in large cold rooms.

Implementation Strategy

This includes meeting the requirement of energy efficiency and safe systems, periodical inspections, logbook, installation & repair only by certified craftsmen and use of right equipment.

This also highlights the importance of contractor's training with low Global Warming Potential refrigerants. REAL Alternatives is one such platform, founded by European Union. It serves the purpose of e-learning, assessments, training, certification and alternative refrigerants

Skill development for India has to be customized based on its requirements.

1. Skill development programme by government does not identify this sector separately. It is part of electronics and hence less focused. So, a focused programme is needed for the sector.
2. Certification programme has to be developed, with business case, that motivates more people to join this sector, learn it and earn more.

3. There is a need of standards also, around how a refrigerant has to be handled/managed from the production, to warehouses, to charging at time of installation, to the servicing and also while recovery from old units.
4. Need for technology to reduce the load itself, which has brought in the concepts of green buildings. Reducing the load would imply reducing the refrigerants used.
5. Need to increase the awareness among consumers.
6. Remodelling of the equipment to run on lesser refrigerant charge.
7. More energy efficient products have to be brought in.
8. Alternative refrigerants would be looked up to and it would go by the economics of it and not by the push of it.

Solutions

Controlling leakages is important from environment, energy, safety as well as from financial points of view. There is a need to switch to alternative refrigerants. Domestic refrigerators have the lowest leakages at 0.1-0.5% of initial charge every year, while commercial application, like in supermarkets, and transport refrigeration have highest leakages, at 10-35% and 15-50% respectively. Control on these leakages will help:

- reduce the financial loss in terms of refrigerant loss, repair cost, additional energy costs and consequential losses.
- Comply with legislations including FGas regulation, improved green credentials, reduced health and safety risks.
- Efficient operation of RAC systems and hence lower emissions of CO2 at the power station

There is a need to reduce the use of refrigerants by designing smart equipment and constructing buildings with lesser cooling requirement through use of technologies of high performance glaze and better insulations.

Alternative refrigerants have to be developed and engineered given the current available options are not in the ideal condition to use and are highly flammable and/or toxic.

There has to be cooling load reduction and change in use pattern. Key to reducing cooling loads are:

1. Energy efficient buildings with better insulation, high performance glaze, day lighting, etc.
2. Optimum indoor temperature: 24 to 26 degrees
3. Onsite electric generation
4. Internal load management through sensors, energy star equipment, etc.
5. HVAC equipment, like EE pumps, EE cooling system, EE energy recovery system.

Need of the hour is an encouragement through financial incentives and policy/regulatory driven replacement of existing high energy consuming HCFC-22 and R-410A AC units with Low-GWP energy efficient units. It would result in triple wins: energy efficiency, ODS phase-out/ HFC Phase-down and reduce GHG emissions.

Further, focus is also required on the servicing sector because the maximum loss of refrigerants is while servicing. Some of the initiatives taken so far are:

1. In CFC phaseout 20000 technicians were trained, in SCFC phaseout 11000 technicians were trained and another 17000 service technicians are planned to be trained in next 4-5 years. They will be trained on two aspects:
 - Good servicing practices
 - Alternative refrigerants and their handlings
2. Voluntary certifications being developed.
3. Initiated formation of service technicians' society with various states joining in.

For post Kigali situations, industries are taking up the challenge of working on the alternative natural refrigerants which are highly flammable/toxic in nature and need some engineering. Limited Single component low GWP refrigerants options: R-290, Ammonia (R-717), Co2 (R-744), Isobutene (R-600a).



From (L to R): Dr R S Agarwal, Emeritus Chair, Professor of Mechanical Engineering, IIT-D, Mr Marco Buoni, Vice-President-International Affairs, Air conditioning and Refrigeration European Association, Mr Cornelius Rhein, Policy Officer, European Commission, DG Climate Action, and Mr Seemant Sharma, Director, Product Portfolio Management, Johnson Controls - Asia



Mr Cornelius Rhein, Policy Officer, European Commission, DG Climate Action



Mr Marco Buoni, Vice-President-International Affairs, Air conditioning and Refrigeration European Association



Mr Seemant Sharma, Director, Product Portfolio Management, Johnson Controls – Asia

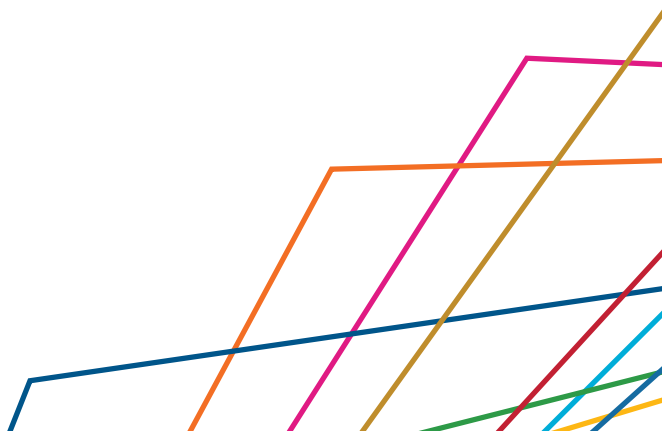


Dr R S Agarwal, Emeritus Chair, Professor of Mechanical Engineering, IIT-D





PLENARY XII



Steps Towards Developing Mid-Century Low Emission Strategies

The panellists set the context of the session by stating that article 25 of UNFCCC which recognises the difference between ability of countries to reduce emission as well their past historic contributions and as per Article 3.4, parties have a right to and should promote sustainable development policies and measures. The Paris Agreement and nationally determined targets can meet the SDG. The session further expanded on keeping track with the 2C and 1.5C degrees goals; steps needed within countries to ensure a science-based process; technologies that are crucial; and role of international cooperation therein. Also, the implications for concrete cooperation activities that EU and India could initiate today was part of the agenda.

Challenges

1. Develop framework of multiple and simultaneous objectives taking into account the synergies and trade-offs.
2. Embed modelling in deliberation because there is no single answer to many transition questions by involving stakeholders and sectoral experts.
3. While developing models the implications of alternative assumptions need to be understood.
4. National models have a comparative advantage over global models.

Mitigation should be linked to human health and other societal goals. While explaining that climate is not the only driver of change the key points that need to be followed in the long term are energy efficiency, decrease in consumption, renewables and electrification of the end users.

Deeper mitigation requires going beyond the already ambitious renewable targets which comes with its own challenges and therefore needs strengthening at the

infrastructure behavioural and policy level.

Reference made to a case of energy efficient technology in a blast furnace to raise concerns about synergising 'Make in India' campaign with Resource Efficiency (RE). The document published by NITI Aayog-EU delegation-TERI on RE is pending for comments.

It requires building on

- MOEFCC-led multi-institution collaboration and ;
- NITI Aayog modelling team and model comparison
- Stakeholder constituency

Also, engagement with sectoral experts for sectorial scenarios that feed into the model is an expected turning point for meeting the mid-century targets.

For CO₂ emission patterns, different strategies are required across different sectors to ensure a better future. For instance, at the residential level, efficiency of the appliances, behavioural change strategies need to be used and at industry level reliable power and upscaling PAT scheme are some of the strategies. India is in a unique position of having to decarbonise while proceeding on a rapid growth & development path. Therefore, implementation would be a huge challenge and implications of economic loss, inequality in a high ambition scenario are important to evaluate.

Solutions

The session used long term models and scenarios to consider the longer-term strategies that are necessary worldwide to achieve goals of the Paris Agreement and how this translates into possible areas for EU-India cooperation.

- NITI Aayog is soon to launch a joint work programme with EU and MoEF on RE that will document all the global

and best practices in this sphere.

- A central regulator to drive the agenda of RE going down to the states.
- Regional programmes to build capacities of people/ industry on RE.

Citing example of China, the panel said RE is not merely energy efficiency strategy but also a life-cycle analysis tool.

SDG will be basis for India's future strategies on climate change. The considerations that should influence the choice of mitigation commitments are:

- Understanding alignment with sustainable development goals and national priorities
- Characterising uncertainties: technology cost pathways, economic growth
- Emerging challenges: Integrating RE into the grid
- Dedicated mitigation policies

Incorporating these elements in the analytical framework are characterised with uncertainties such as the technology cost

and demand; economic growth impacts; Additional policy pathways; Global Change Assessment Modelling (GCAM) Framework. These need to be handled by developing better strategies.

While calculating and generating these scenarios and modeling all the costs such as the utilisation cost, social cost must be accounted for. As part of the energy scenarios some of the future predictions are:

- Across scenarios, renewable energy does show impressive growth
- Coal use is subdued, but far from over
- System wide cost of integrating renewable energy will put increasing economic burden, especially beyond 2030
- The government policy of competitive bidding has helped significantly
- India well on the path of surpassing its NDC commitments
- Electricity sector already on the path to lead India's decarbonisation efforts up to mid-century



From (L to R): Mr Jai Kumar Gaurav, Senior Project Manager, Adelphi, Dr Navroz Dubash, Senior Fellow, Centre for Policy Research, Mr B N Satpathy, Consultant, NITI Aayog, Dr Ritu Mathur, Senior Fellow & Director, TERI, and Dr Vaibhav Chaturvedi, Senior Fellow, Council on Energy, Environment & Water (CEEW)



Mr Jai Kumar Gaurav, Senior Project Manager, Adelphi



Dr Navroz Dubash, Senior Fellow, Centre for Policy Research



Dr Ritu Mathur, Senior Fellow & Director, TERI



Dr Vaibhav Chaturvedi, Senior Fellow, Council on Energy, Environment & Water (CEEW)



Mr B N Satpathy, Consultant, NITI Aayog



PLENARY XIII

Cities & Climate Change: Showcase of Good Practices from Indian Cities

The session on Cities Climate Action targeted national and local institutions, mayors, cities and urban development officers and professionals, private sector and research/academy environment showcasing and discussing local climate strategies and actions undertaken in Indian cities.

Challenges

In recent times, 2,500 new towns have come up due to rural sectoral diversification to help lift people from below poverty line. This means that development increases and therefore carbon emission increases. Some of the towns/cities where such climate challenges are faced are discussed below:

- Saurashtra has very difficult climatic conditions and effects of climate change are already visible especially in the Kutch region.
- Nagpur has extreme weather which ranges from 5 degrees Celsius in winter to 48 degrees in summer.
- City of Surat has a history of floods in the area. They also face challenges such as finance, lack of awareness among citizens, dis-integrated government departments.

Implementation

In Rajkot they have a livability index based on sustainability actions and have identified the following important sectors. Some actions taken/planned are mentioned alongside.

- Building— this includes rainwater harvesting, solar roof tops, green buildings and incentives and disincentives factored in during construction and for future sale.
- Transport—Rajkot has different modes of transport which are not linked and therefore they are taking up a multi-model scheme linking bus stops, airports. It will be an integrated transport system.
- Lighting—52,000 light bulbs have been retrofitted with

LEDs saving 7,000 tonnes of carbon emissions and saving 5.2 million kilowatts of energy.

- Solid waste management, new technology—Tender for waste to energy plants have been floated as well as for waste to compost plants. One bio-methanation plant is also operational. 18 wards have already introduced composting. Earlier waste was transported 25kms outside of Rajkot city which will be reduced significantly in the near future. Construction and demolition waste will be used for building blocks.
- River cleaning and rejuvenation projects will be implanted to have perennial water.
- Internet of things—there are environmental sensors, carbon emissions, monoxide signs in big LED signage and IoT is the future way to go ahead. GPS trackers are placed in dipper vans and buses.

City of Nagpur is one of the 100 smart cities of India. Development plan of the city is based on 4 pillars—e-governance, infrastructure, environment and mobility. Some actions taken are:

- There is a heat wave action plan with a big plantation programme of planting neem trees for coolness.
- Nagpur Municipal Corporation provides facilities such as solar panels, LED, STPs under Amrut Yojna.
- A specialty in Nagpur is the battery-operated local transport for buses and taxis that reduce air pollution.
- A 13-crore project called Nag Rejuvenation and also 'Nadi' is a river dream project.

In the city of Varanasi, organic and inorganic components of urban waste management are being integrated and door-to-door collection of waste takes place. Varanasi will soon be champion with regards to urban waste management and cleaning rivers. For this, the local population must be

included in policy and decisionmaking.

In Surat, cities are connected but an integrated approach towards a smart city development needs to be adopted.

- Surat Climate Change Trust was created along with academia, companies and government. It has the mandate of working towards reducing climate change impacts. They have developed an early warning system for tackling the issue of floods in collaboration with IIT Delhi.
- The Urban Health and Climate Change Resilience Centre was created to document the effects of climate change. Best practices from global examples are being collected and applied in Surat.

Solutions

Select Indian mayors presented and illustrated their city planning, policies and implementation experiences in various fields of Climate Action (Mitigation-Adaptation-Resilience Strategy).

Panel highlighted for a global Covenant of Mayors for Climate Energy and its counterpart in India to establish a network in order to make sustainable and resilient cities. Cities must mobilise the local components of development. Discussing historical development of the global amalgamation of EU Covenant of Mayors and the International Urban Consortium, it was brought to the fore that EU shall give financial and human resources for development of Indian cities. Some points discussed in this context were:

- 1) There is high global recognition and visibility of cities' climate and energy action.
- 2) Credible commitments are made through a review process.
- 3) Help secure long-term support for climate and energy actions.
- 4) Boost access to financing for local climate and energy projects.



From (L to R): Mr Anand Iyer, Chief Project Manager, National Institute of Urban Affairs, Mr Pier Roberto Remitti, Program Director, International Urban Cooperation (IUC)/India, Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India, Ms Debolina Kundu, Associate Professor, National Institute of Urban Affairs, Mr Banchchandhi Pani, Municipal Commissioner, Rajkot Municipal Corporation, Ms Nanda Jichkar, Mayor, Nagpur Municipal Corporation, Mr Ramgopal Mohley, Mayor, Varanasi Municipal Corporation, and Mr Kamlesh Yagnik, Chief Resilience Officer, Surat Municipal Corporation

- 5) Tailored guidance to cities and practical support available.
 - 6) Quick access to technical excellence and 'know-how' is also available.
- In order to do this, what is required is:
- I) A free-of-cost network.
 - II) An agreement of a political nature must be signed by the mayor and a declaration of commitments by the mayor is expected.
 - III) Implementation of agreement, post the declaration to achieve their cities' action plans need to be outlined.
 - IV) Periodic monitoring of implementation of projects under the covenant of the agreement needs to be conducted.



From (L to R): Ms Pamposh Bhatt, Coordinator, India-EU Clean Energy and Climate Partnership, Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India, Ms Debolina Kundu, Associate Professor, National Institute of Urban Affairs, Mr Banchhanidhi Pani, Municipal Commissioner, Rajkot Municipal Corporation, Ms Nanda Jichkar, Mayor, Nagpur Municipal Corporation, Mr Ramgopal Mohley, Mayor, Varanasi Municipal Corporation, and Mr Kamlesh Yagnik, Chief Resilience Officer, Surat Municipal Corporation



Ms Pamposh Bhatt, Coordinator, India-EU Clean Energy and Climate Partnership



Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India



Ms Debolina Kundu, Associate Professor, National Institute of Urban Affairs



Mr Ramgopal Mohley, Mayor, Varanasi Municipal Corporation



Mr Anand Iyer, Chief Project Manager, National Institute of Urban Affairs



Mr Kamlesh Yagnik, Chief Resilience Officer, Surat Municipal Corporation



Mr Pier Roberto Remitti, Program Director, International Urban Cooperation (IUC)/India



Mr Banchhanidhi Pani, Municipal Commissioner, Rajkot Municipal Corporation



Ms Nanda Jichkar, Mayor, Nagpur Municipal Corporation



PLENARY XIV

Technology as Topic of International Cooperation

Innovation and technology—deploying existing and new on a substantial scale will be a key enabler and driver in achieving the SDGs and the Paris Agreement’s goals both in the fields of mitigation and adaptation. Global cooperation in the development and deployment of climate responsive technologies focusing on transformative change would pave the way for resilient and low carbon infrastructure. The EU and India have already been cooperating on several crucial fields such as renewables for energy generation, elements of transport infrastructure and resilience and adaptation of agriculture and forestry. The session addressed some technology challenges and provided insights on existing examples of ongoing technology transfer efforts and on how further cooperation on climate responsive technologies between EU and India will shape up.

Key Challenges

The panel highlighted that technology challenges that India faces will not be met by the scale and level at which various centres of technology were created under The Paris Agreement, such as CTCN and TEC.

On the legislation front, India needs to reduce foreign exchange outflow in these sectors. Research and innovation in policy is very essential in meeting the objective of combating climate change.

Key challenges in resilience building which includes vulnerability assessment, identification of location-specific sustainable interventions, mainstreaming interventions in planning process, stakeholder engagements, technical support & capacity building, support of stakeholders in scaling up of adaptation projects towards programmatic approach and involvement of financial institutions are some of the challenges. Low-emission development and technology-related challenges such as agro-advisory solutions and climate proofing of value chain were among some more.

Focusing on the implementation challenges, the panel opined that instruments to implement policy needs funding;

- To address climate change and its adverse impacts, participation of businesses is required.
- For technology development needs to reach the outcome at ground level as shown by NABARD.

One of the panellists, while sharing the experience in India on innovation in technology development by deployment of solar water heater in prisons (which saves energy further) shared two messages from his work on climate action in Europe. In the EU 2050 transition towards low emission economy, the finance needed for infrastructure development will be met by saving from fossil fuel import. The second message was that climate needs to be mainstreamed in every activity. For this, EU set a target of achieving 20% of the budget in every activity dedicated towards climate change.

Industry-specific Synergies

EU and India could work towards reducing licensing fees in components of solar technology. Another area of cooperation can be in creating balance electricity systems by using storage devices as India is feeling the repluse in energy systems due to large scale deployment of renewable energy. E-mobility is another area where India needs large-scale global technology cooperation.

The speakers also discussed various adaptation projects funded under national adaptation fund on climate change, adaptation funds and GCF and benefits of such projects. He stressed that mapping of community vulnerabilities is carried out and various interventions are decided accordingly.

Discussing the ‘Horizon 2020’ research framework, they mentioned that call for proposals under this framework will be open by end-of-October which is also open to Indian institutions, scientists and so on. They also informed that

EU has several technologies on greener economy, water purification, waste water management, smart grid and is seeking cooperation on these fronts. EU is going to open the doors of 'Horizon 2020' in sharing this knowledge with India.

Solutions

The panel highlighted that various institutes have been created under The Paris Agreement on technology such as technology mechanism consisting of the Technology Committee (TEC) and the Climate Technology Centre and Network (CTCN).

Opportunities exist in innovation and the voluntary involvement of the private sector as well as in decoupling and transformational change not only in the energy sector, but also transport, industry, and land use.

COP 23 technology agenda will evolve further such as how innovation will take place to apply technology in various countries including creating business models, creating policy environment and upscaling and market development. EU India Clean Energy and Climate partnership includes working on smart grids, solar energy and offshore wind technology.

Final comments from the panel suggested that in order to address climate change and its adverse impacts, participation of businesses is required. Efficient use of resources is equally important. Technology development needs to reach the outcome at ground level as shown by NABARD. Stressing on how lifestyle changes and choices also contribute to sustainable future, they highlighted that international cooperation on technology can take place through commercial engagement, collaborative research, bilateral and multilateral arrangements by identifying a common ground.



From (L to R): Mr Karsten Krause, European Commission, Directorate General, CLIMA, Ms Anju Bhalla, Joint Secretary, Department of Science & Technology, Mr Zsolt Lengyel, Senior Consultant, Climate Change & Energy, NIRAS, Dr P C Maithani, Adviser, Ministry of New & Renewable Energy; Dr Sudhanshu KK Mishra, Deputy General Manager, Banker Institute of Rural Development (BIRD), National Bank for Agriculture and Rural Development (NABARD), Ms Tania Friederichs, R&I Counsellor for India & Bhutan, Delegation of European Union to India, Mr Sachin Kamble, Assistant General Manager, NABARD



Ms Anju Bhalla, Joint Secretary, Department of Science & Technology



Dr Sudhanshu KK Mishra, Deputy General Manager, Banker Institute of Rural Development (BIRD), National Bank for Agriculture and Rural Development (NABARD)



Dr P C Maithani, Adviser, Ministry of New & Renewable Energy



Mr Karsten Krause, European Commission, Directorate General, CLIMA



Mr Zsolt Lengyel, Senior Consultant, Climate Change & Energy, NIRAS



Ms Tania Friederichs, R&I Counsellor for India & Bhutan, Delegation of European Union to India



PLENARY XV

Cooperation Between India & EU: What's Next?

India started to work in the area of climate change in the year 2002 and lags behind in global ranking. India is ranked 14 or 15 in the world, but in Asia, India ranks second after China. There are about 3,000 scientists in 450 institutions working on climate change and India is one of the country in the world, which has a systematic data of around 132 years. There are 21 state centres working on creating awareness through trainings on climate change and impacts.

Challenges

Strengthening institutional partnership is important. Climate change cannot be met by one country, one institution, or one actor. Collaboration must cut across science, policy and practice. There is a need to identify system integrators and institutions which translate science into practice and policy and scaling up. Mainstreaming adaptation at the sub-national level, going down to the panchayats is a major concern. EU has taken a lot of actions at the sub-national level and India can benefit from these examples. Collaboration would help in strengthening, mainstreaming and scaling partnerships from the grassroots to the national level.

Talking of technology for business-to-business engagements, India looks at institutional partnership that goes beyond bilateral collaboration between small and medium enterprises.

Capacity building is required not only at the national level but also at the sub-national level, creating a network of successful project implementers, knowledge centres and linking them with EU networks for right expertise and experience so that there is cross fertilisation of ideas at an equal footing.

Implementation

Eight technology areas are being currently under action-assessment of right technology, evaluation, risk assessment foresight, negotiation and adaptation on climate change.

There are around 800+ universities in India which are offering climate change programmes and are working very closely with EU and there are multilateral programmes for science and technology innovation including environmental and climate change area.

The ideal collaboration could be between institutions—India and EU—wherein knowledge, expertise and infrastructure should have joint and robust collaborations. There should be fellowship schemes between India and EU as well.

There are potential possibilities for technological co-operation and collaboration between both the countries. As their organisation (CDP) collects data from companies and cities on energy efficiency, reducing emissions and renewable data for arriving at best practices, the same can be shared with EU companies for better collaboration. First step of data can be shared with the company, which can put them on the path, match them according to their technological requirements with specific firms, if required.

Another joint project is preparation facility for climate finance. EU companies are ready to invest in Indian companies-clean Indian business making clean investments. CDP helps to facilitate this activity-rate and rank them as well to enable collaborations.

CDP developed a whole host of programmes for companies to take climate action, take an internal carbon price to help them prepare for upcoming carbon markets and asking companies to commit to 100% renewable target which creates a demand for renewable energy.

Solutions

EU can help in preparing a road map for low carbon development. Talking of Nationally Determined Contributions (NDCs), the emphasis should be on inclusive growth. India can pick up from EU's integrated planning and spend more

on resources comparatively. Integrated reporting can help to reduce our carbon footprint.

EU could collaborate with India to bring about transformation in lives and development of 1.5 billion people by providing required technologies that cater to our future needs.

Technological cooperation, is another sphere where EU and India can collaborate. Even though solar pricing has come down—it's making business, but there is infrastructure challenge in terms of grid which should be flexible enough for renewable energy. Availability of storage technological for both off-grid and on-grid solution with renewable energy is required. Some concrete technological cooperation for quality control and maintenance of solar technology is required between both the countries.

Smart cities to be made climate-friendly with urban mobility, energy efficiency, water supply, transport and living within the survival emissions.

EU had a good cooperation on energy and now on climate change. Following are some of the topics that EU plans to look into and explore opportunities in future with India.

- Take stock of all their cooperation-green cooling work, South-South co-operation, cities as drivers of change and work on climate change issues under the IOC programmes and other frameworks.
- Opportunity for industry cooperation, technology, research programmes, innovation.
- Work on projects on renewable energy, grid integration, smart grids needed for next generation.
- Other areas include energy efficiency of buildings, energy efficiency products, financing models, cross-cutting integrated approaches, air quality.
- Organisational partnership-smart and sustainable organisations that is a deliverable for the next summit.
- Education, awareness, skill development and programmes.



From (L to R): Mr Damandeep Singh, Director – CDP India, Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India, Ms Dian PhylipSEN, Director - Climate Change, SQ Consult B.V., Dr Akhilesh Gupta, Head & Scientist G, Department of Science & Technology, Dr Ashish Chaturvedi, Director, Climate Change, GIZ-India, and Mr Sanjay Vashist, Director, Climate Action Network in South Asia (CANSAs)

- Monetary reporting and verification aspects.
- Policy dialogue with government for energy efficiency, smart grid, complimenting these with climate change initiatives.
- An annual EU conclave for a fruitful dialogue and better stakeholder engagement.

the near future between both the countries is required. Investment in renewable energy efficiency is the key. Investors from EU can support flagship schemes such as 'Make in India' and financial support for Indian feed-in regulations for decentralised support schemes. This will address the cause of incremental cost and good business opportunities.

At the end the panel concluded by stating that business development/opportunities, low carbon development in



Ms Dian Phylipsen, Director - Climate Change, SQ Consult B.V.,
Dr. Akhilesh Gupta, Head & Scientist G, Department of Science
& Technology



Dr Akhilesh Gupta, Head & Scientist G, Department of Science
& Technology



Mr Sanjay Vashist, Director, Climate Action Network in South Asia (CANSA)



Mr Damandeep Singh, Director – CDP India



Dr Ashish Chaturvedi, Director, Climate Change, GIZ-India



Ms Henriette Faergemann, Counsellor Environment, Energy and Climate Change, EU Delegation to India



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

As a developmental institution working towards India's overall growth with a special focus on India@75 in 2022, the CII theme for 2018-19, **India RISE : Responsible. Inclusive. Sustainable.** Entrepreneurial emphasizes Industry's role in partnering Government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development; financing growth; promoting next gen manufacturing; sustainability; corporate social responsibility and governance and transparency.

With 65 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Iran, Singapore, South Africa, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

The Mantosh Sondhi Centre
23, Institutional Area, Lodi Road, New Delhi – 110 003 (India)
T: 91 11 45771000 / 24629994-7 • F: 91 11 24626149
E: info@cii.in • W: www.cii.in

Follow us on :



Reach us via our Membership Helpline: 00-91-124-4592966 / 00-91-99104 46244



CII-ITC Centre of Excellence for Sustainable Development

CII-ITC Centre of Excellence for Sustainable Development is a not-for-profit, industry-led institution that helps business become sustainable organisations. It is on a mission to catalyse innovative ideas and solutions, in India, and globally, to enable business, and its stakeholders, in sustainable value creation. It's knowledge, action and recognition activities enable companies to be future ready, improve footprints profiles, and advocate policymakers and legislators to improve standards of sustainable business through domestic and global policy interventions.

CESD leverages its role of all-inclusive ecosystem player, partnering industry, government, and civil society. It has been a pioneer of environment management systems, biodiversity mapping, sustainability reporting, integrated reporting, and social & natural capital valuation in India, thus upgrading business in India to sustainable competitiveness.

With three locations in India, CESD operates across the country and has also been active in parts of South and South East Asia, Middle East, and Africa. It has held institutional partnerships and memberships of the United Nations Global Compact, Global Reporting Initiative, International Integrated Reporting Council, Carbon Disclosure Project, development agencies of Canada, the USA, the UK, and Germany.

CII-ITC Centre of Excellence for Sustainable Development

II-Floor, Thapar House
124 Janpath, New Delhi 110 001

Unit No 101 & 102, 1st Floor,
Sewa Corporate Park,
M G Road, Gurgaon - 122 002

T: +91 124 434 6376 / 6378 / 6371 • **F:** +91 11 4150 1924

E: sustainability.summit@cii.in

W: www.sustainabledevelopment.in

Follow us on :





Confederation of Indian Industry



CII-ITC Centre of Excellence
for Sustainable Development

SAVE THE DATE



For queries, write to us at sustainability.summit@cii.in
To stay informed, follow us on



/ciicesd



/ciicesd



/company/1526422



/ciicesd