WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2020

TOWARDS 2030 GOALS
MAKING THE DECADE COUNT

January 29-31, 2020
India Habitat Centre, Lodhi Road, New Delhi, India

Welcome Note

It gives me immense pleasure to welcome you all to The Energy and Resources Institute's (TERI's) flagship event — the World Sustainable Development Summit (WSDS) 2020. This marks the 20th year since the Summit's inception, and I am proud to note that WSDS has established itself as a responsible platform for mobilizing opinion-makers to identify and advance pioneering actions to address the most relevant issues concerning sustainable development.

Countries today, not just represent different ideas of inclusivity but also demonstrate distinct levels of development and social inclusion. The year 2020 is a crucial year, as it marks the last decade for action towards achieving the Sustainable Development Goals (SDGs). This edition of WSDS 2020, titled — 'Towards 2030 Goals: Making the Decade Count' will be devoted to facilitate solution-driven talks and guide us towards fulfilling our earlier promises.

Topics that will dominate the discussions over the course of the Summit include some of the biggest challenges we face today. Arguably, these are — Air Pollution, Green Finance, Water, Industry and Energy Transition, Blue Economy and Mobility. The Summit will seek to understand these broad areas across 20 Thematic Tracks and focused Plenaries. At WSDS 2020, we are delighted to launch the Delhi chapter of IFAT, the leading trade show of Messe Műenchen India (MMI). In its inaugural year, IFAT Delhi will showcase a global exhibit of upcoming clean technologies, which include – Water, Sewage, Solid Waste, and Recycling.

The Summit will witness a host of distinguished speakers comprising senior government officials, representatives of major global corporations, leading thinkers, and researches who will look to deliberate over matters of urgent concern. I thank you all for your involvement in the ensuing three days of the Summit. I look forward to the discussions and hope we are all collectively led to arrive at a consensus that guides us to make the decade count.

Ajay Mathur
Director General, TERI

Acknowledgements

The Energy and Resources Institute (TERI) launched its annual flagship event in 2001, which was inaugurated by former Hon'ble Prime Minister of India, Shri Atal Bihari Vajpayee. Over the past years, the platform has emerged as one of the foremost fora bringing together various heads of state and the government, thought leaders, policymakers and captains of industry and academia to deliberate on myriad issues of sustainability. The Summit provides an enabling atmosphere that encourages people-to-people dialogue, fostered understanding, cooperation and collective action to achieve goals of sustainable development. Three chief priorities of the Summit platform have been the exchange of knowledge, ideas and best practices; building partnerships across sectors and encouraging initiatives and efforts which are continuous and collective.

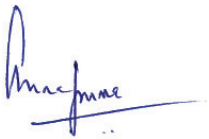
Over the years, the Summit series has provided not only the Indian national and subnational governments but the global community as a whole – constituting of international governments, institutions, industries and individuals – an opportunity to share with a high-level and diverse audience their future plans, policies, and priorities on sustainable development and climate change.

It is heartening to note that the Summit series, to date, has hosted 46 heads of state and the government, ministers from over 60 countries, 13 Nobel laureates, over 1,500 international and Indian CEOs, and delegates from across continents, in addition to many subnational leaders from across the globe.

This journey of two decades, which I have had the privilege of being part of each single year, though arduous and challenging, has surprisingly been exceedingly rewarding and gratifying. This would have been impossible without the support of our inspiring partners, distinguished speakers, and imposing delegates. My heartfelt gratitude and sincere thanks to each one of you.

TERI and the Summit secretariat look forward to working with you in the years to come, to accelerate the pace of climate action and to achieve a world of prosperity and security for our future generations. Let's #Act4Earth together.

Welcome to WSDS 2020!



Dr Annapurna Vancheswaran
Senior Director, Communication Outreach & Advocacy Unit, TERI

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ABOUT TERI

About TERI

A dynamic and flexible organization with a global vision and a local focus, TERI was established in 1974, with an initial emphasis on documentation and information dissemination. Research activities at TERI were initiated towards the end of 1982, which were rooted in the organization's firm conviction that efficient utilization of energy and sustainable use of natural resources would propel the process of development.

TERI's primary focus lies in the promotion of efficient and sustainable use of natural resources for the benefit of the global community.

Buoyed by more than 30 years of excellence in research and innovation, TERI is now poised for future growth, driven by a global vision and outreach, with a philosophy that assigns primacy to enterprise in government, industry, and individual actions. Looking ahead, it aims to build new alliances and partnerships in order to build innovative solutions to make the world a better place.

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SUMMIT SERIES

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Summit Series

The journey of the World Sustainable Development Summit (WSDS) started in 2001 when it was initiated as the Delhi Sustainable Development Summit (DSDS). The Summit was recognized as a leading forum for discussing issues related to sustainable development. The DSDS held under the aegis of the Ministry of Environment, Forest and Climate Change (MoEFCC), with the support of the Ministry of External Affairs (MEA), Government of India, was an epitome of track II diplomacy.

In 2016, DSDS transitioned into WSDS, which was designed as a leading international platform for accelerating action towards sustainable development and especially towards climate change. The Summit series has emerged as the premier international event on sustainability that focuses on the global future, but with an eye on the actions in the developing world which could bend our common future.

The Summit series has, over the years, brought together 4749 heads of state and government, 13 Nobel laureates, 67 ministers from 76 countries, 1700 business leaders, 2000+ speakers and over 13,000 delegates from across the world.

Possibly the sole Summit on global issues taking place in the developing world, WSDS now strives to provide long-term solutions for the benefit of the global community by assembling the world's most enlightened leaders and thinkers on a single platform.

The 2020 edition of the Summit will be held from 29 to 31 January 2020 at the India Habitat Centre, New Delhi, under the broad rubric, 'Towards 2030 Goals: Making the Decade Count'.

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INTERNATIONAL STEERING COMMITTEE (ISC)

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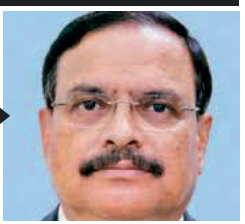
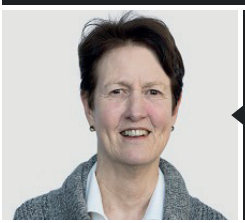
International Steering Committee

The WSDS Secretariat seeks the guidance of its esteemed International Steering Committee (ISC) members in the preparation of the Summit.

Anand Kumar
Secretary, Ministry of New and Renewable Energy, Government of India

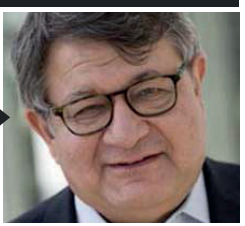
C K Mishra
Secretary, Ministry of Environment, Forest and Climate Change, Government of India





Frances Beinecke
President Emeritus, Natural Resources Defense Council (NRDC)

Suman Bery
Non-Resident Fellow, Bruegel & Former Chief Economist Strategy and Business Environment, Shell International Limited

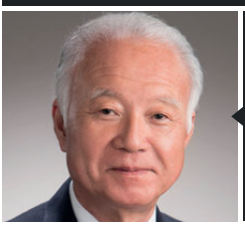


Preety M Bhandari
Director, Sustainable Development & Climate Change Department, Asian Development Bank (ADB)

Fatih Birol
Executive Director, International Energy Agency (IEA)

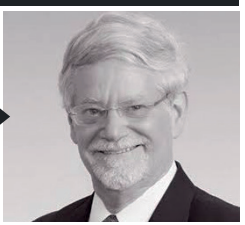
Yvo de Boer
Former Director General, Global Green Growth Institute, Korea & Former Executive Secretary, UNFCCC

Manjeev Puri
Former Indian Diplomat



Kazuhiko Takeuchi
President, Institute for Global Environmental Studies (IGES), Japan

Arne Walther
Former Secretary General of International Energy Forum & former Chairman, International Energy Agency (IEA)



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SUMMIT PRE-EVENTS

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Summit Pre-events

Each year, in the run up to the main Summit, a series of dialogues is held to set the scene and begin the deliberations on the topics at hand. During the main event, these topics are further expounded upon by field experts. Since last year, these have taken both a regional and international form.

This year, as a countdown to WSDS 2020, a series of five dialogues was held. Two of them were international.

New York: In Partnership with The Rockefeller Foundation and Energy Transitions Commission

Leadership Coalition on Energy and Industry Transition

This dialogue discussed India's transition to a low carbon power system. It focused on the opportunities and challenges in the growth of the use of renewables and policy initiatives targeted towards integrating variable renewables within a flexible power system. The policy initiatives taken to grow variable renewables were highlighted. Emission control in the Indian economy was discussed as an important long-term measure towards a low carbon economy. The session also focused on the main 'harder-to-abate' sectors like iron and steel, cement and petrochemicals. The policies in place to promote energy efficiency in large industries were also covered. The session also discussed both near-term and long-term options for decarbonisation.

Monaco: In Partnership with Prince Albert II of Monaco Foundation

Renewable Energy – A Viable Tool for Clean Energy Transitions & Advancing Electric Mobility in Cities – Addressing Critical Challenges (Policies, Regulations and Technology)

The need to shift from viable to sustainable options in terms of people, planet, and profits was the main focus of discussions during the first plenary. Globally, energy systems are undergoing a rapid transition in how they're being used in industry, transportation,

and homes. Recent developments indicate the overall growth of renewables in the energy mix. Presently, the overall share of renewables is over 33% of globally installed power generating capacity. Estimates are that nearly half of global total capacity will be solar and wind energy by 2035. Discussions focused on renewable energy usage through utility scale power development, small-scale applications and heating, cooling power applications using biomass waste streams. The panel agreed on the need to create immediate solutions for long-term benefits and the need for active collaboration in developing new technologies and business models for integrating renewable energy into distributed network.

With abundantly available renewable energy sources, the second plenary was about how the future would be driven by clean mobility, electric vehicles being one of the most commercially viable modes of transport at the moment. The panel discussed how governments and technology providers could partner effectively in achieving the common goal of clean mobility. The deliberations highlighted concerns over the cost of leasing and procurement of electric vehicles as well as lack of infrastructure for refuelling the fleet. An analysis of the electric vehicle market in US, China, and Europe was revealed to highlight the policies and regulations that need to be in place to make the market conducive to the introduction of new technology. High cost remains a prohibitive barrier, so there needs to be more affordable vehicle models available for consumers. The session concluded with a highlight of the specific problems faced by developing countries like India, where public transport has not been able to meet demand in terms of volume and led to an increase in private vehicles.

Kolkata: In Partnership with Bengal Chamber of Commerce and Industry, with H Energy

Water Secure Economies: Perspectives from the Industries

The panel discussed how, with industrial development, the demand for industrial water has also increased and is expected to increase substantially by 2050. The growth in water-intensive industries such as thermal power plants, heavy engineering, textile, pulp and paper, steel, etc., has been the major factor in this increased demand. This growth of industries puts a higher demand on freshwater resources and Indian industries tend to use more water for production compared to international standards because of 'obsolete process technology, poor recycling and reuse practices, and poor waste water treatment'. The panel discussed how the current approach of waste water treatment needs to change to decentralized, process integrated water management with efforts towards 'zero discharge'

or 'positive water balance' to reduce fresh water consumption and pollution, leading to the added benefit of business sustainability and profitability. Major organic pollutants are generated by distilleries and paper mills. Chemical pollution is generated by pharmaceuticals, rayon fibres, caustic soda, soap, and detergents.

New Delhi: Leadership Coalition on Petrochemicals

The round-table discussion brought together participants from leading organizations in the petrochemical sector to outline their organization's innovative goals for the future of petrochemicals and efforts being made on a company level for responsible growth plans. This dialogue brought together participants from leading organizations like Bureau of Energy Efficiency (BEE), BASF India, Covestro (India) Private Limited, GAIL (India) Limited, Indian Chemical Council (ICC), International Energy Agency (IEA), IOCL, ONGC, Petroleum Conservation Research Association (PCRA), SABIC, Shakti, and TERI. These discussions will be further elaborated upon during WSDS 2020.

New Delhi: **In Partnership with Natural Resources Defense Council (NRDC)**

Sustainable Action Dialogue on Air Pollution

The panel focused largely on the air pollution problems faced in India –how to develop and implement resilience against the health effects of air pollution through city and regional policy measures. Taking a look at power plant norms and financing, and funding patterns are some of the ways India can continue with its massive domestic energy expansion requirements without the massive emissions that invariably accompany them. The panel agreed that the current centralized command and control effort that India adopts towards regulating industrial emissions might not always be the finest and the best practices of other countries, which encourage greater transparency, should be looked at. The importance of improving the public transport network, vehicular technology, urban design, and land use was highlighted to avoid repeating the developed world's personal transport problems. This not only causes massive congestion issues on the streets but vehicular emission is also one of the largest localized sources of urban air pollution that needs to be addressed. The panel agreed that the capacity of India's regulators, both at the state and city levels, needs to be looked at and enhanced to plan, monitor, and implement air pollution interventions through measures such as decentralization of decision-making, transparency, and accountability.

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SUSTAINABLE DEVELOPMENT LEADERSHIP AWARD (SDLA)

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Sustainable Development Leadership Award

A significant feature of the Summit is the Sustainable Development Leadership Award (SDLA) which was instituted by TERI in 2005. This award felicitates global leaders for their contributions in the field of sustainable development and environment protection.

The past recipients of the award from 2005 to 2019 have included:

- **2019** Rear-Admiral (Retired) Josaia V. Bainimarama, CF (Mil), OStJ, MSD, jssc, psc, Hon'ble Prime Minister of Republic of Fiji
- **2016** Mr Pawan Kumar Chamling, Hon'ble Chief Minister, Sikkim
- **2015** Dr José Manuel Durão Barroso, Former President of European Commission and Former Prime Minister of Portugal
- **2014** Mr Anand Mahindra, Chairman and Managing Director, Mahindra & Mahindra Ltd
- **2013** HE Mr James Alix Michel, President of the Republic of Seychelles
- **2012** HEMs Tarja Halonen, President of Finland
- **2011** Dr Manmohan Singh, Hon'ble Prime Minister of India
- **2010** HE Mr Yukio Hatoyama, Prime Minister of Japan
- **2009** HE Mr Ban Ki-moon, Secretary-General, United Nations
- **2008** HE Mr Maumoon Abdul Gayoom, President of Maldives
- **2007** HE Mr Arnold Schwarzenegger, Former Governor, State of California, USA
- **2006** HE Prof. Ernesto Zedillo, Former President of Mexico and Director, Yale Centre for the Study of Globalization, USA
- **2005** Dr Shoichiro Toyoda, Honorary Chairman and Member of the Board, Toyota Motor Corporation, Japan

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AGENDA

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DAY 1 | January 29, 2020		
8.00–9.00	**Registration**	
9.00–10.00	**Inaugural Ceremony**	
10.00–10.30	**IFAT Delhi Visit**	
10.30–11.00	**Tea** Venue: Thematic track venues	
11.00–1.00	**Thematic Tracks**	
Group A		**Venue**
1	Mainstreaming Development and Enhancing Climate Resilience: New Opportunities for States in India	Marigold
2	De-risking Investments in Decentralised Solar Solutions	Juniper
3	Educate, Inspire and Empower: Teachers' for a Greener Tomorrow	Tamarind
4	Managing Intermittency of Demand & Supply at Electricity Distribution-level	Gulmohar
5	Multi-level Actions to Strengthen NCAP	Jacaranda 1
6	Tracking India's NDCs: Methodologies and Tools for Tracking Progress on Mitigation and Adaptation Policies/Actions in India	Silver Oak 2
7	Forest - A Tool for Adaptation and Mitigation of Climate Change	Magnolia
8	Energy Management Solutions for SMEs	TERI Conference Room
9	Entrepreneurial Solutions for the Challenges of Climate Change	TERI Social Room

1.00–1.30	**IFAT Delhi Visit**	
1.30–2.30	**Lunch** Venue: Margosa Lawns	
2.30–4.30	**Thematic Tracks**	
Group B		**Venue**
1	Inclusive and Integrated Mobility Systems for Cities	Marigold
2	Alternativism: Give Paris a Chance	Juniper
3	Clean Air Project - a SDC initiative	Tamarind
4	Investment Opportunities & Business Models of BESS at Distribution	Gulmohar
5	The Green Business Opportunity – EU Excellence in India	Jacaranda 1
6	Transparency and Accountability in Global Climate Governance: Needs, Challenges and Opportunities for India	Silver Oak 1
7	SMART Policy Levers for Achieving Sustainable Cooling	Silver Oak 2
8	Pilot Implementation of India's Forestry NAMA in Assam	Casurina
9	Finance Mechanisms for Accelerating Industry Decarbonization	Magnolia
10	Achieving SDG 6 Goals: The Need for Circular Economy Approaches	TERI Conference Room
11	Implementation of NAMA: Improving Waste Management in India	TERI Social Room
4.30–5.30	**Tea** Venue: Thematic track venues	
6.00–6.30	In-Conversation: Towards 2030 Goals: Making the Last Decade Count	Stein Auditorium

6.45–7.15	Fireside Chat : Status Check on Renewable Energy Financing for C&I Clients in India: The Year that was, Key Challenges, Desired Regulatory Framework & Sectoral Outlook	Stein Auditorium
DAY 2 | January 30, 2020		
9.30–10.15	Keynote Address: 'Geo-politics of the SDGs and India's Leadership in the World'	
10.15–11.00	Keynote Address: 'Energy Future Map'	
The Business Segment		
11.00–1.30	WSDS 2020 Corporate Conclave: Mobility Talks	
11.00–11.30	Opening Session:	
11.30–12.15	Session 1: Need for Clean Mobility: Exploring the Options Available Towards Cleaner Future	
12.15–1.30	Session 2: Inroads into e-Mobility – Enabling Environment to Encourage EV penetration	
1.30–2.30	**Lunch** Venue: Margosa Lawns	
2.30–3.30	WSDS 2020 Corporate Conclave: Addressing Climate Change through Waste Management Initiatives	
3.30–4.45	Plenary: Beyond Connections: Sustaining Universal Energy Access in India	
4.45–5.45	Plenary: Success at COP 26?	
5.45–6.45	Plenary: Strengthening National Clean Air Programme (NCAP) for Breathable Air	
DAY 3 | January 31, 2020		
10.00–10.30	IFAT Delhi Visit	
10.30–11.00	Special Address & Launch: McKinsey Global Institute Report 'Climate Risk and Response: Physical Hazards and Socioeconomic Impacts'	
11.00–12.00	Plenary: Achieving the Common Target: Opportunities & Challenges Universal and Equitable Access to Safe Drinking Water	

12.00–1.00	Plenary: Leadership Coalition on Energy and Industry Transition
1.00–2.00	**Lunch** Venue: Margosa Lawns
2.00–3.15	Plenary: Transformative Actions to Revive Green Climate Finance
3.15–4.00	Plenary: Blue Economy for Agenda 2030 - Aligning Economic Development for Sustainability of Oceans
4.00–4.45	Plenary : Fast-tracking the 2030 Agenda
4.45–5.00	EU Youth Climate Conclave: A Presentation
5.00–5.45	Valedictory Session: Future of Sustainability
	Closing Remarks

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PLENARIES

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In-Conversation: Towards 2030 Goals: Making the Last Decade Count

The global success of achieving SDGs by 2030 primarily depends on the progress that is made by developed nations of the world and the choices they make to meet their economic goals in a sustainable manner.

Nations that are falling behind in achievement of the SDGs need to be helped in building capacity without taking away from the sense of ownership that they need to continue to have with respect to the achievement of the goals. Capacity building may be required in governance systems including administrative service delivery; in the enabling infrastructure or in knowledge creation and management. The sustainability of the effort that goes into achieving the SDGs is itself a matter for introspection. To have nations believe that their responsibility would dial down once the SDGs are achieved in 2030 would not be an ideal circumstance. What would need to follow would be another set of aspirational goals to strive for; but equally important, what would have been achieved would need to be preserved and protected to prevent any retraction. This emits serious planning starting henceforth, such that policy institutions, implementation mechanisms, and infrastructural capacity are further strengthened to ensure that the gains under the SDGs continue to accrue, and indeed become better through continuous improvement. In other words, our efforts to achieve the SDGs must become embedded into national, State level and local planning and management, and in fact into the collective public consciousness.

In the immediate context, some light needs to be thrown on the kind of institutional changes and or measures that need to be provided further to nations to ensure a sincere continuity in their SDG progress. A trajectory of SDG progression by each nation needs to maintained and sustained through the years to ensure continuity in efforts.

The 'In-Conversation: Towards 2030 Goals: Making the Last

Decade Count' session being held during the World Sustainable Development Summit 2020 in the presence of Mr Jairam Ramesh, Hon'ble Member of Parliament, India and Lord Adair Turner, Chair, Energy Transitions Commission (ETC) would be a conversation that initiates a cross country dialogue and status of the realisation of the SGDs in India and the United Kingdom respectively. The session will attempt to shed light on certain indicators that are crucial in the journey of global nations realising their goals:

- How would technology play a role in meeting global SDGs?
- How will economic support be extending to the global-local-people action, necessary to stimulate change and progression?
- What role can developing countries play in combating the climate emergency?

Beyond Connections: Sustaining Universal Energy Access in India

The proposed plenary session entitled "Beyond connections: Sustaining universal energy access in India" will be a reconvening of experts and agencies that have walked the talk on access to energy. Having provisioned the first electricity and LPG connection to several million homes, more than 95% homes as per the government, India's stage is set for the next big leap. In the coming years, as India celebrates its 75th Independence Day in the year 2022, to ensure the graduation of all Indian homes from connection to sustained use, innovative, bold, concerted and complementary efforts are required. Therefore, in order to provide a timely momentum to the aforementioned discourse, during the proposed plenary session, the experts and delegates will delve into the following:

- Whats is the current status on access to clean cooking and how to move further from connections to sustained use of clean fuels in all homes
- What have been India's achievements on the universal access to electricity in recent years and how can India ensure demand-based reliable and quality electricity supply to all homes and enterprises?
- What enabling policy measures and institutional arrangements are required to translate efforts into impactful outcomes by the year 2022?
- What experiences can the developing countries borrow from India to strengthen their efforts for universal energy access?

Success at COP 26?

The new normal we face in 2020 is not what one might have imagined just a few years ago. Increasingly adverse instances of natural disasters, fuelled by climate change, are amongst the most pressing issues affecting the global community. Amidst repeated dire warnings from the scientific community, in the last year we have seen catastrophic bushfires in Australia, preceded by deathly forest fires in the Amazon, flooding of urban centres across the world and melting glaciers, making it clearer than ever before that urgent climate action is indispensable. In this context, although the climate negotiations may seem slow-paced and far removed from the reality of the situation, they remain the best hope for catalysing the required coordinated global action at scale and representatives from over 190 Parties have been working towards mobilizing collective action to mitigate and adapt to climate change at the successive UN Conference of Parties (COP).

The last COP in Madrid failed to raise the necessary commitments towards ambition. However, to call the COP25 a complete failure would be devoid of a holistic view. It is imperative to note that COP25 contributed significantly towards furthering technical work on impending issues, including those related to finalizing the Rulebook for the implementation of the Paris Agreement.

As we move to COP26 in Glasgow, which carries the weight of the unresolved issues from the preceding COP, the stakes get higher for what it might hold in store for the global climate agreement. At the outset, apart from enhancing commitments and crystallising the details on operationalizing carbon markets and trading (Article 6), some other crucial discussion areas will pertain to long term strategies especially around sectors beyond electricity, reliable finance and technology cooperation between developed and developing nations. Roles, actions and promised contributions by developed and developing countries together will matter significantly making this COP a success.

COP26 comes at a time where expectations for real climate action from the global community is more than ever before. The stakes

could hardly be higher and the challenges ahead are equally consequent. Citizen mobilisation coupled with non-decreasing emissions threatening the achievement of 2°C target, demand effective leadership from Glasgow this year.

Questions

- What does success at COP 26 essentially mean?
- What can be done differently at COP 26, so as to remove the 'Trust Deficit'?
- How can sub-national/non-state actors be brought into the fight against climate change?
- How can youth be constructively involved in the designing and outcomes of COP 26?
- How can coalitions across governments and businesses support finance and technology mobilisation? What can COP26 do to ensure this?

Strengthening National Clean Air Programme (NCAP) for Breathable Air

Air pollution is a major problem that affects millions of people worldwide. Nine out of ten people in the world breathe polluted air which is causing about 7 million premature deaths annually. Rapid economic growth, population migration towards urban areas, and inadequate controls have led to degradation of ambient air quality, particularly in cities. More than 75% of Indian cities violate the National Ambient Air Quality Standards (NAAQS); 122 cities are classified as non-attainment cities. In order to address the issue of air pollution, Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India has launched the National Clean Air Program (NCAP) in January 2019, with the intent of 20-30% reduction in PM2.5 and PM10 concentrations by 2024 with the base year as 2017. Despite several initiatives of central, state and city governments, air pollution has remained as a major issues to be resolved.

This plenary session in the World Sustainable Development Summit (WSDS) will focus on how the NCAP can be further strengthened in order to achieve air quality beyond the prescribed targets. The session panelists will discuss progress made on several fronts related to NCAP in the last one year, since its launch. The session will have representatives of the Central and local Governments, Member of Parliament, and non-governmental organizations to discuss key measures which can reduce pollution at regional and urban scales. The challenges in implementation of NCAP and air quality management plans at Delhi will also be discussed. TERI with the Bloomberg Philanthropies has been providing technical assistance to MoEFCC on NCAP. The project has analyzed key sources of pollution at both national and city levels and has also identified important sectoral measures for control. Policy briefs/discussion papers have been prepared discussing the implementation mechanisms for identified sectoral measures and will be released in the plenary. The session will also discuss international experiences on air pollution control and the lessons learnt.

Questions

- What are initiatives taken so far to achieve the targets of NCAP ?
- What are the unresolved issues in NCAP and how the programme can be further strengthened?
- How cities are trying to control and aligning their activities with NCAP?
- What are the key sectoral measures for control and implementation strategies at the national scale ?
- How can India learn from the international experience for faster control of the problem?

Achieving the Common Target: Opportunities & Challenges Universal and Equitable Access to Safe Drinking Water

Water availability scenario across the world has become increasingly challenging due to continually rising and competing demand, inefficient use, and pollution. Water scarcity, which affects more than 40 percent of people globally, is projected to increase with time. In such a scenario access to clean water is even more challenging. Access to clean drinking water is a basic human right; but, still 1 in 3 people in the world lack access to safe drinking water.

Further, the SDG target 6.1 also calls for universal and equitable access to safe and affordable drinking water for all. India has made significant progress towards universal coverage of drinking water but there still exist huge inequalities in terms of availability, accessibility, affordability and quality of services. Access to drinking water is no more the only criterion of service but drinking water should be safe, affordable and accessible to all.

There are significant challenges for achieving this target especially amongst the developing countries, many of which are battling poverty and rapid population growth. There are multiple constraints to service delivery, yet there are examples to learn from.

In terms of challenges, quality of water is of concern as around 45% of rural households do not treat the water and source it from groundwater which in many areas is contaminated. Even the urban piped water supply has many reported cases of contamination mostly because of intermittent supply system. Safe drinking water is directly linked to health of users. As per WHO, around 829 000 people are estimated to die each year from diarrhoea as a result of unsafe drinking-water, sanitation, and hand hygiene. This could be easily prevented if there is provision of safe drinking water and sanitation services. Diseases also affect the productivity of users thus indirectly impacting the socio-economic life.

Other socio-economic impacts associated with water supply is the provision of safe drinking water in each household which saves time

and physical effort of collecting water which could be used for some other productive work. This also minimizes the risks associated with such journey which are at times not safe for women folk.

In many places the water supply is inadequate which leads to dependence on multiple sources of water. The availability of safe drinking water is questionable in such a scenario. Besides quality, equity is also questionable in such scenarios of inadequate water supply. People in such situation are forced to buy water at costlier price than the municipal rates.

In order to achieve the goal of access to safe drinking water for all and efficiently maintain the existing water supply infrastructure, there is a need for a combination of interventions including use of efficient & affordable technologies, dissemination of technological know-how & best practices, conducive policies & sustainable finance mechanisms, as well as inclusive water management with awareness and capacity building of the relevant stakeholders. The strategy for government planning and funding should focus on closing the inequality gap in terms of availability, accessibility, affordability and quality of services. For achieving this target, there is a need to accelerate the efforts to reduce water stress, enhance water use efficiency, improve water quality and ensure sustainable water for all. Special attention should be provided to the needs of women, people with disabilities, and communities in vulnerable situations.

Government of India, through its Jal Jeevan Mission has planned to achieve this goal of universal access to safe drinking water by 2024. The goal of this mission is to provide functional household tap connections to every household in the country with service level at the rate of 55 litres per capita per day. This would be done by development of infrastructure for taps in every household along with augmentation of existing sources of water supply or development of new ones. Further, technological interventions are also planned to be undertaken for treatment to make water potable. Moreover, grey water management and capacity building of various stakeholders are also key schemes under the mission. The Har Ghar Nal se Jal is a crucial programme under this mission which was announced in the last fiscal budget. This programme aims to implement source sustainability measures as mandatory elements. This would include interventions such as groundwater recharge, water conservation, and rain water harvesting.

Jal Jeevan Mission would help to improve the quality of life particularly of women and children and also would help in

improving sustainability of Swachh Bharat Mission as water is important to sustain open defecation free status.

In order to create sense of ownership amongst the users, local authorities such as Gram Panchayats, Paani Samiti will implement the s in-village piped water supply infrastructure and related source development. Government has also announced that each Paani Samiti would have 50% women members. These Samitis would decide the infrastructure needed for water supply and fix the user charges. In every village where the water supply programme is implemented, women will also be provided training for masonry, electrical and motor mechanic work. Communities will contribute 5-10% in cash or kind in all such villages. Such initiatives will help in better implementation and long term operation and maintenance of the scheme. To assist the village community in technical aspects and for awareness creation, NGOs, women SHGs, etc would be associated. Jal Jeevan Mission will focus on integrated demand and supply management of water at local level including creation of local infrastructure for source sustainability and management of household wastewater that would be undertaken in convergence with other Government programmes.

However, there are additional challenges which need to be factored in while developing strategies for achieving the target. These factors include climate change induced disasters, conflicts, and economic crises. Management of resources during climate calamities and social conflicts is also important to ensure that targets are well achieved.

The session aims to identify and appraise options where equity considerations become part of policy, implementation and monitoring. The deliberations would also focus on cost-effective affordable solutions for ensuring universal and equitable access to clean drinking water. The distinguished panel would address the following questions:

- What are the enabling conditions that will allow various stakeholders to apply their practices and strategies in a way that supports the target of SDG 6.1?
- What are the ways to enable the substantial private investment for improving water delivery service while ensuring equitable access or accounting for the water needs of vulnerable populations? What are the most viable innovative funding models that can best advance SDG 6 implementation?
- What are the main entry points to eliminating inequalities in the access to water services?

Leadership Coalition on Energy and Industry Transition

We do not yet live in a dematerialized world. Development is still dependent on increasing inputs of materials and energy, to fuel the processes of industrialization and urbanization. As a still relatively poor country in per capita terms, India must supply its economy with ever greater quantities of affordable and reliable flows of energy and materials. How it does so will be crucial to determining both local environmental issues like air pollution or forest destruction, as well as global environmental issues like climate change.

With its very high population density, India is – at least in per capita terms - a structurally resource poor country. In 2017, India contributed only 0.9% of world crude oil production, and 0.8% of world natural gas production. India has only 0.3% of world proved oil reserves and 0.6% of world proved natural gas reserves. India imports large volumes of coking coal and scrap steel in order to supply its steel industry. Thus, for India resource and energy security are paramount concerns. In the face of these considerations, it is simply inconceivable that India could follow a resource intensive development pathway charted by the early industrializers like the United States or the United Kingdom.

Currently, India's per capita greenhouse gas emissions are less than half the global average, and 8 times lower than those of the high emitting developed countries. However, because of its size, India is today the fourth largest emitter of energy related greenhouse gases, after China, the United States, and the European Union. Given its domestic interests, India has always tried to balance its focus on development with a focus on environmental protection and increasingly climate mitigation.

India's energy intensity of GDP is lower than the G20 average. India's precocious deployment of clean energy means that its energy sector is likely never to hit the levels of carbon intensity that were reached by China and the developed countries before it.

Already, India has 86 GW of renewable energy generation capacity, and renewable electricity reached an 11% share in total generation in 2019. Coal's share in total electricity generation peaked in 2015 and has declined by about 6 percentage points since then.

By 2030, the government is targeting about 450 GW of renewable energy generation capacity, a target that would imply coal's share in electricity generation falling to around 50% by that date. This would be an unprecedented transition for a country of India's low income per capita. India would have been one of the only major economies to have charted such a pathway at this stage in its development. Clearly, there are challenges with this objective. The power sector is financially stressed, and the grid integration of variable renewables is not easy. But with the cost of renewables falling so dramatically, there is no doubt that India's power system will look quite different 20 years hence.

While it is right to celebrate India's successes in laying the foundations of a lower carbon power sector, it is important to note that energy transition is not limited to just the power sector. To reduce emissions in line with the 2 degrees goal, all sectors must contribute, including those where today the challenge appears more technically or economically challenging.

For example, the iron and steel sector is the largest energy consuming sector among India's industry sector. The sector already emits about 242 million tons (Mt) of CO_2 and this is projected to grow to 837 Mt by 2050. This represents almost 40% of India's total CO_2 emissions today from all sectors and all fuels. Clearly, this level of emissions increase would be incompatible with India's role in global efforts to limit warming to 2 degrees.

However, heavy industry sectors such as iron and steel, have traditionally been excluded from global mitigation efforts and national policies, because of policy-makers' concerns about harming their international competitiveness. However, as new and promising pilots of new technologies are underway, international interest in transition pathways are increasing. Testament to this is the industry coalition spearheaded by Sweden and India, which was unveiled at the UN Secretary General's Climate Action Summit in September 2019.

Ultimately, the topic for this plenary is the nexus between the energy transition and the industry transition. New energy technologies require new industrial capabilities, and lowering

the carbon footprint of industry will require both an industry and energy revolution.

Questions:

- What can the government of India do to support transition in the industry sectors, while preserving and indeed improving their international competitiveness?
- How can tools like the PAT scheme be evolved in order to support decarbonization in the industry sectors?
- What is required from the power sector in order to support direct and indirect electrification in the industry sectors?
- What is needed from the international framework in order to support transition in Indian industry, i.e. in terms of research and development, technology collaboration and diffusion, and financing?
- What is the role of private sector industry collaboration and how can this be supported?

Transformative Actions to Revive Green Climate Finance

The reasons for faster climate action are growing more acute every year, and yet, public action at the global level is proving to be a disappointment. As is the case in history of all major past technological changes, finance remains the great enabler of climate action. Recognizing this tenet, development organizations, multilateral development banks and institutional investors are all increasingly prioritizing their climate budgets and actions, announcing larger targets for themselves, and have in most cases been successful in recapitalizing their dedicated climate funds. At the same time, technological choices are growing rapidly and market solutions are becoming increasingly viable across a growing number of sectors.

At the national level, the Central Banks of many countries are considering and introducing measures for accelerated climate action and many private banks, insurance companies and institutional investors are visibly allocating more to 'sustainable' or 'green' portfolios and even the equity flows to the green sector are on a rise and innovative green technologies – ranging from electric vehicles, to batteries for renewables – are now closer to becoming 'market-ready'.

However, while financial institutions, along with the other key actors have started preparing to step up and accelerate climate finance, the required public policies to enable and support them on a coordinated basis are still lagging. This situation is further aggravated due to the weakened macroeconomic conditions of many low and middle income countries, which doesn't permit them to undertake ambitious climate actions, even if they so desire.

At the global level, COP25 could be considered a disappointment, especially on resolving the issues pertaining to climate finance, as Article 6 was once again shelved with the Rulebook still pending and discussions on long-term finance was also left unresolved. While a few Parties, led by the vulnerable and least developed

countries advocated for higher ambitions, most others stuck to their stated positions, and the divide between developed and developing countries positions became clearly evident. The large emitters did not commit any meaningful enhancements of their climate goals and it seemed that some developing countries too have started to re-think the desirability of enhancing their climate targets.

The MDBs and dedicated climate funds can be considered to be the key influencers in this area at present, leveraging their role strategically to shift more public and private funding to climate relevant investments and assets, through support mechanisms and better 'models' of public-private policy frameworks. But is this sufficient? Further, given the scale of needs ahead in the next crucial decade, and the higher costs and risks of such financing in the private sector, especially in developing countries, reviving the Article 6 mechanism and international voluntary trading mechanisms is critical. The efficacy of private actors and markets to achieve the desired goals, in the absence of a globally coordinated rulebook, is not yet clearly explored.

In this context, it is imperative to review the green finance requirements and hurdles, and re-think on measures required to bring a fresh impetus to its mobilization and effective utilization. An expanded role of 'Green' financial institutions is now vital and the potential of various finance channels and the array of financing instruments needs to be assessed to determine those which can be leveraged best to facilitate a wider range of ambitious climate actions. At a macroeconomic level, the challenge of green financing is not insuperable: The gross annual needs for enhanced climate financing are still relatively small at around USD 2 trillion a year, amounting to approximately 2 percent of global GDP, and as compared to the size of total financial assets (~ USD 400 trillion) under deployment in global bank debt, bond and equity markets. Thus, much of the needed finance can come from effectively reallocating a small portion of the existing finances.

There are several successful and ground-breaking finance and business models now existing for funding climate actions from the regional, to national, to local levels. The knowledge from these can be built on and modified to be scaled-up and replicated in new geographies. For instance, the past rapid growth of the Green bond markets (from virtually zero to close to USD 200 billion a year in the past decade) could hold important lessons for re-designing traditional financial instruments and local capital markets for sustainable green finance.

The broad question around which this plenary discussion will focus is: Can financial institutions do more on their own, supported by the stronger investor preferences for green investments, and can they play the role of the bellwether to revive overall and public climate finance and enable more innovative and ambitious climate actions?

Some other questions which arise include:

- As a next step, with the larger global rulebook and uniform standards for climate financing remaining out of reach, is it time now for countries and smaller regional groupings to plan their own robust accounting frameworks and finance roadmaps? This is especially pertinent for the vulnerable and developing countries, where the need is the most and the incremental financing challenges the greatest, while offering the greatest opportunities for accelerated action.
- In the same vein, is it time to bring smaller and more nimbler 'climate clubs' into existence, for example, through accelerated regional cooperative mechanisms; or should the approach now shift to focus more on accelerating sub-national climate actions and specific sectoral changes, with cities, and transport, infrastructure and industries coming to the forefront?
- Carbon taxes (and subsidies) have often been thought as a key solution to the public and market-enhancing climate financing challenge, but the political costs have been very high (as evident in disparate settings from France and Australia to Chile and Ecuador). What alternatives are possible? Can the private sector do more and better on its own to create a new class of voluntary and market-led international mechanisms, building on the lessons from the CDM markets and ETSs?
- Can central banks and regulators play a much bigger and more independent role, and how should they coordinate their policies better for accelerated climate investments in the private financial markets?
- Is the financial sector doing enough to recognize climate risks and is there a critical momentum building for the financial intermediaries to voluntarily move away from investing in such high-risk and potentially major stranded assets in the future?

Blue Economy for Agenda 2030- Aligning Economic Development for Sustainability of Oceans

As the largest habitat and home to a unique biodiversity, the role of oceans as the world's "temperature controller", absorbing the sun's heat and dispersing it across the globe through its ocean current is critical to combating climate change. Even minor changes in the sea would lead to cyclic impact on the temperature and weather conditions across the globe.Fragile marine ecosystems get affected with miniscule changes in temperature, water quality and salinity levels, endangering both flora and fauna. The ocean ecosystem is complex and delicate, requiring local, national and global responses and the emerging blue economy framework will be critical for the success of sustainable development of oceans. For a robust ocean economy, the necessity to preserve oceans.

With 2030 approaching, accelerating the implementation of SDGs is a necessary action and an urgent need. Goal 14- Life under water is a critical goal among the SDGs that needs urgent implementation mechanisms. It focuses on tackling the growing marine pollution and eutrophication in the ocean. The goal emphasizes on the need to preserve 10% of the affected marine protected areas and enhancing the management of Marine Protected Area (MPAs). The goal also focuses on the need for sustainable fishing practices, combating ocean acidification, safeguarding marine life and ocean biodiversity. SDG 14 targets have particular relevance for India's growing marine economy and also to understand and analyse India's position in the Global Maritime Governance Framework. India has actively engaged at the Indian Ocean Rim Association (IORA) level and has been the initiator of the Blue Economy agenda for the Indian Ocean region.

Blue economy is considered as vital framework to address economic, social, environmental challenges and opportunities within one umbrella. Blue economy goes beyond the traditional forms of trade and geopolitical dynamic and also includes fisheries, tourism, deep sea mining, harnessing ocean energy,

increasing biotechnology and technological innovations based on ocean research. The concept of blue economy encompasses myriad opportunities and challenges that the Ocean faces into one composite goal to be achieved through dialogue, global governance and international cooperation.

Global Fish production peaked at about 171 million tonnes in 2016 with 47 percent emanating from aquaculture. Capture fishery production has largely remained static since late 1980s. 85 per cent of global population involved in fisheries and aquaculture was in Asia and 75 per cent of global fishing vessels are from the region as well. According to FAO 2018, the percentage of stocks fished at biologically sustainable levels have increased from 10 per cent in 1974 to 33 percent in 2015- with most of the increase emanating in the 1970 and 1980s. Fisheries is also a major contributor to Food security, as global food fish consumption has grown from 9.0 kg in 1961 to 20.2 kg in 2015 (in per capita terms) with Asia emerging as the largest consumer in 2015. Combating illegal, unregulated and unreported fishing is critical to ensure sustainability of fishery stocks in the future and a necessary aspect from the Blue economy perspective. Ocean and coastal based tourism is also major contributor to coastal economies.

According to IUCN, from 2004, before the first International Marine protected Areas Congress (IMPAC) until August 2017, global marine protected area (MPA) coverage has increased 5-fold, from 1.1% to 6.3%. Currently, MPAs cover 15.9% of marine areas under national jurisdiction but only 0.25% of areas beyond national jurisdiction. By 2020, Global marine protected area target of 10% has to be achieved under Aichi Biodiversity Targets and countries are still to reach this milestone.

Studies indicate that around 80% of the plastic debris in the marine environment originates from land based sources, with minimal coming from abandonment of fishing nets, waste from shipping or other offshore activities. The other major forms of waste are sewage water and industrial effluents. Most of the pollutants are transported through rivers systems and waste water treatment works. The movement of waste and pollution from land to oceans also occurs due to extreme weather events like floods, hurricanes that shift debris to the high seas (Li et al, 2016). Large part of the marine debris includes plastic waste comprising mainly of single use plastics. The most commonly used plastics when they reach marine environment, break down to ultra violet light and low temperature and transform into microplastics. Microplastics are

smaller than 5 millimeters in size and either made for special purposes such cosmetics or breakdown over a period of time. Both large and small organisms in the marine systems have been reported to have ingested these microplastics including Bivalves, zooplankton, mussels, fishes, shrimps, oysters, copepods, lugworms, and whales. These microplastics cause various health problems for marine organisms including pathological stress, reproductive complications, blocked enzyme production, reduced growth rate (Auta, 2017). External injuries such as blockages in breathing vessels, nostrils, ingestion and entanglement in plastic debris have also occurred especially with plastics that still haven't broken down. According to Xanthos and Walker (2017), international policies have been existent for some time, however the issue is of lack implementation strategies.

The forthcoming decade from 2021-2030 has been marked as the decade of oceans with particular emphasis on enhancing science-policy interface to address sustainable development of the oceans. Many countries including India are focusing on advancing the blue economy agenda in the national, regional and global governance framework providing an opportunity to conserve, protect and manage oceans and accelerate sustainable development efforts within its purview. With sustainable development as one of its pillars, blue economy agenda could provide appropriate mechanisms and measures to conserve and protect oceans while enhancing economic growth of ocean based economies.

With just a decade left, there is much to be achieved under the SDG 14-Life under water. There is a need to enhance policy measures, strengthen implementation mechanisms and accelerate technology deployment to address major environmental challenges such as marine pollution, expansion and management of marine protected areas and to increase sustainable fishing. The goal also focuses on strengthening national, regional and global governance frameworks to manage oceans that move beyond national boundaries. With blue economy agenda being considered as the core of discussions on oceans development by many countries, aligning SDG 14 goals and targets to Blue economy would enhance the efforts for implementation of the goals in the coming decade.

Some of the key issues or questions that are vital to achieving SDG 14- Life under water within the blue economy framework are-

- How can blue economy framework help coastal and ocean based economies attain their SDG goals by 2030?
- What is the role of Science, technology and innovation in Blue economy agenda and how could it facilitate the implementation of SDG 14?
- How can countries achieve their biodiversity targets within the blue economy framework and what policy options should be explored to address sustainable fishing, marine pollution and marine protected areas.

Fast-tracking the 2030 Agenda

Sustainable development is a widely valued concept across countries, governments and industries.

Year 2015 has gone down in the history of sustainability for inking two remarkable global agreements promoting green growth. The adoption of the seventeen Sustainable Development Goals (SDGs) by the United Nations General Assembly and the Nationally Determined Contributions (NDCs) which embody efforts by each country to reduce national emissions and adapt to the impacts of climate change, promulgated by the Paris Agreement helped carve resilient partnerships. These partnerships commit combined efforts towards the realization of the goals of sustainability.

193 member states undertook the mission to improve our land, air, and water through sustainable measures while not hindering economic growth, and progression of an inclusive society.

Year 2020 shall mark two important milestones. First, it commences the ten year mark towards the realisation of the 2030 Agenda; and second the international community is called upon to enhance their respective National Determined Contributions (NDCs) as the global discourse is now positioned on raising climate ambitions.

It is also an important crossroad, as 2021 marks the beginning of the 'UN Decade on Ecosystem Restoration', as declared by the UNGA (General Assembly) this year. Restoring our ecosystems back to health is fundamental to achieving the Sustainable Development Goals (SDGs). Much of the coming decade also happens to coincide with the ongoing 'International Decade for Action on Water for Sustainable Development, 2018-2028'.

Clearly, the coming decade will have such initiatives lining-up and vying for global attention and resources. However, they would not so much be vying, as drawing on a common pool of resources and feeding back into it - hopefully enriching it in the process.

The 2020 edition of The Energy and Resources Institute's (TERI) annual flagship event, the World Sustainable Development Summit

(WSDS) will focus on the need to assess global contributions made, and the next steps to be undertaken by the world community to meet the 17 SDGs. Under the broad theme of 'Towards 2030 Goals: Making the Decade Count', the Summit will hope to establish the terms of the discourse for making the most of the decade we have left. This it intends to do by weaving together the many strands of climate action, through myriad, high-level discussions.

The WSDS is an important meeting point for stakeholders representing various sections of the society to deliberate, strategise, and execute a unified agenda underlined by indicators of universal sustainable growth and development, which would serve the overall, long- term interest of the entire world community. The Summit held in the attendance of leading policy makers and senior government officials, does not just stop at deliberations but commits to the translation of these dialogues into responsible policy making. With a lens directed towards India, it will only be through the combined efforts of state policy and industrial support, that the mammoth transition to a largely renewable power system will become a thriving reality for the nation.

In the words of the Hon'ble Secretary General of the United Nations, Mr António Guterres, 'Sustainable development is more than a goal. It is our responsibility to our planet and future generations.'

Let's pledge to re-commit to environmental progression through sustainable measures on the World Sustainable Development Summit 2020 stage.

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2020

TOWARDS 2030 GOALS
MAKING THE DECADE COUNT

January 29-31, 2020

India Habitat Centre, Lodhi Road, New Delhi, India

CORPORATE CONCLAVE

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Corporate Conclave: Addressing Climate Change through Waste Management Initiatives

The session would broadly focus on various elements of climate change and plausible different ways in which we can reverse the climate change effect.

The major reasons for climate change are wrong assumptions such as Earth has infinite capacity to hold and has infinite natural resources. Also, there is a disbalance between economic growth and environment sustainability.

Due to the changing lifestyle, there is an ever increasing demand of energy and this has been satisfied using fossil fuel. Constant use of fossil fuel has led to the increase in CO_2 concentration in the atmosphere. At this point it becomes imperative to curb the unnecessary consumption and also to shift from fossil fuel based energy to renewable energy

1. As per estimates, more than 55 million tons of Municipal Solid Waste (MSW) is generated per year in India. Dumping is the common practice which is adversely affecting on environment and public health. Management of unattended MSW is a major problem in the current scenario. Scientific treatment of MSW is crucial & should involves proper segregation and at source treatment. Depending on their compostability, MSW can be broadly classified into organic (compostable material eg: food waste) and inorganic (Non- compostable materials eg: glass, metals, plastics) waste. Inorganic waste comprising of sand and stone can be used as Refuse derived construction material.

Following solutions can be provided to manage MSW:

- Decentralized composting systems to convert organic waste to compost
- Refuse Derived Fuel (RDF): RDF is a renewable form of energy derived from MSW and its can be used in electricity generation

2. Biomass Gasification to produce Syngas (CO + H2) which can be used to generate electricity. The feedstock required for the

gasification process can be obtained from various types of agricultural wastes or agro-residues. Biomass energy based electricity offers a sustainable energy solution

3. Biogas systems: provide clean gaseous fuel for cooking and transportation, improves sanitation and also helps in reducing the causes of climate change

4. The rising levels of Carbon dioxide gas in the atmosphere has been considered to be the major contributor of climate change. Plants use CO_2 during photosynthesis to produce sugars. Hence, cultivation of different type of plants especially those which requires minimal water, nutrients yet availing higher CO_2 absorption should be promoted. To enlist few of them are bamboo, mangrove, elephant grass, etc. Cultivation of certain algae like seaweeds should also be encouraged as seaweeds has an amazing carbon dioxide uptake and storage property. Also, seaweeds have a high commercial value.

5. Water Management:

- India is the largest user of groundwater in the world with over 60% of irrigated agriculture and 85% of drinking water supplies dependent on aquifers.
- 90% of India's water is consumed in farming and 80% of this irrigation is for water-guzzling crops such as rice, wheat and sugarcane. Reducing this number is the most effective way of solving India's water problem. Crop Diversification can be one of the solution to reduce water usage in Agriculture
- Aquifer recharge and rainwater conservation through community ponds and recharge wells should be promoted

Corporate Conclave: Mobility Talks

The transport sector is often referred to as an 'engine of growth' for an economy, which is true for India as well. At the same time, the demand for energy from India's transport sector has been increasing rapidly. During 2005–15, the energy consumption in India's transport-related activities increased at a CAGR of 8.3% – a much higher rate than the fuel consumption in the transport sector globally (CAGR of 2%) during the same period (IEA 2019). While the transport sector generates massive positive externalities, it also contributes to India's import burden, GHG emissions, and air pollution.

Emissions from vehicles, passengers, and as freight, are major roadblocks in India's climate change targets to reduce GHG emissions. Well cognizant of the growing economic and environmental burden of transport activities and driven by the commitment under NDCs, the government of India has taken numerous steps towards mitigating the transport-related externalities and shifting towards low carbon mobility.

Need for Clean Mobility: Exploring the Options Available Towards Cleaner Future

Agenda: It is expected that the future policy will be strongly guided by climate change, air pollution, and related health concerns. The same is visible in the policy and regulatory actions being undertaken by the government. To this end, various alternative low carbon vehicle technologies (BS-VI standard, inspection, maintenance, etc.) and fuels (biofuels, natural gas, hydrogen fuel cell, electric, etc.) are being promoted by the government. It is critical to understand the relative advantages and disadvantages of these different low carbon transport options available in terms of their economic, environmental, and social impacts on the economy.

- What should be the right pathway/s for transition of the transport sector into low carbon sector?
- What are the key challenges associated with different low carbon transport technologies and fuels?

- What should be the target for penetration of low carbon fuels for the automobile segment and that too with a realistic timeline?

Inroads into E-Mobility – Enabling Environment to Encourage EV Penetration

Agenda: Taking forward the electrification policy as chalked out in the National Electric Mobility Mission Plan (NEMMP) 2013, the Ministry of Heavy Industries and Public Enterprises rolled out Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME)-I scheme in April 2015. This scheme, inter alia, focused on increasing the adoption of electric vehicles (EV) through purchase subsidy. FAME-I was extended and FAME-II scheme was launched in March 2019 with 10 times the financial budget of FAME-I – at Rs 10,000 crore. Additionally, the Ministry of New and Renewable Energy (MNRE) constituted a group of experts under the National Energy Storage Mission, 2018, with the primary objective of creating an enabling policy and regulatory framework to promote the energy storage sector. Moreover, several state governments, including Maharashtra, Karnataka, Uttar Pradesh, Telangana, and Delhi, drafted an electric vehicle policy to accelerate the uptake of EVs.

- What are the initiatives undertaken to promote greater adoption of electric vehicles?
- What is the impact of electrification on energy security, job security, and trade security?
- How to achieve the basic supply chain/infrastructure requirements for electric mobility in a cost effective and time-bound manner?
- Will the current path adopted by the government and private entities lead to success in achieving the 30% EV sales target set for 2030? If not, what should be the approach?

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THEMATIC TRACKS

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Mainstreaming Development and Enhancing Climate Resilience: New Opportunities for States in India

As per the direction of the Ministry of Environment, Forest and Climate Change, the States are now on a course towards revising State Action Plans on Climate Change (SAPCCs) based on 'The Common Framework for Revision of SAPCCs' issued in January, 2018. The framework provides a consistent methodology for states to identify actions that are in coherence with the national and global climate change goals.

The discussions will focus upon the following key points:

- Development and Sustainable Development Goals: opportunities to mainstream climate actions in development policies through SAPCCs; how States have already tried to mainstream SDGs and Climate actions in policy-making.
- Enhancing Climate Resilience: new opportunities for the Indian States to enhance resilience through their SAPCCs.
- Sharing Best Practices that are replicable: drawing lessons from some of the best practices implemented by States which could potentially be replicated in the second SAPCC.
- Understanding the Challenges: challenges that the States have faced during the process of drafting, financing, coordination and implementation of actions; highlighting actionable solutions to combat the existing challenges by stepping beyond state budgets for financing and establishing institutional structures.
- Monitoring and Evaluation: the discussion would be around the existing M&E frameworks and what are the challenges in the SAPCCs implementation.

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Creating Innovative Solutions for a Sustainable Future

De-risking investments in Decentralised Solar Solutions

The National Action Plan on Climate Change (NAPCC) and India's Nationally Determined Contributions (NDCs 2030) draw the framework for a low carbon pathway. Keeping energy security and environmental protection in mind, India has worked towards increasing renewable energy capacity in the country with a heavy reliance on the Solar Energy sector. The Government, through its strong and transformative initiative, Jawaharlal Nehru National Solar Mission and subsequent policies, regulations and acts at the central and state levels, has achieved a cumulative commissioned solar capacity of over 33.8 GW by December 2019.

It was in the preparation of COP-21 in Paris that PM Mr. Narendra Modi announced India's ambitious target of 175 GW of renewable energy by 2022, which recently was raised to 227 GW for 2022. Setting this ambitious target, it was highlighted that it would be important to get foreign investment inflows so as to achieve these targets and the developed nations would have a huge role in enabling this transition. It was also opined that foreign investment inflows may be difficult at the scale required to meet India's solar energy targets if investors perceive Indian solar projects to be risky. Some of the policy measures which came into effect in the recent past have raised concerns on the risk profile of the sector. Some of these included GST regime, imposition of safeguard duty, tariff ceilings in the biddings, and timely availability of land, besides payment delays. Though Government of India is making efforts to address these issues, there is still a gap in putting effective risk management mechanisms in place, which would not only facilitate foreign institutional investors, but also uplift the sector and its actors, especially DISCOMS from financially difficult positions.

In keeping with the above, The Energy and Resources Institute (TERI) and Germanwatch, in association with Climate Action Network-South Asia (CANSA), Vasudha Foundation, and the Centre for Study of Science, Technology and Policy (CSTEP) are working towards "De-risking Foreign Investments in the Indian Solar Energy

Sector" through a multi-stakeholder approach. The objective is to identify and formulate effective risk management instruments, with inputs from policy makers, financial institutions, civil society and sectoral stakeholders.

The proposed thematic track is the sixth in a series of workshops held across India. The first workshop in New Delhi conducted on 30th April 2018, focussed on identifying key challenges and categorization of risk in the solar sector. The second workshop in Mumbai conducted on 30th August 2018, focussed on identifying key financial risks and potential de-risking strategies, along with roles and responsibilities of key actors in this endeavour. The third conducted at Intersolar 2018, Bengaluru focused on financial barriers to solar financing. The fourth held as part of WSDS 2019 dealt with barriers in solar financing. Another workshop organised during Intersolar 2019, Bengaluru focussed on new and emerging business opportunities.

In this thematic track, we delve into key risks associated and their mitigation strategies. with the decentralised applications like Solar PV Rooftop, Solar Pumps, which is seen as one of the important strategies to scale up installation of solar capacities.

SPV Roof Top – Changing Scenario

Energy demand patterns are changing, due to consumer preferences, energy efficient practices, adaptation of smart appliances, and digitalization. Owners of systems in agricultural sector, roof top segment are transforming as "PROSUMERS" from simple consumers. Decentralised energy demand and supply modes change the current business practices.

Enhancing the slow moving roof top installations, currently at about 4.06 GW capacity accounting only up to about 12 % of the all solar power installations, needs comprehensive approach overcoming the challenges. About 12 GW per annum of roof top business is a tall order of the day to meet the ambitious 40 GW target by the year 2022. Commercial and Industrial segments considering better cost economics of solar power vis-à-vis grid power lead the roof top installations with a share of 70%. Grid power tariffs at

Rs. 7.1 per kWh for commercial and Rs. 6.2 per kWh for industrial, clearly makes way for solar with tariffs at about Rs. 3- to 4 per kWh providing approx. 50 % saving and with higher potential in future to the C&I segment. Implementing roof top business thru CAPEX and OPEX models, for commercial and industrial sectors, with CAPEX leading at 65 % share, are moving in the direction of OPEX due to high upfront costs and lack of O&M capabilities among roof top owners. State DISCOMS resistance as they lose their potential customers, lack of standardization and proper implementation of the regulations of different states pose challenges to roof top segment.

Residential sector, at a national average tariff of Rs. 4.97 per kWh still needs better motivation in terms of financial benefits. Low awareness of the benefits of green power compared to the grid power is one of the limitations for lack of penetration.

Financing roof top project developers and consumers is a potential challenge. Complexity of lending to roof top segment in particular and energy sector as a whole is increasing and is associated with risks. Addressing the risks on a long term and proposing measures to address would be beneficial. Assessing companies seeking loans is, for certain a stupendous task for FIs to understand their credit worthiness, due to lack of strong balance sheets. In addition, assessing EPC contractors, quality of modules and BOS equipment, AEP and return projections puts FIs in complex situations.

Innovations like containerized solar PV, PV port are being introduced in to the market. A knowledge sharing platform, State Rooftop Solar Attractiveness Index (SARAL) developed help investors identify states that are attractive for rooftop solar investments.

Solar PV-based Water Pumping

Water is essential for daily drinking and other needs, besides agricultural requirements. It demands huge power for pumping and that too at competitive prices. Diesel pumping is ubiquitous. Substituting diesel and conventional power by SPV pumping, saving environment contributing towards carbon reduction, is increasing rapidly across globe. Solar photovoltaic pumping systems offer

reliability, flexibility and low maintenance for a wide range of applications such as irrigation, livestock and potable water. Solar photovoltaic water-based water pumping systems such as surface, floating, and submersibles can provide a wide range of solutions to the problem of finding a reliable power for irrigation and drinking water in India and elsewhere.

Approximately 86% of India's typical pump systems are DC surface suction type, 2 percent are DC submersible type, 2 percent are DC floating type, and rest are AC submersible type. The type of solar pumping system needed is determined by the nature of the well either being deep well, bore well or open well.

The Ministry of New and Renewable Energy (MNRE) has recently rolled out a massive solar-pump programme called the PM-KUSUM scheme. The scheme has a goal of setting up solar capacity of 25,750 MW to power irrigation pumps by 2022, with central financial support of around $4834 million. It includes installation of 1.75 million off-grid and 1 million on-grid solar pumps. Another 10,000 MW of solar capacity in rural areas by means of 0.5 MW to 2 MW of decentralized ground-mounted plants are part of the scheme. This power will also help solarising the grid and meeting the states RPO mandates.

Apart from this, the International Solar Alliance (ISA) has achieved global attention by bringing down the cost of solar-powered agricultural pumps by half (Approx.$800/HP) through the largest global price discovery exercise rolled out across 22 member nations via India's state-run EESL, in a potential order valued at $2.7 billion.

Assessing risks, providing proper data to FIs and all the stake holders and giving comfort to their decision making, is pertinent. Accelerating the roof top, pumping and other applications business and help achieve the national targets need a multi- pronged approach, with innovations in financing, technology and new business models is the need of the hour. The thematic facilitates debate on this, resulting in deriving appropriate out comes.

Educate, Inspire and Empower: Teachers' for a Greener Tomorrow

Education is learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society. The role of education is critical in view of the current environmental crisis so as to capacitate people to create sustainable, resilient communities both locally and globally to lead an informed and empowered life of contentment and satisfaction. To achieve this education needs to go beyond mere transfer of information to adoption of active, participative, and experiential learning methods that engage students and make a difference to their understanding, thinking and ability to act.

National Education Policy (2019) recognizes teachers as the *Torchbearers of Change* and focuses on continuous professional development of teachers. Tata Steel Limited in association with TERI launched an ambitious project, **The Green School** in April 2017 in the operational areas which works around development of a green pedagogy. The Green School project also reiterates the centrality of connecting with teachers as a stepping stone towards success of the effort. **Green pedagogy** designed under the project involves systemic thinking, participatory learning, and thinking creatively for future scenarios. This will help teachers in developing student's personal and social wellbeing, and inspires them in meaningful involvement in their local social, economic and ecological communities. The project has already made its presence at the United Nations Climate Change Conference (COP25) in Madrid.

The session **'Educate, Inspire and Empower: Teachers' for a greener tomorrow'** at WSDS 2020 will provide a platform to the educators from remote locations of Jharkhand and Odisha to showcase their local learnings and collaborate with other stakeholders from different states that will help in strengthening their learning process and will also generate ripple effect.

TATA STEEL

#WeAlsoMakeTomorrow

Managing intermittency of demand and supply at electricity distribution level

India is transitioning towards a low-carbon future through clean energy-based pathways. A sustainable energy framework is one of the key pillars to enable this paradigm shift. Renewable energy (RE), integrated at the bulk-power transmission level and as a distributed energy resource (DER), assumes prime importance in this endeavour. A significant quantum of RE-based power will be injected into the distribution network since the government of India has set a target of installing 40 GW of solar photovoltaic (PV) power from rooftop mounted systems by 2022. Further, the KUSUM scheme aims to add distributed solar energy capacity of 25.75 GW by 2022. With incentives for setting up charging infrastructure under FAME-II scheme, the penetration of EVs in the distribution network is also set to rise. However, with increasing penetration of distributed RE in the form of RTS and EVs, there are several technical challenges related to their integration with the network that might emerge. Increasing penetration levels of rooftop solar could contribute to increasing skewness in demand pattern. Voltage magnitude deviations, power quality issues, and protection-coordination phenomenon are the likeliest impacts of large-scale PV penetration. Integration of a large number of EV charging stations with the power distribution network will lead to an additional dimension of bi-directional power flows and congestion in the local network. Power system modelling and simulation studies are the need of the hour to accurately understand the behaviour of DERs integrated at the distribution network level. Such grid-integration studies usually focus on impacts – both at steady and in dynamic/transient states – due to the integration of various DERs, and on possible measures for DISCOMs to mitigate such impacts. The main purpose of this session is to disseminate the findings of various power system modelling and simulation studies undertaken by TERI for many distribution utilities in India, deliberate on the various modelling methods, possible mitigation measures; and address the current challenges faced by various stakeholders, and suggest the way forward at the distribution level.

Multi-level actions to strengthen NCAP

Air pollution is a serious problem in many developing countries like India, where 75% of Indian cities scuffle in meeting the prescribed air quality standards. Despite of numerous formulated action plans, the problem persist at much higher magnitude across the country. The alarming level has pressed the need for innovative scientific approaches for effective pollution level accounting at both regional level and urban scale. Complementing the need of hour, the Government of India has launched the National Clean Air Program (NCAP) in January, 2019, strategizing the actionable roadmaps and steps in addressing the perpetuating air pollutions.

TERI with support from the Bloomberg Philanthropies has initiated a project intending to improve the air quality standards; providing technical assistance to MoEFCC for achieving its set NCAP goals; strengthening capacity pertaining to emission inventory databases at the regional scale. With its background, TERI is organizing a high level discussion at the World Sustainable Development Summit (WSDS – 2020), titled 'Multi-level actions to strengthen NCAP' supported by Bloomberg Philanthropies. The preliminary session focuses on air quality management at national scale in India and sectorial contributions to national emission. The next session focuses on improving urban air quality management in Indian cities and case-studies from the cities of Karnataka, Gujarat, Bihar and Delhi.

Style:

- Open panel discussion with the Chair
- Five-Six speakers (maximum)

Proposed speakers and lead discussants: MoEFCC, Word Bank, CII, University of California, London School of Economics, GPCB, KPCB, BPCB and DPCC.

Target participants include: Representatives from Government, Public Sector Units, Multi-lateral Organizations, Academia, Thinktanks, Industries, Policy Institutions and Private Sector.

Bloomberg Philanthropies

Tracking India's NDCs: Methodologies and Tools for tracking progress on mitigation and adaptation policies/actions in India

Under the Paris Agreement, all Parties are required to submit new and increasingly ambitious climate plans (NDCs) by 2020 and every 5 years thereafter. For effective implementation and successful achievement of India's nationally determined contributions (NDCs), it is pertinent to systematically track progress of various actions, plans and policies on mitigation and adaptation or those having intent to contribute towards either of them. This raises an important research question on how the nature and scope of the transparency regime at the domestic level would contribute to measuring/tracking the progress on actions, plans and policies in sectors/focus areas that will contribute to achieving India's NDCs.

Addressing this need, TERI in collaboration with UNEP DTU is pursuing a research study supported by Initiative for Climate Action Transparency (ICAT), with the key objective of assessing the existing monitoring and reporting systems, gaps and developing appropriate options and approaches for tracking the progress (in terms of GHG and SD benefits) of national adaptation and mitigation actions and its overall impacts on India's NDCs.

With this background, a high-level discussion will be organized at the WSDS 2020, to highlight the key findings of the work and discuss opportunities and challenges towards establishing domestic transparency framework for tracking progress of mitigation and adaptation policies and actions in India.

ICAT | INITIATIVE FOR Climate Action Transparency | UNEP DTU PARTNERSHIP

Forest - a tool for adaptation and mitigation of climate change

Forest and tree cover of the country is 80.2 million hectare which is 24.39% of the total geographical area. Under Paris Climate Agreement, India is committed to create an additional carbon sink of 2.5 to 3 billion tonnes of CO2e through additional forest and tree cover by 2030. But so far there is no clear strategy to achieve the forestry sector NDC target. The discussion will consider following measures for achieving India's forestry sector NDCs -

1. Identification of state wise targets for India to create an additional carbon sink of 2.5 to 3 billion tonnes of CO2eq through additional forest and tree cover by 2030.
2. Combating forest degradation and deforestation by using alternate sources of energy
3. Enhancing ecosystem services from the forests such as provisioning, supporting, etc. including forest carbon
4. Obtaining carbon finance through mechanisms such as Afforestation/ Reforestation Clean Development Mechanism (A/R CDM), Reducing Emissions from Deforestation and Degradation in developing countries (REDD+), Compliance and Voluntary Carbon Markets.
5. Improving livelihood through Minor Forest Produce (MFP) trade and value addition
6. Community based forest governance (Gram Sabha)

North Carolina Institute for Climate Studies
NCICS
NOAA

Energy Management Solutions for SMEs

Small- and medium-sized enterprises (SMEs) offer considerable potential for reducing greenhouse gas (GHG) emissions through the introduction of new, cleaner low carbon technologies (LCTs). There is scope to build upon the ongoing initiatives being undertaken in the SME sector and accelerate the adoption of clean, energy-efficient solutions through development and replication of cluster-level energy management models in the selected energy-intensive MSME clusters/sectors. During the session, different stakeholders shall share lessons on energy-efficient activities among SMEs. They will also discuss the strategies to develop and replicate cluster-level energy management models for SMEs.

IGES
Institute for Global Environmental Strategies

Entrepreneurial Solutions for the Challenges of Climate Change

Addressing the most pressing sustainability challenges of today requires leadership, shifting mind-sets and lifestyles, coordinated approaches to climate action, and innovative solutions. It requires a clear direction at the level of the state and in our communities. For transformational impact, we must look beyond conventional sustainable development actors to consider the role of climate-smart, socially inclusive enterprises. Enterprises that are driving the transition to a green and inclusive economy by developing innovative solutions at a local level. They address the needs of their communities through green technologies and climate-smart business models while integrating marginalised communities along their value chain as suppliers, employees and customers.

In this session, we will share and discuss success stories and best practices of SEED Award Winners: enterprises that are environmental stewards in their communities and support India's goals of climate change mitigation and adaptation in the sectors of clean energy, sustainable agriculture, water and sanitation, and waste management.

When supported to scale, these eco-inclusive enterprises can multiply their impact and showcase their innovative approaches to sustainable development at a global level. As India's entrepreneurial ecosystem booms and diversifies across geographies, it is time for us discuss how to leverage this momentum and nurture enterprises delivering significant contributions to sustainable development.

SEED
promoting entrepreneurship
for sustainable development

adelphi

Inclusive and Integrated Mobility Systems for Cities

Over the last few years, India has witnessed new developments in the areas of urban mobility: newer technologies, smarter initiatives, and innovative business models. A new outlook of 'Mobility as a Service' has not only impacted the mode choice and travel patterns of the commuters but has also transformed the attitudes of the commuters towards shared and micro mobility. These new mobility modes of transport should be viewed from the lenses of inclusivity by focusing on the needs of specific user groups such as women, children, elderly, and the differently abled.

The emerging mobility developments have impacted the way people move within the cities with respect to their availability and affordability of travel. Further, these developments have also impacted the outlook of the cities towards sustainable mobility systems.

Globally and nationally, shared, connected, integrated, and zero-emission vehicles have been accepted as pathways for sustainability. However, transport is a state subject and various states have different policy provisions for such new mobility options. Therefore, there is a need to understand the pros and cons of the new services and how they can be tailored to the needs of the cities.

The aim of the thematic session is to discuss the following points towards mainstreaming sustainable urban mobility:

- Aligning new mobility solutions towards inclusivity and integration
- Tools for enhancement of integrated transport systems
- Mechanisms for optimal fleet utilization
- Effective tools in reduction of per passenger emissions
- Affordable modes of public transport

Uber

Alternativism: Give Paris a Chance

OBJECTIVES

- Built a peer group movement towards addressing issues related to climate change
- Enable a behavioral change to think alternatively by suggesting initiatives/steps organizations can take to provide solutions that can be adopted by the larger masses

WHO WOULD WE BE TALKING TO?

- Corporates/Businesses/Industry
- Peer Group
- Influencers
- Media
- NGOs
- Policy Makers
- Government Bodies

Main Messages

- The biggest barrier to sustainability is not consumer awareness or attitudes – there is overwhelming evidence demonstrating the public's desire to address climate change through their daily behaviour and choices – the challenge lies in the availability of alternatives that are sustainable, viable and affordable life
- The lack of alternatives is in part exacerbated by conventional, orthodox thinking being applied to climate change.
- Rather than existing business models and approaches, true sustainability will only be achieved through unconventional, alternative thinking with respect to living styles, business models, production, materials, infrastructure, commercial propositions, valuations, etc.

WHAT ARE WE TRYING TO DO:

- #Alternativism aims to educate various stakeholders on the need for corporates to offer alternative products and services (that are green) to consumers
- We are supporting this with a study done by a third party. The study was an endeavor to understand what Consumers think about Sustainability / Climate Change. To achieve this purpose, Mahindra conducted a survey amongst respondents from the 5 metros- Mumbai, Delhi, Bengaluru, Kolkata and Chennai. The findings of the study will be made available at the round table

Mahindra Rise.

Clean Air Project in India (CAP India)

Rapidly growing economy and population migration to urban areas in India are severely degrading the ambient air quality in cities. Reciting to CPCB's monitored air quality data, more than 75% of Indian cities violate the National Ambient Air Quality Standards (NAAQS); estimates 122 cities are classified as non-attainment cities. In order to tackle the persisting challenge of air pollution, MoEF&CC, GoI has launched the National Clean Air Program (NCAP) in January 2019, with intent (i) to meet the prescribed NAAQ standards at all locations in the country; (ii) with an interim national level target of 20-30% reduction of PM2.5 and PM10 concentration by 2024. In the purview of supporting the India's effort, the Swiss Agency for Development and Cooperation (SDC) has initiated the long-term 'Clean Air Project in India (CAP India)'. The project aims to "support India's efforts to improve people's health & well-being through better air quality, while contributing to environment and climate change mitigation".

With its background, TERI is organizing a high level discussion at the World Sustainable Development Summit (WSDS-2020), to launch the project 'Clean Air Project in India' supported by SDC. The session focuses on air quality management in Indian cities; the progress made on several relevant aspects under the NCAP, and collaboration of Indian Government with Multilateral and Bilateral agencies to implement the NCAP. Stakeholders will be informed about the SDC initiative to support the NCAP through their CAP India. Details will be provided on research and implementation part of the project.

Style:

- Open panel discussion with the Chair.
- Five speakers (maximum)

Proposed speakers and lead discussants: SDC, CPCB, MPCB, UPPCB, and IIT Kanpur

Target participants include: Representatives from Government, Public Sector Units, Multi-lateral Organizations, Academia, Thinktanks, Industries, Policy Institutions and Private Sector.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Investment Opportunities & Business Models of BESS at Distribution

India's shift towards a clean energy future will be powered by its ambitious target of 175 GW of installed capacity from renewable energy (RE) sources by 2022. However, a diverse set of operational challenges will also accompany this transition. Large-scale integration of distributed energy resources, such as rooftop solar PV systems (40 GW of targeted installed capacity by 2022), and penetration of electric vehicles (EVs) will take place at the electricity distribution network in the coming years. Increasing electricity demand has already stressed the distribution network leading to requirements of periodic upgradation in electrical assets. Accelerated deployment of variable RE generators and EVs will further affect the power flows that could pose challenges in the distribution system operation. Therefore, Battery Energy Storage Systems (BESS) can play a pivotal role in managing the distribution grid locally by serving a number of applications to mitigate the aforementioned challenges. Overload management of distribution transformers, peak-shaving, and distribution network augmentation deferral are some of the key applications that could be pertinent for Indian DISCOMs to consider while transitioning towards a clean energy-based and smart distribution infrastructure. This session brings together leading experts representing policymakers, DISCOMs, key investors/funders, battery and equipment manufacturers, project developers to deliberate on the current challenges and learnings from existing pilot projects in the uptake of grid-scale BESS at the distribution downstream in the country. The panel of experts will present their perspectives to provide a way forward for adoption of distribution-level BESS. The discussion will be followed by interactive Q&A sessions.

The Green Business Opportunity – EU Excellence in India

TERI and EBTC are jointly organizing 'EU Excellence in India - The Green Business Opportunity' a workshop at the sidelines of the World Sustainable Development Summit 2020. The 'EU Excellence in India' programme, initiated by the delegation of the European Union in India in coordination with the European Business & Technology Centre, seeks to bring together the best and most innovative solutions and technologies offered by EU companies in India in the field of sustainable development and green technologies.

The European Union is a natural strategic partner of India. Over the years it has strengthened bilateral political, security, economic and cultural cooperation with India, while at the same time facilitating partnerships with India in addressing climate change and in meeting its sustainable development goals.

Through its 'EU Strategy on India' released in November 2018, it has sought to establish new avenues for increasing bilateral cooperation with India in addressing the energy, water and waste challenges in India. Through the best practices of EU institutions and enterprises and the extension of funding by the European Investment Bank to sustainable development projects, the EU has sought to reinforce its engagement with India.

To provide further impetus to this strategy the Business Support to the EU-India Policy Dialogues project was launched in February 2019 to increase business involvement in strategic areas of bilateral cooperation in order to reinforce the existing strong partnership between the European Union and India. The key areas which the project focuses upon are Environment, Energy, Climate, ICT and Urbanisation.

The session at the WSDS 2020, will bring together key stakeholders from the European Union, EU Member States, the Indian government, academia, bilateral chambers of commerce and EU and Indian business enterprises in order to explore new and mutually-beneficial business opportunities for collaboration between EU and Indian business enterprises in the field of sustainable development.

Transparency and Accountability in Global Climate Governance: Needs, Challenges and Opportunities for India

Transparency is one of the most widely touted concepts of our age and has often been lauded as one of the most important factors for improving climate action. Ensuring data is shared openly is vital to our collective efforts. The driving force of this growing call for transparency is an unwavering belief in its potential to foster more accountable, democratic, and effective decision-making, and in turn build mutual trust between countries for enhancing climate action at different levels and across public and private domains. Transparency directly helps inform governments as they increase prospects for ambitious global climate action. Therefore, what happens globally is important for India's climate actions.

To this end, the Climate Transparency initiative, of which TERI is the Indian partner, aims to enhance ambitious climate actions in the G20 countries. Its annual flagship report, Brown to Green, provides a comprehensive overview and the trends for the G20 in terms of emissions, policies and their performance, finance and energy transition. This event is proposed to provide information on the international negotiation outcomes on matters related to transparency and initiate discussions around the Brown to Green country report of India.

Climate Transparency

MacArthur Foundation

SMART policy levers for achieving sustainable cooling

The continuing rise in heat waves across the globe has significantly driven the need for cooling as a basic necessity for a sustainable habitat. Cooling with its cross-sectorial nature from residential & commercial buildings, transport, cold storage, industries, etc. is witnessing unprecedented rise in terms of cooling demand, energy consumptions, refrigerant demand and its associated greenhouse gas emissions.

Consumer behavior and preferences such as selection of air-conditioners and its usage pattern, servicing frequency, level of awareness among technicians about new technologies etc. are some of the major challenges being faced by Indian cooling sector. Behavior of different stakeholders groups and their perception towards issues and challenges in the sector becomes very critical to design smart policies, communication strategies and assessing capacity building needs. Activities can be complementary, thus reinforcing each other, and achieving better results with optimal efforts. To bring about a desired change through behavioral change some elements that are required to be kept in mind includes time taken to devise action plans, seeking strategies through collaborations between various stakeholders, identifying effective previous work done in comparable fields, involving appropriate expertise and highlighting the importance of specific behavioral targets and timeframes.

In the lines, TERI with support from the MacArthur Foundations is conducting a national level perception study of various cooling sector stakeholder groups to identify the levers to synergies the action vis-a-vis policy, awareness and capacity building to facilitate the implementation of the India Cooling Action Plan (ICAP) and to push and pull the correct levers for the targeted stakeholder groups.

With its background, TERI supported by MacArthur Foundation is organizing a two hour high level technical discussion at its flagship

event World Sustainable Development Summit (WSDS) 2020 to present the preliminary findings of proposed perception study and launch a policy brief on 'Accelerating the uptake of Energy Efficient Air-Conditioners in India' and the 9th edition of newsletter 'NewsTRAC' for air-conditioning service technicians. The event also aims to brainstorm to understand the issues & challenges associated with behavioral aspects of cooling sector stakeholders and ways to devise optimal actions through behavioral research to maximize the policy impact, effective communication strategy and better assess the capacity building needs.

MacArthur
Foundation

Pilot Implementation of India's Forestry NAMA in Assam

Pilot Implementation of India's Forestry NAMA in Assam is addressing the foremost unplanned drivers of forest degradation in the country and the state of Assam – unsustainable fuelwood extraction. The Energy & Resources Institute (TERI) and GIZ are jointly implementing the project by addressing knowledge, planning, financing and communication gaps towards:

- Enhancing forest carbon stock through conservation and plantation;
- Reducing fuelwood demand by promoting fuelwood saving technologies. These will cover a wide range of technologies including successful models of Improved Cook Stoves (ICS), driers, LPG, biogas, electricity etc.

Assam State Forest Department (AFD), Assam Branch of Indian Tea Association (ABITA), and Assam Energy Development Authority (AEDA) are the main state level partners for the Pilot NAMA project on Sustainable Fuelwood Management along with many other stakeholders such as educational institutions and community based organisations.

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of:
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
of the Federal Republic of Germany

Finance mechanisms to catalyse industry decarbonisation

Industries have a key role to play in keeping global warming at less than 2°C. It is the private sector that is expected to lead the way in creating low-carbon pathways for industries to transition. The Indian industry is recognized globally for its proactive, ambitious and pioneering climate actions. However, to meet the climate goals a wider and deeper industrial transition is required. The discussions will be categorized under two tracks and will focus on understanding the drivers for the success till now and requirements for mobilizing finance and scaling up industry climate actions.

Panel 1: Accelerating carbon pricing for low carbon finance in the corporate sector

In this discussion, the focus will be on carbon pricing as an effective tools for setting a social cost of carbon and efficiently reduce organizational emissions. To strengthen the capacity of corporates to respond, internal carbon pricing (ICP) is recommended as a key metric because it can help internalize the idea of carbon risk and prepare to aggressively compete in a carbon-constrained world. The handbook on internal carbon pricing, prepared by CDP and TERI, to support corporate sector in their endeavour to put a price on carbon emissions, will also be launched.

Panel 2: Mainstreaming green finance for decarbonizing industries

A green industry is the goal, but on the way to achieving this goal, it is imperative to support industries in transitioning to decarbonization pathways. Such support must be available through enabling policies and access to affordable finance. This panel discussion will focus on developing a degree of understanding on what is required to advance the ongoing industry transitions.

Supported by:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

based on a decision of the German Bundestag

Achieving SDG 6 Goals: The Need for Circular Economy Approaches

The 2019 World Water Development Report demonstrates how improving the management of water resources, providing access to quality water and sanitation for all, could contribute to the goals that underpin the 2030 Agenda. The proposed thematic track on 'Achieving SDG 6 Goals: The Need for Circular Economy Approaches' attempts to initiate a conversation on achieving SDG 6 of the 2030 Agenda with special focus on circular economy principles and use cases.

Emerging economies are now rethinking about water. Now, the questions must be framed around the good and productive use of water, how to use and reuse water, should the water infrastructure and services be centralized or decentralized, linear or circular? There is potential to do things differently in these emerging areas, yet the time is relatively short to create a more sustainable pathway. Hence, quick action is essential if one wishes to create a paradigm shift.

This track would focus on the technology and policy ecosystems across the world which pilots 'out-of-the-box' solutions and embraces philosophies that promote a more circular approach, where used water is recycled and reused, and nutrients and energy are recovered in the process. It brings together various stakeholders and involves a keynote address focusing on the current status of SDG 6 and circular economy approaches needed to achieve 2030 goals; followed by a panel discussion on various issues contextualized around the SDGs.

the international water association

Implementation of NAMA: Improving Waste Management in India

The Greenhouse Gas (GHG) emissions from solid waste disposal (SWD) sites are expected to increase from 13.75 MtCO2-eq in 2011 to 22.77 MtCO2-eq in 2031 and to 39.71 MtCO2-eq in 2051. Methane is a major contributor of GHG emissions from the waste sector, emitted during the degradation of organic matter at waste disposal sites. Considering the priority of effective waste management, the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India decided to develop Nationally Appropriate Mitigation Actions (NAMAs) in the waste and forest sectors. NAMA is a mechanism under the UN Framework Convention on Climate Change (UNFCCC), under which developing countries could seek technical and financial support for GHG mitigation from an economic sector.

As part of the phase II of the Indo-German project titled 'Development and Management of Waste NAMA in India,' GIZ with TERI, as the implementing partner, is implementing low carbon measures to reduce GHG emissions from the solid waste sector in Panaji, Goa and Varanasi, UP. The project is implementing relevant waste management practices including source segregation, implementation of Material Recovery Facilities (MRF), decentralized composting, biomethanation plants, increasing awareness, capacity building, and Extended Producer Responsibility (EPR) to manage the waste generated effectively and reduce the quantity of waste landfilled. The session would focus on sharing lessons learnt by different stakeholders on best waste management practices from Varanasi and Panaji and on the way forward to develop and replicate the decentralized waste management techniques in other municipalities.

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of:
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
of the Federal Republic of Germany

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TOWARDS 2030 GOALS
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Norwegian Embassy

The Royal Norwegian Embassy in New Delhi is proud to be Country Partner at the World Sustainable Development Summit (WSDS) 2020.

Our collaboration is based on the conviction that India plays a crucial role for the World to attain the Sustainable Development Goals, and our global climate targets. In addition, India's geopolitical standing, its large population, long coastline and, not least, its booming economy make India an increasingly influential regional and global player.

Ties between Norway and India date back to the 1600s, when a Danish-Norwegian trading station was established in Tranquebar (Tharangambadi), which lies in today's Tamil Nadu. Norway's first consulates in India opened in Kolkata and Mumbai as early as 1845 and 1857, respectively. In 1952, the "India fund" was established in Norway, with the aim to provide development assistance with a focus on fisheries. The same year, Norway opened its Embassy in New Delhi.

India and Norway are deepening our bilateral relationship in many fields. In 2018, the Norwegian government launched a new "India Strategy" which gave renewed impetus to our bilateral cooperation and directs the thematic priorities until 2030. It focuses on five areas: Democracy and a rules-based world order; the Oceans; Energy; Climate and Environment; and Research, higher education and global health.

In recent years, Norway has significantly strengthened its presence in India. The Consulate General in Mumbai re-opened its doors in 2015. It was joined by Innovation Norway, the Norwegian government's official trade representative, which now has offices both in Mumbai and the capital. In 2019, Norwegian Prime Minister Erna Solberg inaugurated the newly constructed and energy-efficient Embassy complex in New Delhi, which is one of Norway's largest bilateral embassies. More than 120 Norwegian companies have established themselves in India, and the exchanges through our institutional collaboration in research and technology are extensive.

The British High Commission represents the UK Government in India in maintaining and developing relations between the UK and India. We enhance the India-UK relationship - that is stronger, wider, and deeper - generating more jobs, more growth and more security for our two nations. The UK-India relationship is founded on a broad range of mutual interests. We work closely together on issues as diverse as education and research, energy security and climate change, security and defence, international relations.

EXCEL was started in 1941 by Mr Champraj Chaturbhuj Shroff, a chemistry graduate, with the explicit purpose of developing indigenous technology to produce world-class chemicals.

Over the years, Excel came to be known as an industry leader in the area of agro-chemical intermediates, specialty chemicals, and pharmaceutical intermediates and actives.

Excel is also a pioneer and technology leader in the rapid conversion of municipal solid waste to organic compost.

Agro-chemical intermediates of the Company fine application in pesticides, insecticides, weedicides, and fungicides. Specialty chemicals are used for polymers, paints, dyes, soaps and detergents, water treatment, mining chemicals, etc.

Besides serving the country and community through their products and services, Excel and other group companies, under the able guidance of the Shroff family, established a number of non-profit voluntary service organizations with dedicated staff and volunteers, to serve different needs in different geographical locations. Excel has always believed in giving back to the country and community.

The Company is currently managed by the Executive Chairman, Mr Ashwin C. Shroff; Managing Director, Mr Ravi A. Shroff, and Executive Director, Mr Hrishit A. Shroff.

The Company had a turnover of Rs 830 crore for the year ending 31 March 2019.

The Company is listed on BSE and NSE.

MORRIS GARAGES
Since 1924

MG Motor India (MGMI) is a Private Limited Company, duly incorporated on 7th February 2017. The story of MG (Morris Garages) began in 1924 in the UK. In the years that followed, MG's stunning sports cars and cabriolets were the ride of choice for many celebrities, including British Prime Ministers and several members of the British Royal Family. MG has a long and storied history as an iconic British racing brand, having dominated championships the world over. Since then, MG has evolved into a modern day innovative brand and has continued to be a style icon through the last 93 years. The MG brand is driven by innovation, imagination and passion. As one of the world's most celebrated car brands, MG is poised to extend its proud legacy to Indian roads with a clear vision to build the 'next generation automotive company', while delivering the best automotive experience of its kind for customers – one that reflects the MG heritage, sporting legacy and sheer class. MGMI is a wholly owned subsidiary of SAIC Motor Corporation Limited. MGMI recently inaugurated its first manufacturing facility on September 21, 2017, at Halol, Gujarat. The company has launched the MG ZS EV, India's first pure electric internet SUV, at a price of INR 20.88 lakhs (ex-showroom, New Delhi).

Messe München

About Messe Muenchen India

Messe Muenchen India works closely with industry stakeholders to deliver well researched and professional trade fairs keeping in mind the priorities of the customers. With its head office in Mumbai and regional representation in New Delhi, Bengaluru and Chennai, Messe Muenchen India bring professionals from across sectors together for business, learning and networking opportunities.

As one of the leading organizer of B2B trade fairs, Messe Muenchen India organizes analytica Anacon India, bauma CONEXPO INDIA, drink technology India, electronica India, IFAT India, Intersolar India, India Lab Expo, Indian Ceramics, LASER World of PHOTONICS INDIA and productronica India.

Messe Muenchen India is a fully owned subsidiary of Messe Muenchen GmbH, founded in 2007 with a full time workforce of over seventy professionals.

About Messe München

With 10 subsidiaries in Europe and in Asia, and over 60 foreign representatives covering more than 100 countries, Messe München has a network that spans the globe. Worldwide, more than 30,000 exhibitors from over 100 countries and more than two million visitors from over 200 countries participate in fairs and exhibitions in Munich each year. In addition, Messe München organizes trade fairs in Europe, Asia, Russia, the Middle East and South America.

The Asian Development Bank (ADB) is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members — 49 from the region. Its main instruments for helping its developing member countries include policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Bloomberg Philanthropies

Bloomberg Philanthropies invests in 510 cities and 129 countries around the world to ensure better, longer lives for the greatest number of people. The organization focuses on five key areas for creating lasting change: Arts, Education, Environment, Government Innovation, and Public Health. Bloomberg Philanthropies encompasses all of Michael R. Bloomberg's giving, including his foundation and personal philanthropy as well as Bloomberg Associates, a pro bono consultancy that works in cities around the world. In 2018, Bloomberg Philanthropies distributed $767 million. For more information, please visit bloomberg.org or follow us on Facebook, Instagram, YouTube and Twitter.

European Union

The European Union is a unique economic and political union between 28 European countries that together cover much of the continent. The EU started out as an economic cooperation, leading to the creation of a single market for good, services and people. The Union is now evolved into an organization spanning policy areas, from climate, environment and health to external relations and security, justice and migration. The EU is based on the rule of law: everything it does is founded on treaties, voluntarily and democratically agreed by its member countries. The EU is governed by the principle of representative democracy, with citizens directly represented at Union level. The EU has some of the world's highest environmental standards. Environment policy helps green the EU economy, protect nature, and safeguard the health and quality of life of people living in the EU. EU energy policy aims to ensure security of supply, competitiveness and sustainability. A European Energy Union aims to ensure secure, affordable and climate-friendly energy for EU citizens and businesses: Energy will flow freely across national borders in the EU. New technologies, energy efficiency measures and renewed infrastructure will help cut household bills, create new jobs and boost growth. Europe will become a sustainable, low-carbon and environmentally-friendly economy leading the way in renewable energy and the fight against global warming, through ambitious energy and climate targets: By 2020: Reducing greenhouse gases by at least 20% (Compared to 1990 levels); 20% of energy from renewable sources; 20% energy efficiency improvement. By 2030: 40% reduction in greenhouse gas emissions; At least 27% EU energy from renewables; Increase energy efficiency by 27-30%; 15% electricity interconnection. By 2050: 80-95% cut in greenhouse gases.

The Natural Resources Defense Council (NRDC) is an international environmental organization, founded in 1970, with more than 3 million members and supporters. Working in India for over 10 years, NRDC focuses on developing and implementing climate change and clean energy solutions in India.

In India, NRDC partners with premier experts – including national, state, and local governments – to advance cutting-edge scientific and policy research, analysis, and innovations in three interconnected areas – renewable energy, cooling and efficiency, and climate resilience and health. Leading Indian organizations partnering with NRDC include the Administrative Staff College of India (ASCI), The Energy and Resources Institute (TERI), the Public Health Foundation of India (PHFI), the Council on Energy, Environment and Water (CEEW), Self Employed Women's Association (SEWA), Skill Council for Green Jobs (SCGJ), among others.

NRDC's renewable energy work aims to expand solar and wind energy toward achieving India's climate targets. To increase rural energy access, NRDC works to implement clean energy solutions to provide power for livelihoods, alleviate poverty, and improve the lives of poor communities. NRDC also works with partners to develop solutions to increase financial investment into India's clean energy markets and support strong renewables policy through clean energy employment analysis.

With rising temperatures, increasing consumer power, and rapid urbanization, the demand for cooling is growing in Indian cities. NRDC's cooling and efficiency work integrates phasing down dangerous greenhouse gases, hydrofluorocarbons (HFCs), while increasing air conditioner and building efficiency, including cool roofs.

Given the air pollution crisis across India compounded by climate change, NRDC and partners work at the national, state, and city levels to improve the air quality and promote health risk communication strategies to minimize exposure to climate change risks across Indian cities. NRDC's work in the cities also focuses on expanding the electric vehicles (EV) market in India to improve air quality and energy security.

NRDC's work in India aligns with our overall global efforts on climate change and clean energy in China, the United States and elsewhere. NRDC leverages our work in India to strengthen international climate cooperation to limit global warming to 1.5°C.

A market leader in mobility solutions, Lithium was established in late 2014 to encourage an environmentally friendly solution to the rampant air pollution in the country, thereby bringing electric mobility to the forefront of transportation. The largest electric fleet outside China, Lithium runs its 1,000+ fleet for more than 25+ Fortune 500 companies across Bangalore, Delhi, Gurgaon, Noida, Hyderabad and Pune, with plans to start operations in Chennai and Mumbai. In the last five years of operations, its fleet has covered approximately 90 million e- kilometres and abated about 20,000 MT of carbon emissions. Lithium is India's first zero emission electric mobility service, with its own fleets of Electric Vehicles (EVs) and associated charging infrastructure, backed by a strong technology platform that involves telematics, fleet management systems, scheduling, rostering and analytics-based optimisation; and trained and certified drivers. This integrated offering has saved clients up to 40% in transportation costs. As a socially conscious company, Lithium has received the ISO 26000 certification for exemplary work in guidance on social responsibility. Lithium's institutional investors includes LGT Capital and International Finance Corporation (a World Bank Group Co).

McKinsey & Company

McKinsey & Company is a global management consulting firm committed to helping organizations create Change that Matters. In more than 130 cities and 65 countries, our teams help clients across the private, public and social sectors shape bold strategies and transform the way they work, embed technology where it unlocks value, and build capabilities to sustain the change. Not just any change, but Change that Matters –for their organizations, their people, and in turn society at large.

NABARD

NABARD is India's apex development bank, formed by an Act of Parliament in 1982 and wholly owned by the Government of India (GoI). Its mandate is promoting sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing prosperity. From being a pure refinance provider in 1982 to India's apex development bank in 2020, NABARD, today, directly and indirectly, touches lives of millions in rural India. This journey of last nearly four decades has seen the institution defining a clear and purposeful role for ourselves in rural India and seen us playing a larger role in nation building.

NABARD, as a unique Financial Institution, has always operated with a single mission to 'promote sustainable and equitable agriculture and rural prosperity'.

NABARD's Head Office is located in Mumbai and has a pan-India presence with 31 Regional Offices. NABARD has a phenomenal district level outreach with 423 District Development Managers engaged in rural development. The institution has its training establishments situated in Bolpur, Lucknow and Mangalore, which serve the capacity building requirements of rural financial institutions across the country and Asia Pacific countries, besides our own staff.

NABARD's functions are aimed at building an empowered and financially inclusive rural India through specific goal-oriented departments, which can be categorized broadly into three heads of activities: Financial, Developmental and Supervision. These three broad heads enable us to touch almost every aspect of rural economy: providing refinance support, building rural infrastructure, preparing district level credit plans, guiding and motivating the banking industry in achieving credit targets, supervising Cooperative Banks and Regional Rural Banks (RRBs), helping them develop sound banking practices, enabling them to on-board to the CBS platform, designing new projects for rural development, implementing GoI's development schemes, training

handicraft artisans and providing them a marketing platform for selling their articles among others.

The whole gamut of NABARD's functions and activities, unique across the world, focuses on the attainment of sustainable development. NABARD, being National Implementing Entity for Adaptation Fund and National Adaptation Fund for Climate Change(NAFCC) and Direct Access Entity for Green Climate Fund(GCF), is responsible for overall management of these three funds in country.

World Vision
INDIA

World Vision India is one of the country's largest child-focused humanitarian organisations.

With over six decades of grassroots experience, we employ proven, effective development, public engagement and relief practices empowering vulnerable children and communities living in contexts of poverty and injustice to become self-sufficient and bring lasting change. We serve all children regardless of religion, race, ethnicity or gender.

World Vision India works in 140 districts impacting 26 lakh children and their families in over 6200 communities spread across 26 states and the National Capital Region of India to address issues affecting children in partnership with governments, civil society, donors and corporates.

BCC&I
THE BENGAL CHAMBER

The Bengal Chamber of Commerce and Industry (BCC&I), India's oldest institution of its kind, traces its origins to 1833. The Chamber has played a pioneering role as a helmsman, steering the evolution of commerce and industry in India.

The Chamber's vision is to be the most valued partner of commerce, industry, academia, professionals, and governments for achieving inclusive growth and employment generation together with the accomplishment of societal and environment needs.

Donning multiple hats as catalyst, initiator, facilitator, business partner, and service provider, the Chamber has helped governments, both at the Centre and State in crafting pioneering and significant legislation.

Today, the Chamber's range of operations is diverse and has been evolving over time.

The Chamber is deeply involved in areas, such as healthcare, education, energy and environment, information technology, finance and banking, corporate governance, MSME development, manufacturing, infrastructure, tourism – to name a few, and has now assumed a multifaceted role.

The Bengal Chamber's linkages with overseas governments, businesses, and institutions are growing stronger by the day, and it has created relevant B2B platforms for both inward and outward investments by hosting delegations and taking regular business missions spanning continents. It has over 30 sector/area-specific committees, catalysing business growth, industrial development, and socio-economic progress.

The Chamber has, over the last many years, been providing a relevant and sustainable forum towards promoting clean technology access and energy and environment management. A continuous endeavour has been to focus on sustainable development and disseminate information and educate business, industry, and society about the need for balancing industrial growth with ecological stability. This is the maxim of the Chamber's Energy and Environment Committee.

The Bengal Chamber's annual Environment and Energy Conclave, an international forum for climate change mitigation and business response, is held every August and it is the preferred forum for discussing environmental and climate challenges, in addition to mitigation actions in sync.

Since 2010, Eco365 has been helping properties across India to save water through water-efficient fixtures. The adoption of Eco365 solutions could result in better conservation of water and energy, minimize waste, protect our environment, and contribute to a healthier existence.

Awards & recognitions

- The National Entrepreneurship Award (NEA) 2019
- Indian of the Year 2017
- Green Excellence Award 2018
- Media coverage by: News18TV, HistoryTV18, The Hindu, The Indian Express, The Times of India, The Better India, Yourstory.com, etc.

Water-efficient fixtures include:

- Low water flow aerators and regulators for existing taps
- Low water flow showerheads
- Low water flushing toilets
- Waterless urinals
- Water-efficient taps

Till date, Eco365 has saved 35 billion litres of fresh water in India. With the help of Eco365 fixtures, it was possible to retro-fit existing plumbing fixtures, such as taps, shower, and toilets, thereby reducing the overall water consumption. The reduction of water wastage on existing taps was by 98%; at showerheads, up to 60%, toilets up to 20%, and urinals up to 100%. The innovative solutions to save water are easy to adopt, cost effective, and game-changing given the current water situation of our country.

Eco365's 12 key achievements are:

1. Can reduce water wastage by up to 98%, thereby saving energy and money
2. Boasts of subject experts on water efficiency
3. Saved 35 billion litres of water in India
4. Has a clientele of 2000+ corporate and residential apartments
5. Has a 4.5/5 rating on Amazon.in

6. Won numerous awards
7. Covered by 20 + leading media channels
8. Has been a prominent TED speaker (founder)
9. Invited by IGBC/Rotary/RSS to speak on water conservation
10. Has a complete range of water-savers for homes, offices, schools, and government buildings
11. In talks with overseas customers. Recently appointed partners in Saudi Arabia
12. Ventured in bio-plastic business in 2016

For more information, visit: www.eco365.co.in

The Energy Transitions Commission (ETC) brings together a diverse group of individuals from the energy and climate communities: investors, incumbent energy companies, industry disruptors, equipment suppliers, energy-intensive industries, non-profit organizations, advisors, and academics from across the developed and developing world. Their aim is to accelerate change towards low-carbon energy systems that enable robust economic development and limit the rise in global temperature to well below 2 °C. The ETC is co-chaired by Lord Adair Turner and Dr Ajay Mathur. The ETC members agree on the importance of cutting carbon emissions, and share a broad vision of how the transition to a low-carbon energy system can be achieved.

Mercom Communications India, a subsidiary of US-based Mercom Capital Group, is a clean energy research and communications firm, recognized worldwide for its expertise in Indian renewable energy markets. Located in Bengaluru, Mercom has been providing communications and research services across India for clean energy organizations since early 2009.

PRINCE ALBERT II
OF MONACO
FOUNDATION

The Foundation, created by His Serene Highness Prince Albert II of Monaco, is active in the fields of climate change and renewable energies, biodiversity, water, and combating desertification. It supports projects in specific geographical areas such as the Mediterranean Basin, the Polar regions, and the least developed countries, in order to promote the preservation of the environment and sustainable development.

The objectives of the Foundation include raising awareness among both populations and governments of the impact of human activities on the natural environment, encouraging more environment-friendly behaviour, and promoting outstanding initiatives and innovative solutions, notably by distributing awards and grants.

The Foundation's aim is to initiate partnerships to identify and conduct joint projects in line with its fields of interest and geographical priorities.

The Rockefeller Foundation's mission—unchanged since 1913—is to promote the well-being of humanity throughout the world. Today, the Foundation advances new frontiers of science, data, policy, and innovation to solve global challenges related to health, food, power, and economic mobility. As a science-driven philanthropy focused on building collaborative relationships with partners and grantees, The Rockefeller Foundation seeks to inspire and foster large-scale human impact that promotes the well-being of humanity by identifying and accelerating breakthrough solutions, ideas, and conversations.

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2020

TOWARDS 2030 GOALS
MAKING THE DECADE COUNT

January 29-31, 2020

India Habitat Centre, Lodhi Road, New Delhi, India

THEMATIC PARTNERS

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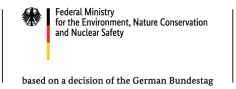
THEMATIC TRACK PARTNERS


adelphi is a leading independent think tank and public policy consultancy on climate, environment and development. Mission of adelphi is to improve global governance through research, dialogue and consultation. adelphi offers demand-driven, tailor-made services for sustainable development, helping governments, international organizations, businesses and nonprofits design strategies for addressing global challenges.

Staff of more than 200 provides high-quality interdisciplinary research, strategic policy analysis and advice, and corporate consulting. adelphi facilitates policy dialogue and provide training for public institutions and businesses worldwide, helping to build capacity for transformative change. Since 2001 we have successfully completed over 800 projects worldwide. adelphi's work covers the following key areas: Climate, Energy, Waste, Resources, Green Economy, Sustainable Business, Green Finance, Peace and Security, International Cooperation and Urban Transformation. Partnerships are key to the way we work at adelphi. By forging alliances with individuals and organizations, we help strengthen global governance and so promote transformative change, sustainable resources management and resilience. Sustainability is the foundation of our internal and external conduct.

BSES Rajdhani Power Limited

BSES Rajdhani Power Limited (BRPL) distributes power to an area spread over 750 sq. km with a customer density of ~3100 per sq. km. It's over ~2.5 million customers are spread in 21 divisions across South and West areas - Alaknanda, Dwarka, Hauz Khas, Jaffarpur, Janak Puri, Khanpur, Mundka, Najafgarh, Nangloi, Nehru Place, Nizamuddin, Palam, Punjabi Bagh, R.K. Puram, Saket, Sarita Vihar, Tagore Garden, Vasant Kunj, Vikas Puri, Uttam Nagar &

Mohan Garden. The mission of BRPL is to provide uninterrupted, affordable, quality, reliable, safe, and clean energy. It strives to nurture human values and remains concerned for society, the environment and above all, people. It aims to contribute towards community development and nation building.

BRPL is the supporting partner under US-India collaborative for smart distribution System with Storage. TERI with support from BRPL has conducted a detailed feasibility study within BRPL license area in the NCT of Delhi, and identified few locations to implement pilot to showcase BESS capabilities at the distribution level and develop appropriate model-cases

BSES Yamuna Power Limited

BSES Yamuna Power Limited (BYPL) has been the frontrunner in implementing power distribution reforms in the capital city of Delhi and is acknowledged for its quality, reliable power supply and customer friendly practices. BYPL is a joint venture between Reliance Infrastructure Limited and Govt. of NCT of Delhi with a 51%: 49% shareholding. The company started operations on July 1, 2002 post the unbundling of the erstwhile Delhi Vidyut Board (DVB). The company's operations span across its license area of 200 sq km in the Eastern and Central parts of the National Capital.

For a greater reach and easy serviceability, the company serves its customer base through its THREE CIRCLES (South-East, North-East & Central) & FOURTEEN DIVISIONS (Chandni Chowk, Darya Ganj, Dilshad Garden, Jhilmil, Karawal Nagar, Krishna Nagar, Laxmi Nagar, Mayur Vihar, Vasundhara Enclave, Nandnagri, Pahar Ganj, Patel Nagar, Shankar Road and Yamuna Vihar).

Since privatization, the Aggregate Technical & Commercial (AT&C) losses in its areas have shown a record decline. From a high of 63.1% in 2002, the AT&C losses have come down to single digit levels i.e. 8.98% levels, a reduction of over 54%. BYPL is actively working in distributed Battery energy storage systems area at electricity distribution level.

EBTC was institutionalised as a multi stakeholder project in 2008 and co-funded by the European Commission that transitioned into an independent not-for-profit organisation. EBTC contributes to the economic ecosystem of the fastest growing economy and its natural partners for a multilateral cooperation, through collaborations for sustainable technologies and innovations. Its collaborative platforms, clusters and body of knowledge cater to the demands of governments and the private sector for enhanced economic activity. EBTC's clusters, projects, programme and cooperation with governments is based on the assessment of the local demands leading to collaborations and multi-stakeholder engagements. They also contribute in building business ecosystems by creating joint value propositions and managing and enabling stakeholders from India and Europe. It acts as an enabler for Europe India collaborations by underpinning several partnerships between both the countries. Their focus is on three strategic areas: Projects, Advisory and Investment that can facilitate India Europe ties. India has been the focal point for EBTC and continuous to be because the country's multiple development and growth related initiatives and strategies offer European entities an enabling environment for entering into cooperation or exploring investment opportunities.

Climate Action Network South Asia (CANSA) is a coalition of over 150 civil societies organisations working in 08 South Asian countries to promote government and individual action to limit human-induced climate change in a manner that promotes equity and social justice between peoples, sustainable development of all communities and protection of the global environment.

CANSA has been at the forefront of representing the southern perspectives at international climate negotiations and undertakes inter-governmental, regional, and national actions. With its large membership base CANSA works towards linking policy work, research and action based work in the region to address and set workable solutions to the adverse effects of climate change affecting the region.

CDP is a not-for-profit charity that runs the global disclosure system or investors, companies, cities, states and regions to manage their environmental impacts by running a global environmental disclosure system. Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation. We do so at the request of their investors, purchasers and city stakeholders.

Over the last two decades we have created a system that has resulted in unparalleled engagement on environmental issues worldwide. In 2019, over 8,400 companies reported through CDP on climate change, water security and forests, and, over 800 cities and more than 120 states and regions disclosed their environmental impacts through CDP.

CDP India

CDP began working in India in 2008 and was formally registered in 2012, working on disclosure and driving climate action. It serves as a source of knowledge for hundreds of Indian corporations, from those that are just beginning on the road to corporate environmental disclosure, through to those looking to improve sustainability and make commitments to reduce environmental impact.

It is the only NGO to be named in India's INDC submission to the UNFCCC owing to its corporate environmental data repository and tracking of emissions and mitigation data from the Indian Industry. CDP India also actively participated in Government of India's Ministry of Environment, Forests & Climate Change (MoEFCC) work on future carbon market mechanisms. In addition to our work on disclosure, CDP India is actively engaged in other initiatives including Internal Carbon Pricing (ICP), Science-based targets (SBT) and RE100.

CESC Liited is India's first fully integrated electrical utility company and we've been on an epic ride ever since 1899 in generating and distributing power in Kolkata and Howrah. CESC's private participation in generation, transmission and distribution of electrical power. CESC is the sole distributor of electricity within an area of 567sq km of Kolkata & Howrah and serve 2.9 million consumers which include domestic, industrial and commercial users. It owns & operates three thermal power plants generating 1125 MW of power. These are Budge Budge Generating Station (750 MW), Southern Generating Station (135 MW), & Titagarh Generating Station (240 MW) . From these three generating stations, CESC accomplishes 88% of our customer's electricity requirement and remaining 12% is achieved by purchase of electricity from third parties. More than 50% of coal is sourced from captive mines for generation of electricity in our generating stations.

TERI has conducted prefeasibility study for integration of battery energy storage at distribution level and behind the meter applications for CESC.

Center for Study of Science, Technology and Policy (CSTEP) is a not-for-profit research organisation incorporated in 2005 u/s 25 of The Companies Act, 1956. As one of the largest Think Tank in South-East Asia, its mission is to enrich policy-making with innovative approaches using science and technology for a sustainable, secure and inclusive society. CSTEP has grown to become a multi-disciplinary policy research organisation in the areas of Energy, Infrastructure, Materials, Climate Adaptation and Security Studies.

CSTEP is recognised as a Scientific and Industrial Research Organisation by the Ministry of Science and Technology, Government of India. The Center is supported by the grants from domestic and international foundations, industry trusts and governments. Grants and donations made to CSTEP are eligible for exemptions u/s 80 (G) of the Income Tax Act, 1961. CSTEP is also registered under the Foreign Contribution (Regulation) Act, 2010. CSTEP has on its Board people from various back grounds and with relevant and rich experience. The board members represent reputed organisations to include, government, corporate, academics, philanthropists and from administrative services.

In addition to this, CSTEP has built a multi-disciplinary research capacity to include economists, policy specialists and social scientists, IT experts, etc to ensure that the research conducted have a long-term impact and have meaningful outcomes by incorporating social and economic perspectives to a scientific solution. CSTEP constantly aims at science and technology enabled policy options for an inclusive and equitable economic growth.

Founded in 1925, DIW Berlin (the German Institute for Economic Research) is one of the leading economic research institutes in Germany. The institute analyzes the economic and social aspects of topical issues, formulating and disseminating policy advice based on its research findings. DIW Berlin is part of both the national and international scientific communities, provides research infrastructure to academics all over the world, and promotes the next generation of scientists. A member of the Leibniz Association, DIW Berlin is independent and primarily publicly funded.

European Union

The European Union is a unique economic and political union between 28 European countries that together cover much of the continent. The EU started out as an economic cooperation, leading to the creation of a single market for good, services and people. The Union is now evolved into an organization spanning policy areas, from climate, environment and health to external relations and security, justice and migration. The EU is based on the rule of law: everything it does is founded on treaties, voluntarily and democratically agreed by its member countries. The EU is governed by the principle of representative democracy, with citizens directly represented at Union level. The EU has some of the world's highest environmental standards. Environment policy helps green the EU economy, protect nature, and safeguard the health and quality of life of people living in the EU. EU energy policy aims to ensure security of supply, competitiveness and sustainability. A European Energy Union aims to ensure secure, affordable and climate-friendly energy for EU citizens and businesses: Energy will flow freely across national borders in the EU. New technologies, energy efficiency measures and renewed infrastructure will help cut household bills, create new jobs and boost growth. Europe will become a sustainable, low-carbon and environmentally-friendly economy leading the way in renewable energy and the fight against global warming, through ambitious energy and climate targets: By 2020: Reducing greenhouse gases by at least 20% (Compared to 1990 levels); 20% of energy from renewable sources; 20% energy efficiency improvement. By 2030: 40% reduction in greenhouse gas emissions; At least 27% EU energy from renewables; Increase energy efficiency by 27-30%; 15% electricity interconnection. By 2050: 80-95% cut in greenhouse gases.

"Observing, Analysing, Acting" under this motto Germanwatch has been engaged since 1991 for global equity and the preservation of livelihoods. The politics and economics of the North, with their global consequences, stand at the centre of our work.

The situation of marginalised people in the South form the starting point for our engagement for sustainable development. The political and globalised market structures of the North, as well as their resource-intensive mode of production, which is now being increasingly imitated, are influencing human lives worldwide.

We advocate for a political, economic and social framework which can ensure a future for the people of the South, who are being pushed to the margins of society through unbridled globalisation and whose very existence is threatened by the loss of their ecological and economic foundations of their livelihoods.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. The diverse expertise of our federal enterprise is in demand around the globe – from the German Government, European Union institutions, the United Nations, the private sector and governments of other countries. We work with businesses, civil society actors and research institutions, fostering successful interaction between development policy and other policy fields and areas of activity. Our main commissioning party is the German Federal Ministry for Economic Cooperation and Development (BMZ). GIZ has been working jointly with partners in India for sustainable economic, ecological, and social development. The GOI has launched numerous important initiatives to address the country's economic, environmental and social challenges, and GIZ is contributing to some of the most significant ones.

A full-fledged Department of Power under Government of West Bengal came into being on 19th September, 1972. Until then, matters pertaining to power were being looked after by the Electricity Development Directorate under the Department of Commerce & Industries. The driving forces/factors behind the decision to create a separate department under the stewardship of a Minister-in-charge of cabinet rank were:

Urgent requirement of more power for accelerating the economic growth of the state

Need for long term perspective planning for generation of power and execution of power projects.

Planning and overseeing appropriate investments in the power sector, both in the public and private domains.

Enactment of appropriate legislation and framing of rules to facilitate the expeditious development of infrastructure in generation, transmission and distribution of electricity in the state.

Need for coordinating and dovetailing the activities of various power generation and distribution utilities in the state cohesively.

The Non-conventional Energy Sources wing was transferred to this department on 18th April of 2001 from the Department of Science & Technology to ensure better co-ordination and integration of renewable energy in the overall development of the sector. The Department has drawn up ambitious plans for installing 100 MW Grid Connected Ground Mounted Solar PV Power Plant and Grid Connected Roof top Solar PV Power Plants.

The process of reforms in power sector in West Bengal began in 2005, with restructuring of erstwhile West Bengal State Electricity Board (WBSEB) into the Transmission and Distribution utilities in 2007:

West Bengal State Electricity Distribution Company Ltd. (WBSEDCL) – Distribution Company

West Bengal State Electricity Transmission Company Ltd.

(WBSETCL) – Transmission Company

The generation function of erstwhile state utility has been organized under a separate entity, West Bengal Power Development Corporation Ltd. (WBPDCL). Established in 1985, WBPDCL is responsible for thermal power generation in the State, while hydro generation is being undertaken by the then WBSEB till the time of unbundling has been currently transferred to WBSEDCL.

The State Regulatory Commission, West Bengal State Electricity Regulatory Commission (WBERC) was established in 1999. Department of Power & Non Conventional Energy Sources is at present functioning from The Bidyut Unnayan Bhavan (5th Floor), 3/C, LA Block, Sector-III Salt Lake City, Kolkata-700 098.

The State is now in a position to export power to other states after meeting its internal demand fully and the surplus power in often banked with the states having deficits and the same is returned to the state in the critical summer months. Many more power projects are coming-up, suitably programmed to meet the projected demand growth until the end of the 13th plan period.

The stress, now, is on the commensurate strengthening of the transmission and distribution network in the state to widely disperse the availability of quality power, amongst 1.8 crore consumers, especially in rural Bengal. Development of a state-of-the-art IT facility with state-wide coverage has already been undertaken which has resulted in improvement of consumer services by the various utilities in the state. Steps have also been taken for implementation of ERP and other IT interventions which will revolutionize the way the business is conducted in these utilities and the Directorates.

ICAT is an unincorporated multi-stakeholder partnership of: the Children's Investment Fund Foundation (CIFF); ClimateWorks Foundation (CWF); the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU); and the Italian Ministry for the Environment, Land and Sea (IMELS). The UNFCCC secretariat as the dedicated UN body with a climate change policy mandate is a special partner and represented on ICAT's board. UNOPS provides management and support services through the ICAT Secretariat, which coordinates day-to-day activities and guides the work of ICAT's implementing partners: the UNEP-DTU Partnership, Verra, World Resources Institute (WRI), and the Institute for Environmental Protection and Research (ISPRA).

ICAT was founded to respond to the critical need of improved transparency and capacity building for evidence-based policymaking under the Paris Agreement. ICAT works to increase the overall transparency capacities of countries, including the capacity to assess the contribution of climate policies and actions on countries' development objectives, and provide appropriate methodological information and tools to support evidence-based policy-making.

The Institute for Global Environmental Strategies (IGES) was established in March 1998 under an initiative of the Japanese government and with the support of Kanagawa Prefecture. IGES made the transition to a Public Interest Incorporated Foundation in April 2012.

The aim of the Institute is to achieve a new paradigm for civilization and conduct innovative policy development and strategic research for environmental measures, reflecting the results of research into political decisions for realising sustainable development both in the Asia-Pacific region and globally.

IGES operates as an agent of change. Together with key international organizations, governments, academic institute, business and civil society leaders the institute seeks to foster a world where planetary boundaries are fully respected, green economy is flexibly implemented, and the well-being of people is steadily improved. In so doing, the institute emphasises workable and inspired approaches to cross-cutting global development issues ranging from climate change, natural resources and ecosystems management, and sustainable consumption and production, among others.

The institute maintains its international headquartes in Hayama, Japan. With offices and country desks in Tokyo, Kansai, Kitakyushu, Beijing, Bangkok, and New Delhi, IGES supports a regional and global network for ground breaking sustainable development research and practices.

The International Water Association (IWA) is a global organization that works with an interdisciplinary network of water professionals and partners to create a water wise world. IWA is the global reference point for water professionals working in all aspects of the water cycle. Our network of around 10,000 members and over 500 companies worldwide enables us to help water professionals deliver innovative, pragmatic and sustainable solutions to challenging global needs. Drawing on the over 70-year heritage, we combine global expertise in research, practice, regulation, engineering, consulting, industry and manufacturing.

IWA works across a wide range of issues covering the full water cycle, with three programs (Basins of the Future, Cities of the Future, Water and Sanitation Services) that work towards achieving the Sustainable Development Goals and addressing the threat to sustainable water supplies posed by climate change.

Water underpins every aspect of human and environmental existence. The severe water challenges facing the world today require an unprecedented global response. IWA members and staff are situated in 130 countries worldwide, forming the largest international network of water professionals working towards a water wise world.

Our programs develop research and projects focused on solutions for water and wastewater management; we organize world-class events that bring the latest science, technology and best practice to the water sector at large; we work to place water on the global political agenda and to influence best practice in regulation and policy making; and we do this via the IWA's global membership.

MacArthur Foundation

"The John D. and Catherine T. MacArthur Foundation is one of the largest private foundations in the United States. Based in Chicago, MacArthur has awarded more than $7.1 billion to nearly 10,000 effective organizations and creative individuals in 116 countries since its inception in 1978. The Foundation's grantmaking priorities include advancing global climate solutions, decreasing nuclear risk, promoting local justice reform in the U.S., and reducing corruption in Africa's most populous country, Nigeria."

The Mahindra Group is a USD 20.7 billion federation of companies that enables people to rise through innovative mobility solutions, driving rural prosperity, enhancing urban living, nurturing new businesses and fostering communities. It enjoys a leadership position in utility vehicles, information technology, financial services and vacation ownership in India and is the world's largest tractor company, by volume. It also enjoys a strong presence in agribusiness, aerospace, commercial vehicles, components, defense, logistics, real estate, renewable energy, speedboats and steel, amongst other businesses. Headquartered in India, Mahindra employs over 2,40,000 people across 100 countries.

Formally approved as an inter-institutional research institute by the University of North Carolina General Administration in January 2011, NCICS is a unique center of excellence showcasing a partnership between universities, the private sector, non-profit organizations, community groups, and the federal government. NCICS' primary activity continues to be the operation of the NOAA Cooperative Institute for Climate and Satellites–North Carolina (CICS-NC), which was founded in 2009. CICS-NC's mission is facilitated by its co-location with our primary NOAA sponsor, the National Centers for Environmental Information (NCEI), in the Veach-Baley Federal Complex in Asheville, North Carolina. Other extramural support continues to expand, however, including federal projects supported by NSF, DoD SERDP, and NASA as well as several smaller private industry project awards.

Main Objectives

- promote discovery of new knowledge about global, regional, and local climate variability and its impacts, and
- provide information that is critical for determining trends and validating climate forecasts at all of these spatial scales.

Underpinning all of these activities is the fundamental goal of enhancing our collective interdisciplinary understanding of the state and evolution of the full Earth System.

Our Mission

- Promote collaborative research into the use of in situ and remotely sensed observations in Earth system research and applications, led by NOAA's National Centers for Environmental Information
- Innovate new products and methods to understand the state and evolution of the full Earth system
- Facilitate regional economic development through its engagement activities

- Prepare the next generation of the workforce needed to address climate science and its applications
- Engage with corporate leaders to develop a climate-literate society

Vision

- Inspire cutting-edge research and collaboration
- Advance understanding of the current and future state of the climate
- Engage with business, academia, government, and the public to enhance decision making

NOAA's roots reach back more than 200 years but was officially formed in 1970 by combining together 3 former individual agencies: U.S. Coast and Geodetic Survey (as the Survey of the Coast);1807, The Weather Bureau; 1870 and the U.S. Commission of Fish and Fisheries; 1871. It is America's environmental intelligence agency that enriches life through science. Their reach goes from the surface of the sun to the depths of the ocean floor as they work to keep the public informed of the changing environment around them.

Mission

- To understand and predict changes in climate, weather, oceans, and coasts;
- To share that knowledge and information with others; and
- To conserve and manage coastal and marine ecosystems and resources.

Vision for future

- Resilient Ecosystems, Communities, and Economies; and
- Healthy ecosystems, communities and economies that are resilient in the face of change.

Focus areas

"NOAA's mission spans from the surface of the sun to the depths of the ocean"

There are **9 focus areas** of NOAA:

- Weather
- Climate
- Oceans and Coasts
- Fisheries
- Satellites
- Research
- Marine and Aviation
- Charting
- Sanctuaries

SEED
promoting entrepreneurship
for sustainable development

SEED is a global partnership for action on sustainable development and the green economy. SEED believes entrepreneurship is key in driving sustainable development. SEED's enterprise support programmes directly assist enterprises at multiple levels of business development – from the early stages of concept building to scaling up or replication of proven business models. Its ecosystem building programmes cultivate networks of collaborators, finance and policy to support eco-inclusive entrepreneurship. SEED provides platforms for dialogue between local, national and international stakeholders and work to improve the quality of relations between these stakeholders and enterprises. SEED was founded by the United Nations Environment Programme (UN Environment), the United Nations Development Programme (UNDP) and International Union for Conservation of Nature (IUCN) at the 2002 World Summit on Sustainable Development in Johannesburg. Currently, SEED activities are funded by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Government of Flanders.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

The Swiss Agency for Development and Cooperation (SDC) has been a partner of India for more than 60 years. Since 2011, SDC's engagement focuses specifically on climate change and other environmental issues. The office in India is part of SDC's Global Programme Climate Change and Environment (GPCCE). Other SDC Global Programmes like Food Security and Water also have ongoing activities in India, as part of their regional/global initiatives.

TATA STEEL

#WeAlsoMakeTomorrow

Tata Steel Group is among the top global steel companies with an annual crude steel capacity of 33 million tonnes per annum (MTPA). It is one of the world's most geographically-diversified steel producers, with operations and commercial presence across the world. The Group recorded a consolidated turnover of US $20.41 billion (INR 133,016 crore) in FY18. In 2018, Tata Steel acquired Bhushan Steel Ltd (now renamed as Tata Steel BSL Ltd). Currently, Tata Steel's consolidated India crude steel production capacity stands at 18.6 MnTPA.

A Great Place to Work-CertifiedTM organization, Tata Steel Ltd, together with its subsidiaries, associates and joint ventures, is spread across five continents with an employee base of over 65,000.

Tata Steel retained Industry Leader position in FY18 and ranked second overall in the DJSI assessment, 2017. The Company has been recognised as the Climate Disclosure Leader in 'Steel category' by CDP (2017). Besides being a member of the World Steel Climate Action Programme, Tata Steel has won several awards including the Prime Minister's Trophy for the best performing integrated steel plant for 2016-17, Best Risk Management by CNBC TV18 (2018) and 'Corporate Strategy Award' by Mint (2018). The Company also received the 'Most Ethical Company' award from Ethisphere Institute for the sixth time (2018), Steel Sustainability Champions (2017) by the World Steel Association, Dun & Bradstreet Corporate Awards (2017 & 2018), Golden Peacock HR Excellence Award by Institute of Directors (2017 & 2018) as well as 'Asia's Best Integrated Report' award by the Asia Sustainability Reporting Awards (2017), among several others.

In 2018, the Company launched a corporate brand campaign #WeAlsoMakeTomorrow. (www.wealsomaketomorrow.com).

Uber

Uber is a ridesharing application that connects passengers with independent transportation service providers, registered with the Uber application ("Uber App"). The Uber App is currently available in 500+ cities and 80+ countries. The Uber App generates meaningful livelihood opportunities for thousands of Driver-Partners who are essentially micro-entrepreneurs. The Uber App has a number of integrated features which ensure that the transportation services provided by the Driver-Partners to the Users are safe, reliable, and affordable.

At Uber, we are committed to transforming urban mobility and reducing congestion in the City. Our vision for the Uber App is to provide an alternative to car ownership by complementing public transport, reducing dependency on the land area for parking and encouraging carpooling.

Recognizing the need to address climate change, ensure mutual energy security, and build a clean energy economy; Government of India and the United States of America agreed to expand the Indo-U.S. Joint Clean Energy Research and Development Center (JCERDC) by funding new research in two areas critical to improving the reliability, flexibility and efficiency of the electricity delivery system - Smart Grids and Energy Storage. The Government of India (through the Ministry of Science and Technology) and the U.S. Department of Energy each expect to award approximately $1.5 million per year for a period of five years, with a 50% cost share requirement from the consortium partners including the private sector. The program will be administered in India by the bilateral Indo-U.S. Science and Technology Forum (IUSSTF) and in the U.S. by the Department of Energy.

The awarded project titled "UI-ASSIST: U.S.-India collAborative for smart diStribution System wIth Storage" is led in India by the Indian Institute of Technology (IIT) Kanpur and in the United States by the Washington State University, Pullman. This collaborative project with 10 Academic and 18 Private partners from India and US aims at addressing essential issues related to the adoption and deployment of smart grid concepts along with Distributed Energy Resources (DERs) including storage in the distribution network. An important objective of the UI-Assist initiative is to bridge the gap between smart grid, storage and renewable energy research and facilitate its subsequent adoption by distribution utilities in their systems, with the joint efforts of Indo-US consortium. The JCERDC is part of the U.S.-India Partnership to Advance Clean Energy, which aims to accelerate the transition to high performing, low emissions, and energy secure economies. The activities of the JCERDC would contribute greatly to the sustainability and prosperity of not only our two countries but also the world at large by addressing global energy and environmental sustainability challenges.

The Danish Ministry of Foreign Affairs, UN Environment and the Technical University of Denmark (DTU) established UNEP DTU Partnership in 1990. It is a leading international research and advisory institution on energy, climate and sustainable development. Its work focuses on assisting developing countries transition towards more low carbon development paths, and supports integration of climate-resilience in national development through in-depth research, policy analysis, and capacity building activities. A unique scientific and operational knowledge base and a global institutional network characterises UNEP DTU Partnership. UNEP DTU employs 70 researchers of 26 different nationalities working around the world from offices in UN City, Copenhagen.

Unique position

As a UN Environment Collaborating Centre, UNEP DTU Partnership is actively engaged in implementing UN Environment's Climate Change Strategy and Energy Programme. As part of the Technical University of Denmark, one of Europe's leading universities, UNEP DTU Partnership is able to draw on a vast range of scientific expertise and to collaborate with world-leading scientific partners to conduct the research that serves as a foundation for its activities. In addition, UNEP DTU combines this with developing country expertise and network; currently have projects running in 100 countries.

Strategic Focus Area

UNEP DTU Partnership has unique research-based expertise and is a leading knowledge institution covering three main areas within climate and energy:

- Climate Policy and planning
- Climate Transparency and Accountability and
- creating Business Models and Markets for green technology

Vasudha Foundation is a non profit organisation set up in 2010, with the belief in the conservation of Vasudha, which in Sanskrit means the Earth, the giver of wealth and with the objective of promoting sustainable consumption of its bounties. VASUDHA works in Climate Change, Renewable Energy, Energy Access Solutions and Sustainable Development Goals.

WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2020

TOWARDS 2030 GOALS
MAKING THE DECADE COUNT

January 29-31, 2020

India Habitat Centre, Lodhi Road, New Delhi, India

YOUTH CONCLAVE

teri

Youth can significantly contribute to climate action but they urgently need adequate capacity building and support to make informed decisions which are aligned with achievement of Global Goals. With about 1.8 billion young people worldwide in the age group of 10- 24 years, it is important to have an active engagement with youth in decision-making processes to enable intergenerational collaborations and inclusive partnerships that collectively seek solutions which benefit our planet and it's inhabitants. As per Census Report (GoI, 2011), youth (15-24 years) in India constitutes one-fifth (19.1%) of India's total population. Youth is indeed a demographic dividend for India, and it is imperative that they play an important role in climate action.

As a part of the Strategic Partnership for Implementation of Paris Agreement (SPIPA) project of the European Union with Ministry of Environment, Forest and Climate Change (MoEFCC) as the nodal ministry, "Youth Climate Conclave" is being organized as a competitive and educative approach to enhance youth engagement for climate action. Keeping this in mind, the Youth Climate Conclave was launched on 4th October 2019. As a prelude to the final event, a series of activities- photography and blogging competitions for youth were organized. Culmination of these activities will be observed as a conclave wherein finalists of competitions along with other selected students will participate in awareness building sessions and deliberations to present their views about issues related to Climate Change. As an outcome of the conclave, a Youth Declaration on Climate Change will be drafted and presented in the WSDS 2020 to mark the culmination of the programme. This conclave is scheduled to be held from 29-31 January 2020 along with the World Sustainable Development Summit (WSDS) 2020 (http://wsds.teriin.org/), which is TERI's annual flagship programme.

Outcome of the Youth Climate Conclave

- A unique Climate Change Education (CCE) initiative for youth.
- Formulation of a Youth Declaration on Climate Action in a consultative and educative manner.

- Excellent opportunity for youth to be associated with sustainable networks dealing with contemporary environment and climate change issues
- An innovative training of youth on consensus building and global negotiations on Climate Change issues (mitigation, adaptation, finance, MRV (measurement, reporting and verification), reporting and stock taking.

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IFAT DELHI

teri

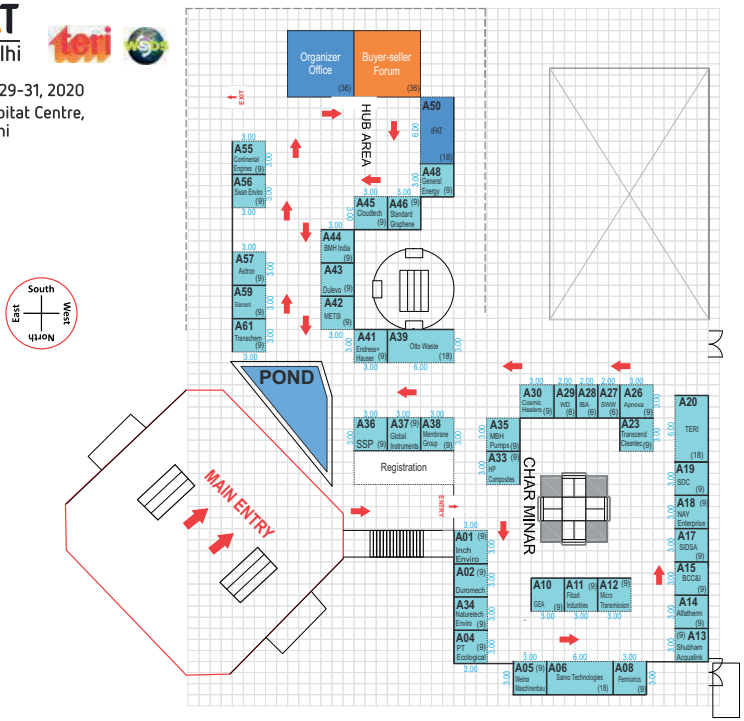
About IFAT

A world leader in the truest sense of the word, IFAT—the world's leading trade fair for Water, Sewage, Solid Waste, and Recycling—is active across the globe offering innovations, resources, and solutions, specifically to tackle those challenges present across various markets. In addition to the event in Munich, IFAT also hosts individual trade fairs in China, India, Turkey, and South Africa as part of a global network for decision makers in businesses operating in the environmental technology sector.

Messe München

IFAT Delhi

January 29-31, 2020
India Habitat Centre,
New Delhi



IFAT Delhi 2020

North India's Trade Fair for Water, Sewage, Solid Waste, and Recycling

The first edition of IFAT Delhi will be co-located with WSDS 2020. With the launch of the second edition of IFAT trade fair in India, Messe München India (MMI) aims to establish the event as a strong platform for the environment community in the country's north.

The event will showcase the latest technologies for waste water treatment, water extraction, waste management and recycling, waste-to-energy and air pollution.

Company name	Stall no.
Inch Enviro Technologies Pvt. Ltd.	A01
Thapar Engineering Works	A02
PT Ecological Services Pvt. Ltd.	A04
WEIMA Maschinenbau GmbH	A05
Sarvo Technologies Limited	A06, A07
Permionics Membranes Pvt. Ltd.	A08
Reline UV Asean Pvt. Ltd.	A09
GEA Westfalia Separator India Pvt. Ltd.	A10
Filcart Industries	A11
Micro Transmission Systems	A12
Shubham Acqualink (India) Pvt. Ltd	A13
Alfa Therm Limited	A14
The Bengal Chambers of Commeerce & Industry (BCC&I)	A15
SIDSA Environmental Pvt. Ltd.	A17
Nay Enterprise	A18
Swiss Agency for Development and Cooperation(SDC)	A19

The Energy & Resources Institute (TERI)	A20, A21
Transcend Cleantec Pvt. Ltd.	A23
Apnova Infratek Pvt. Ltd.	A26
Cosmic Healers Pvt. Ltd.	A30
HP Composites LLP	A33
Nature Tech Enviro Protection Limited	A34
MBH Pumps (Guj) Pvt. Ltd.	A35
SSP Pvt. Limited	A36
Global Instruments Company	A37
Membrane Group India Pvt. Ltd.	A38
Otto Waste Systems (India) Pvt. Ltd.	A39, A40
Endress+Hauser (India) Pvt. Ltd.	A41
Metsi Enviro Tech Pvt. Ltd.	A42
Dulevo International Spa	A43
BMH India (Samkitec Resources)	A44
Cloudtech Private Limited	A45
Standard Graphene	A46
General Energy - Management Systems Pvt. Ltd.	A48
Hermann Sewerin GmbH	A48
Continental Engines Pvt. Ltd.	A55
Swan Environmental Pvt. Ltd.	A56
Astron Solpower Pvt. Ltd.	A57
Biogest Energie Und Wassertechnik GmbH	A57
Element Materials Technology	A59
Transchem Agritech Pvt. Ltd.	A61
Jagtap Engineering Works	

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