WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2022

TOWARDS A RESILIENT PLANET:
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE

February 16-18, 2022

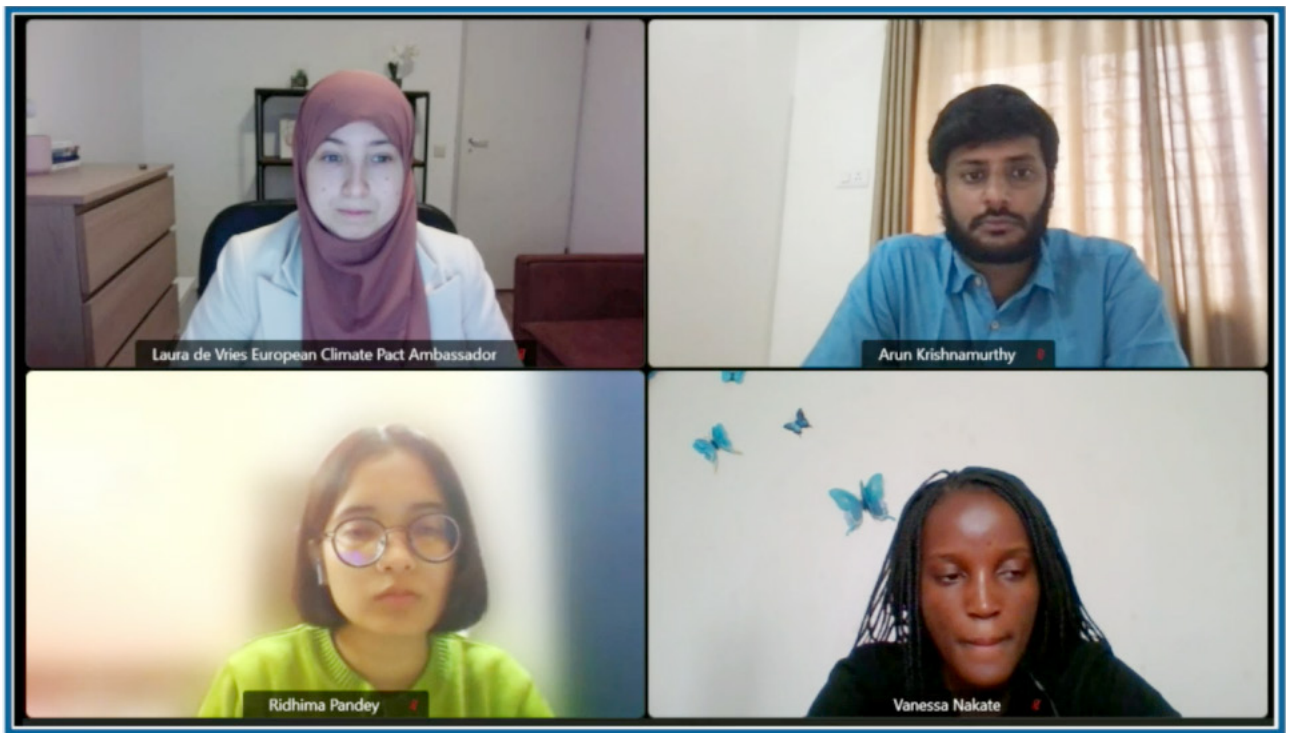
SUMMIT BULLETIN | DAY 3

YOUTH PLENARY

Virtual Hall: Gir Auditorium

INTERGENERATIONAL CONVERSATIONS TOWARDS SYSTEMIC TRANSFORMATIONS FOR ACHIEVING CLIMATE JUSTICE

Opening Remarks : H.E. Mr Ugo Astuto, Ambassador of the European Union to India and Bhutan, New Delhi; Mr Vincenzo De Luca, Ambassador of Italy to India, New Delhi
Moderator : Dr Livleen Kahlon, Senior Fellow, TERI
Youth Leadership Addresses: Ms Vanessa Nakate, Climate Activist, Uganda; Ms Laura de Vries, European Climate Pact Ambassador in Netherlands; Ms Ridhima Pandey, Climate Activist, India; Mr Arun Krishnamurthy, Founder, Environmentalist Foundation of India



Actionable Messages

Message 1 There should be dialogues where young people get the chance to discuss with the government who are responsible for actions towards climate change.

Message 2 There is a need of political will to deal with climate change.

Message 3 While proposing solutions to climate change affected communities, one should consider if it will benefit the entire community or remain accessible only to the privileged sections.

Message 4 Climate crises need to be communicated in a manner which is not boring, does not involve greenwashing and is in a language that can be comprehended by the larger population.

Message 5 Government, corporations and common people should not only work together for climate justice but also hold each other accountable.

The Youth Plenary started with Mr Kartikey Sharma touching upon the role of youth engagement in climate change adaptation efforts. In his opening remarks, H.E. Mr Ugo Astuto emphasized that there is a need to take up urgent actions to combat climate change, but countries need to work together to achieve this goal. As youth are major stakeholders in climate change adaptation, they should be involved in the systematic transition and changing paradigms that various governments are working upon. Mr Vincenzo De Luca added that as many as 400 youth from 189 countries attended the Youth Climate Summit in Milan, which shows the eagerness of young people who want to be a part in the fight against climate change. Dr Livleen Kahlon reiterated the importance of breaking shackles and working with peers. Ms Vanessa Nakate mentioned that climate disasters are unfolding across African continent and Global South. While youths are playing their part in demanding climate justice, they cannot continue alone. The older generation needs to act proactively to advance climate change adaptation. Climate justice is not only about solar panel installations or tree plantations; but it is about

improving lives of people and communities involved. Ms Laura De Vries emphasized that climate change impacts everyone and it is crucial that countries have empathy for each other. She elaborated that Climate Justice involves generational justice, justice across borders, justice within the country as well as inclusion of all stakeholders.

Ms Ridhima Pandey added that older generation needs to understand why young people have to leave classes, organize strikeouts and be climate activists demanding their rights for a sustainable future. People should have the same questions and expectations from the government as they do, for young climate activists. Mr Arun Krishnamurthy mentioned that local practices which were sustainable in the long run are eroding due to modern sophistication and increased urbanization. He stressed on the need to reconnect with nature, look at individual level solutions as well as communicate about climate crisis to the common man to bring about global change.

Post the engaging discussion with the youth plenaries, Mr Jai Kumar Gaurav, GIZ-India, announced the winners of different competitions (Photography, Blog, Short Video and Debate) of Youth Climate Conclave (YCC) organized under Strategic Partnership for the Implementation of Paris Agreement (SPIPA) project. The Youth Pledge prepared under YCC was presented by youth representatives. Ms Taru Mehta, TERI, announced the Global and Country winners of the Green Olympiad, which is TERI's flagship events aimed at school fraternity, since 1999. The session ended with Mr Kartikey thanking the ambassadors and the speakers for the informative and engaging session.

H.E. MR UGO ASTUTO

Ambassador of the European Union to India and Bhutan, New Delhi

"To keep global warming at 1.5 degree Celsius, we need to implement promises made at Glasgow as soon as possible, with respect to climate change adaptation and mitigation including clean energy transition and climate financing."

H. E. MR VINCENZO DE LUCA

Ambassador of Italy to India, New Delhi

"Government has to take action to set stringent targets; but after the government it is the responsibility of civic society. Young generation is the pillar of civic society."

MS LAURA DE VRIES

European Climate Pact Ambassador in Netherlands

"Government, corporations and common people should not only work together for climate justice but also hold each other accountable."

MS RIDHIMA PANDEY

Climate Activist, India

"Only the youth speaking is not going to solve the climate crisis, governments should listen and act accordingly to the people who are most impacted."

MR ARUN KRISHNAMURTHY

Founder, Environmentalist Foundation of India

"We are not talking about climate crisis in a tone in which common man or women can understand climate change. This gap in communication is why are we not able to reach out to grassroots level."

Youth Climate Conclave (YCC) 2022

With a quest of working with the youth, TERI organizes Youth Climate Conclave (YCC) since 2019. The programme is an initiative of the Delegation of the European Union to India, together with GIZ India, CEEW, and TERI. The initiative is implemented under the Strategic Partnership for Implementation of the Paris Agreement (SPIPA) project, where the Ministry of Environment, Forest and Climate Change (MoEFCC) is the nodal ministry. The conclave seeks to engage youth in a positive and proactive way in science-based discussions on the most relevant climate change issues. The first edition of YCC was launched in 2019 and since then the conclave has been an annual feature.
The third edition of YCC was held virtually on February 10–11, 2022, ahead of the World Sustainable Development Summit (WSDS) 2022. The two-day deliberations included capacity building sessions along with a debate session followed by a session on understanding youth priorities and actions for development of youth pledge, which was the outcome of the programme.

Photography Contest

Category A:

- First Position: Akshat Singh, Amity International School, Vasundhara-6, Ghaziabad, Uttar Pradesh
- Second Position: Bhanvi Sharma, Faith Academy, Delhi
- Third Position: Disha Jha, Adarsh Public School, New Delhi

Category B:

- First Position: Harsh Patel, National Institute of Fashion Technology, Jodhpur, Rajasthan
- Second Position: Nansi Kumari, Mahatma Gandhi Kashi Vidyapeeth, Varanasi, Uttar Pradesh
- Third Position: Yatheesh Rao Sarvade, Kandula Srinivasa Reddy Memorial College, Kadapa, Andhra Pradesh

Blogging Contest:

Category A:

- First Position: Dev Garg, Amity International School, Saket, New Delhi, Delhi
- Second Position: Itishree Pradhan, OAV Jharbahali, Ulunda, Sonepur, Odisha
- Third Position: Lakshay Gupta, Adarsh Public School, New Delhi, Delhi

Category B:

- First Position: Aakriti Ahuja, TERI School of Advanced Studies, New Delhi
- Second Position: Anandi Sen, Kamala Nehru College, University of Delhi, New Delhi
- Third Position: Harshita Kanodia, Kirori Mal College, University of Delhi New Delhi

Short Video Contest:

Category A & B

- First Position: Akash Jeirath, Chitkara International School, Chandigarh
- Second Position: Meenakshi V Nair, Chinmaya Vidyalaya Vaduthala, Kochi, Kerala
- Third Position: Riddhi, Lady Irwin College, Delhi

Debate:

Winner Category A

- Ms Tanishqa Punia, The Air Force School, Delhi
- Mr Jnyanam Bordoloi, Faculty Higher Secondary School, Guwahati
- Ms Gowri Umesh, National Academy For Learning(NAFL), Bangalore, Karnataka

Winner Category B

- Mr Swetanshu Kumar Sahoo, Vellore Institute of Technology- Andhra Pradesh, Vijaywada
- Ms Lakshyashikha Pawar, University of Delhi
- Ms Anchal Gautam, University School of Chemical Technology, Guru Gobind Singh Indraprastha University, Delhi

GO Awards

One of TERI's strengths is, enriching young minds on environmental integrity and strengthening youth portfolios by creating convergence in aspirations and environmental challenges of present times. The Environment Education & Awareness Area at TERI, works relentlessly towards raising environmental consciousness and instill sustainability linked choices amongst youth through several education and awareness building initiatives. GREEN Olympiad is a step in this direction, and since 1999 this initiative reaches out to over 2000 schools with a participation of approximately 200,000 students annually. The Olympiad is for students of Std. 4–12 from schools in India and abroad. GREEN Olympiad is a premier MCQ- based examination on environment and sustainable development and draws its linkage with the principles of UNESCO's ESD for 2030 programme and 'Goal 4 - Target 7' (SDG 4.7), which states, 'ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development' by 2030. In 2021, GREEN Olympiad included an additional theme of 'Green Skills', which is essential for an overall growth, enhance employability of youth and mainstream green skills within the learning ecosystem of children from an early age.

The GREEN Olympiad Global and Country Winners in each level were virtually felicitated during the World Sustainable Development Summit on February 18, 2022.

Name of the Global Winners in each difficulty level:

Theme1: Environment & Sustainable Development:

Level I (Classes 4 & 5)

- Agrat Chakraborty, Delhi Public School, Ahmedabad, Gujarat
- S. Patricia Jane, Al Yasmin International School, Riyadh, Saudi Arabia

Level II (Classes 6, 7 & 8)

- Anushka Sharma, Sardar Patel Vidyalaya, New Delhi
- Ch Yuvansh, Pragathi Central School, Hyderabad, Telangana
- Daiwik, Amity International School, Noida, Uttar Pradesh

Level III (Classes 9 & 10)

- Shreyanshu Ghosh, Delhi Public School, Bokaro Steel City, Jharkhand

Level IV (Classes 11 & 12)

- Nayana Renjith, Delhi Private School, Sharjah, Dubai, United Arab Emirates

Theme 2: Green Skills + Environment & Sustainable Development:

Level I (Classes 4 & 5)

- Aanya Jaiman, Cambridge School Indirapuram, Ghaziabad, Uttar Pradesh
- Prarthana Anand Jyoti, New Horizon Gurukul, Bengaluru, Karnataka
- Sanidhya Das, Presidency School, Bengaluru, Karnataka

Level II (Classes 6, 7 & 8)

- Aditya Arun Kartha, Indian Educational School, Kuwait
- Anishka Ghosh, Bhavan's Gangabux Kanoria Vidyamandir, Kolkata, West Bengal
- Faisal Nurul Aman Shaikh, Abu Dhabi Indian School, Abu Dhabi, United Arab Emirates
- Mahroof Ahmed Khan, D A V PUBLIC SCHOOL, Bhubaneswar, Odisha
- Samarjit Das, Delhi Public School, Guwahati, Assam

Level III (Classes 9 & 10)

- Gowtham S, DAV Boys Senior Secondary School, Gopalapuram, Chennai, Tamil Nadu

Level IV (Classes 11 & 12)

- Fazl Al Haque A M, Gems Our Own Indian School, Dubai, United Arab Emirates
- Shravani Raju Dhawane, School of Scholars, Nagpur, Maharashtra

In 2021, Green Olympiad reached out to students from Azerbaijan, Bahrain, Bangladesh, India, Kuwait, Malaysia, Nepal, Nigeria, Oman, Qatar, Saudi Arabia, Singapore, Turkey, Turkmenistan, United Arab Emirates, United States of America and Vietnam. Names of country winners are available at www.teriin.org/olympiad

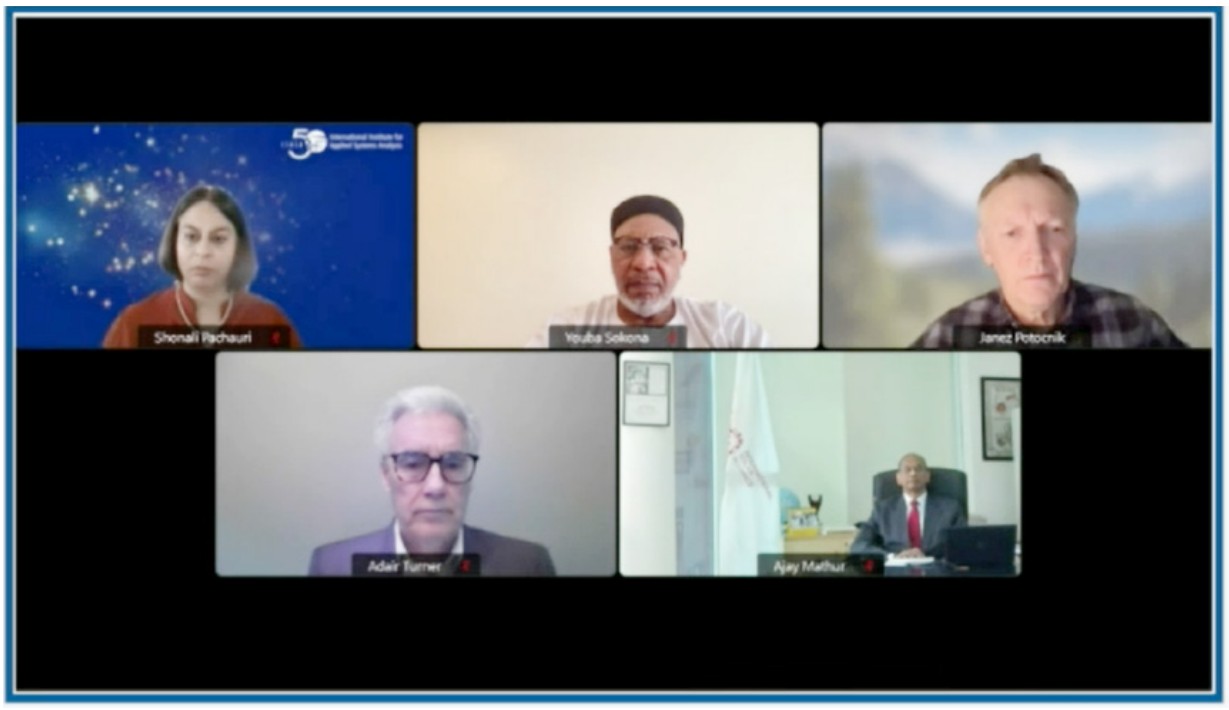
Transitioning Environment Learning: From Awareness to Action!

Youth Awards

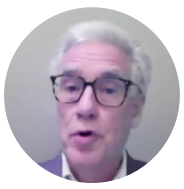
Virtual Hall: Gir Auditorium

MEETING THE TWIN GOALS—ENERGY SECURITY AND RESOURCE SECURITY

Chair: Mr Suman Bery, Non-Resident Fellow, Bruegel
Leadership Addresses: Lord Adair Turner, Chairman, Energy Transitions Commission; Dr Janez Potočnik, Co-chair, International Resource Panel; Dr Ajay Mathur, Director General, International Solar Alliance; Dr Youba Sokona, Vice Chair, Intergovernmental Panel on Climate Change; Dr Shonali Pachauri, Research Group Leader, International Institute for Applied Systems Analysis



The main theme of the session was to critically reflect on energy transition and decarbonization with respect to resource security. All the panelists talked about the various challenges and opportunities associated with decarbonizing the energy sector, which is crucial to meet the 1.5 degree goal of the Paris Agreement. The panelists talked about the challenge of access and availability of various minerals, required in solar and wind technologies, such as Lithium, steel, Silicon, etc., as their demand would increase to meet the goal of decarbonization and energy security. Another challenge that was talked about was the local environmental impacts associated with mining of these minerals. However, these local impacts are negligible when compared to those associated with mining of coal. There were mixed perspectives on how imperative is economic growth and the possible solutions. However, all the panelists emphasized that there are various opportunities associated with decarbonization and it is crucial to manage the trade-offs and maximize the co-benefits so that the lock-ins can be avoided. Some of the possible solutions that were talked about, to meet the twin goals of energy and resource security, included dematerializing the systems, decentralization of resource availability, and use of circular economy approaches.



LORD ADAIR TURNER

Chairman, Energy Transition Commission

"In principle, a renewable energy system could be not only far cleaner but also more economically stable than a fossil fuel-based system but that will only be the case if governments and companies make it so."

DR YOUBA SOKONA

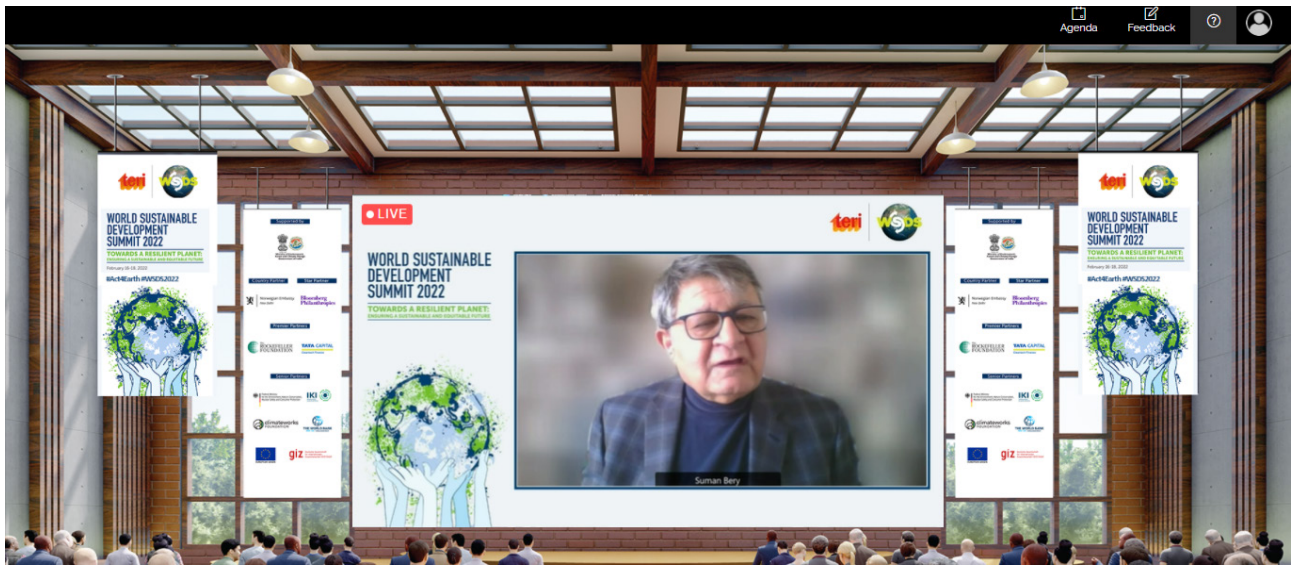
Vice Chair, Intergovernmental Panel on Climate Change

"Meeting the twin goal of energy security and resource security needs realization upfront that current developmental models that build on expectation of continuous massive economic growth everywhere is neither possible nor likely desirable."

DR JANEZ POTOCNIK

Co-chair, International Resource Panel

"We must focus not only on decarbonization, but also need to dematerialize the systems we depend on."



DR AJAY MATHUR

Director General, International Solar Alliance

"Solar provides great opportunity in terms of its modularity and consequently its ability to provide electricity resources in places where it was not available."

Actionable Messages

Message 1 Government as well as various companies have the potential and should focus on making the renewable energy system not only cleaner but also more economical.

Message 2 A systems approach is needed to manage trade-offs and prevent lock-ins.

Message 3 There is a need to decentralize resource availability and create large number of centres of supply that are competitive with each other.

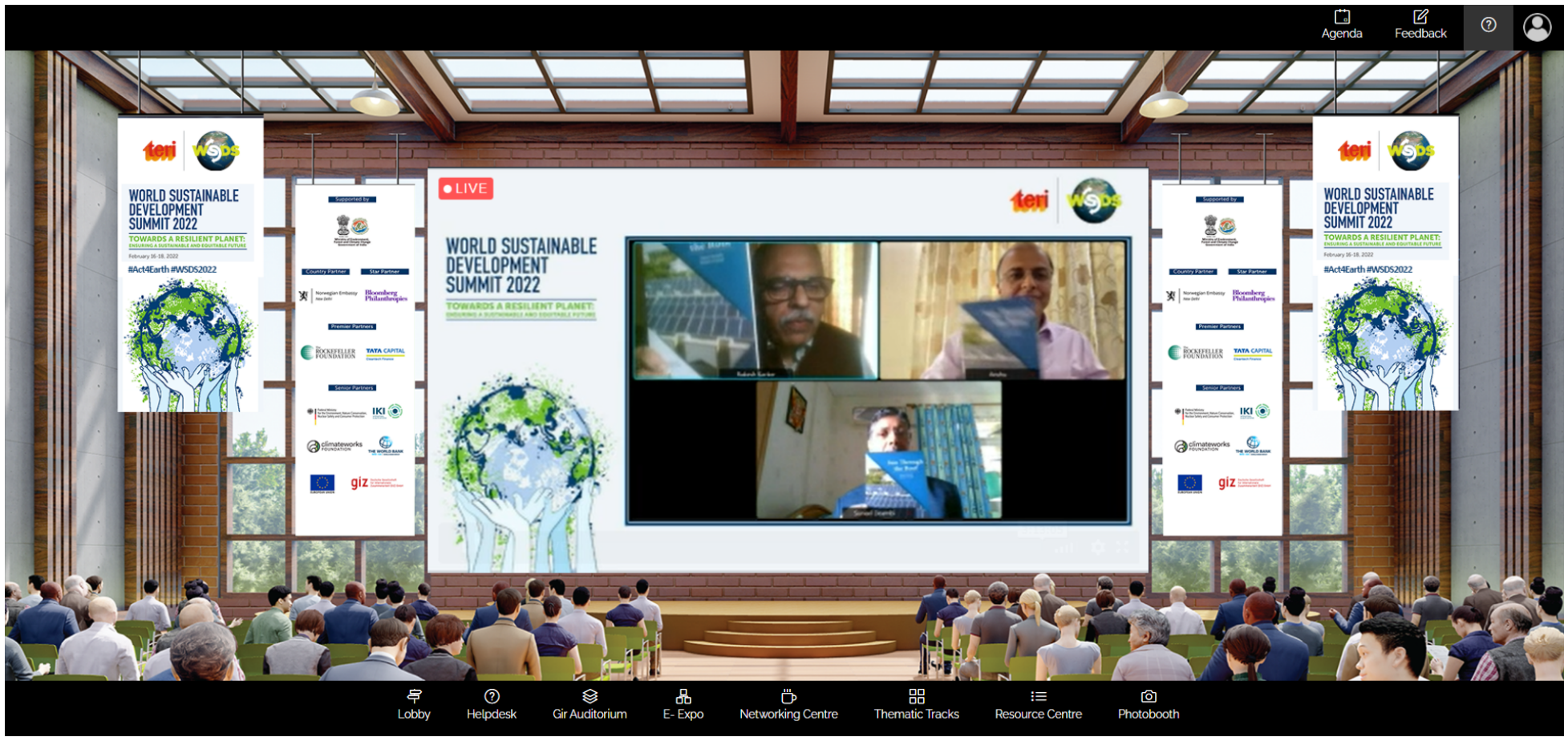
DR SHONALI PACHAURI

Research Group Leader, International Institute for Applied System Analysis

"We live in a world of vast inequalities and access to decent living services globally are unequally distributed and this is also reflected in the individual contributions to greenhouse gas emissions at a global scale."

CONCERNED CITIZEN SERIES 'SUN THROUGH THE ROOF' (A SERIES BY TERI ALUMNI ASSOCIATION)

Chair : Mr Rakesh Kacker, President, TERI Alumni Association
Speakers: Dr Anshu Bharadwaj, Chief Executive Officer, Shakti Sustainable Energy Foundation; Dr Suneel Deambi, one of the Authors



Sun through the Roof is written by Dr Suneel Deambi and Mr Shirish S Garud, which aims to create awareness in a comprehensive and user-friendly way to use clean and inexhaustible energy provided by the sun. With rooftop solar becoming popular worldwide with residential electric vehicle charging, it is becoming increasingly important for residential and commercial units to understand more about the rooftop solar system, its components and installation. This book would be helpful to readers in the process or ramping up their rooftop solar programmes in India. Technical, economic, and regulatory issues related to solar rooftop system need be solved to increase roof top solar systems. As such, Sun through the Roof demystifies the process of implementing a rooftop solar PV project through a step-by-step guide to development. By being aware of all the steps in the process, and with guidance on handling the various aspects, this handbook will prove helpful to streamline the implementation process and therefore makes rooftop solar PV much more accessible. Next book in the series will be out soon.

DR ANSHU BHARADWAJ
Chief Executive Officer, Shakti Sustainable Energy Foundation

"Solar Rooftop makes eminent sense in scenario with residential Electric Vehicle charging."

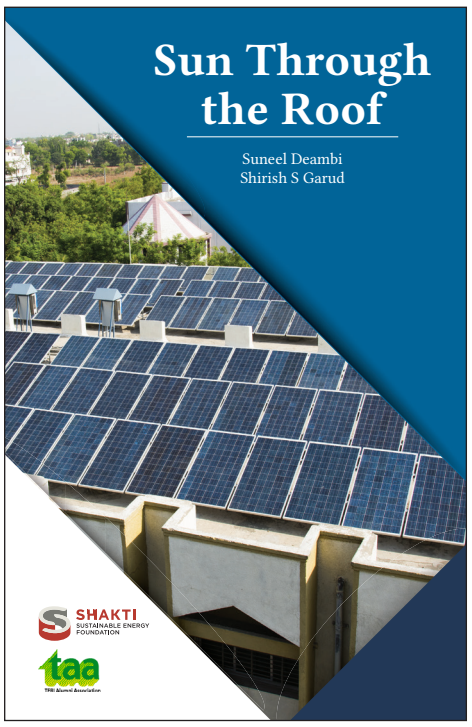
DR SUNEEL DEAMBI
one of the Authors

"For sustainable living, solar roof top can be a souse of safe, clean and reliable power."

Actionable Messages

Message 1 Creation of awareness in common man related to solar rooftop systems is significant.

Message 2 Technical, economic, and regulatory issues related to solar rooftop system need be solved to increase rooftop solar systems.



Sun Through the Roof introduces its readers to grid-connected rooftop solar systems for the residential sector. Against the backdrop of rising tariffs coupled with fluctuating voltage and continuing shortage of electricity – and the noise and fumes from diesel-powered generators to make up for such poor-quality supply – the book hopes to convince its readers of the many benefits of generating electricity through rooftop solar systems while, at the same time, making readers aware of some of the drawbacks of those systems.

In keeping with the objectives of the 'Concerned Citizen' series, Sun Through the Roof seeks to answer many of the frequently asked questions about rooftop solar systems and also to provide essential information and insights to those who are considering that option not only to reduce their electricity bills but also to do their bit for the environment and sustainable development.

Here are the kind of questions answered in the book.

- Will I have continuous supply if I install a rooftop solar system?
- What should be the right-capacity (kilowatts) system for me?
- Do I get any subsidy from the government (state or central)?
- How much will I earn by selling surplus electricity?
- What is the difference between net metering and gross metering?

Link to buy Sun Through the Roof book https://bookstore.teri.res.in/books/9788179936832

MS PRIYA SHANKAR
India Director, Environment and Climate Program, Bloomberg Philanthropies Science

"A collaborative spirit will enable us to navigate through difficult times like the COVID-19 pandemic."

Virtual Hall: Gir Auditorium

PLANETARY HEALTH, HUMANITARIAN AND EQUITY IMPLICATIONS OF SUSTAINABLE DEVELOPMENT POLICIES

Chair: Ms Priya Shankar, India Director, Environment and Climate Program, Bloomberg Philanthropies
Science Leadership Address: Prof. Anthony Capon, Professor, Monash Sustainable Development Institute, Melbourne
Leadership Addresses: Dr Erik Solheim, President Green Belt and Road Institute; Mr Vidar Helgesen, Executive Director, The Nobel Foundation; Mr Manish Bapna, President and CEO, Natural Resources Defense Council; Mr Ranjit Barthakur, Founder & President, Balipara Foundation; Dr Zhou Jinfeng, Secretary-General, China Biodiversity Conservation and Green Development Foundation

After the COVID-19, we have learned that we need collaborative efforts to maintain the health of the planet. The interplay between various integrated factors like climate and development has to be understood for the good health of the planet and the people. Indigenous people have always been living where the health of the planet was given due consideration.

Planetary health simply means safeguarding the health of human civilization and natural resources for the present and the future generation. Air pollution and the emerging diseases as a result of pathogens such as Covid, SARS, Zika virus have a spillway effect. Planetary consciousness is indeed the most significant step to promote planetary health. A collaborative transdisciplinary, socio-ecological approach is the need of the hour.

In the 21st century, we can expect ecological growth if the geopolitical issues are kept peaceful and promote collaborative efforts for the larger well-being of the planet. The policy of being fair between nations and inside nations will be crucial to evaluate our growth.

Systematic planning is needed, which can manage these different silos. The public decision-making needs to be informed by science to understand, manage, and reduce the ecosystem from worsening.

Resilience in a fragile interconnected world—individual countries and the world as a whole faced difficulty in facing the recent pandemic. Climate change also needs resilient efforts. Investing in the early warning systems, resilient infrastructure shows there is a strong imperative of investing in resilient infrastructure. The risk associated with these investments is not easy to evaluate and involves non-financial risks like environmental risks. These risks fall on the people with the lease string voices to raise their concerns and we need to quantify the risk and solutions have to be designed accordingly. Every country should have an ecological budget that talks about ecological wealth.

Since humans are at the centre of the environmental cycle and are responsible for its degradation we need to promote a human-based solution approach to promote the balance between solutions for climate change crisis, biodiversity loss, and sustainable growth.

PROF. ANTHONY CAPON
Professor, Monash Sustainable Development Institute, Melbourne Leadership Addresses

"Planetary health can be promoted through a transdisciplinary eco-social approach is needed to bring about the planetary consciousness amongst people."

Actionable Messages

Message 1 Collaborative efforts with a socio-ecological transdisciplinary approach are the most significant and hence we need to understand the interplay between health, climate change, and stakeholder involvement.

Message 2 Circular model of the economy where reuse, repair is normal has to be brought in our economic process and we need to figure out policies for it.

Message 3 Public decision making has to be based on research and a science-oriented solution-making approach to be promoted.

DR ERIK SOLHEIM
President Green Belt and Road Institute

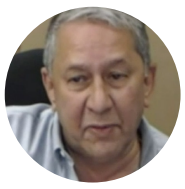
"India is leading way in terms of renewable energy and this will pave way for economic growth sustainably."

MR VIDAR HELGESEN
Executive Director, The Nobel Foundation

"Public decision-making has to draw background from a science-based solution approach."

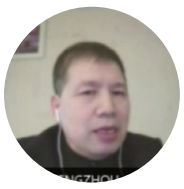
MR MANISH BAPNA
President and CEO, Natural Resources Defense Council

"Building resilience, risk evaluation, and including it in the government budget is integral in responding to the climate crisis."



MR RANJIT BARTHAKUR
Founder and President, Balipara Foundation

"Valuing nature and quantifying its benefit is crucial. We need a model, which talks about the ecological budget before the economic budget."



DR ZHOU JINFENG
Secretary-General, China Biodiversity Conservation and Green Development Foundation

"A human-based solution is the only solution to cure the damage done to biodiversity and address the climate crisis."

Virtual Hall: Gir Auditorium

RELEASE OF A BOOK AND ARCHIVES ON DR R K PACHAURI

Chair: Mr Nitin Desai, Chairman, Governing Council, TERI
Reflections by Family Members, Colleagues and Friends: Dr Saroj Pachauri and Dr Ash Pachauri; Dr Mac McQuown, Partner, Co-Founder, and Director, Diversified Credit Investments, San Francisco; Dr Vibha Dhawan, Director-General, TERI; Mr Rakesh Kakkar, President, TERI Alumni Association

Actionable Messages

Message 1 Dr Pachauri great work will be shared and inspire the generations

Message 2 We have one planet Earth. Hence its protection should be our priority.

Message 3 Keep the global family together

This session was dedicated to Dr R K Pachauri, the father of TERI and WSDS Summit.

Dr R K Pachauri Archive and a book in his memory were launched. The book is the reflection of his great work through people around the world while Archive is the wealth where all his work is organized and available to the world to get inspiration.

Mr Nitin Desai shared his memories with Dr Pachauri. He recalled how TERI and IPCC (Intergovernmental Panel on Climate Change) flourished under his leadership. Work of IPCC started getting reflecting in political agenda of countries under Dr Pachauri leadership.

His family members Dr Saroj Pachauri and Dr Ash Pachauri conveyed their gratitude to the panellists for bringing out beautiful book and archive of Dr Pachauri. Dr Saroj Pachauri, read out some of the essay and writing from the book and thanked TERI for organizing his work in the form of an archive.

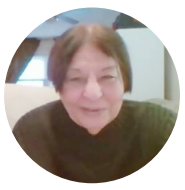
Dr Ash Pachuari said that great work of Dr R K Pachauri in the form of book and archive will inspire the new generation and keep his vision alive.

Dr Mac McQuown also shared his memories with Dr Pachauri and talked about his great personality. Dr Vibha Dhawan shared the reminiscences, highlighting how Dr Pachauri was favourite of TERI Staff children.

MR NITIN DESAI

Chairman, Governing Council, TERI

"Father of Summit and TERI."



DR SAROJ PACHAURI

"It is a proud moment for the family."

DR ASH PACHAURI

"Let's continue with his journey to protect the planet and keep the global family together."

DR MAC MCQUOWN

Partner, Co-Founder, and Director, Diversified Credit Investments, San Francisco

"Dr Pachauri always has distinguished things to say and crisp thinking."

MR RAKESH KAKKAR

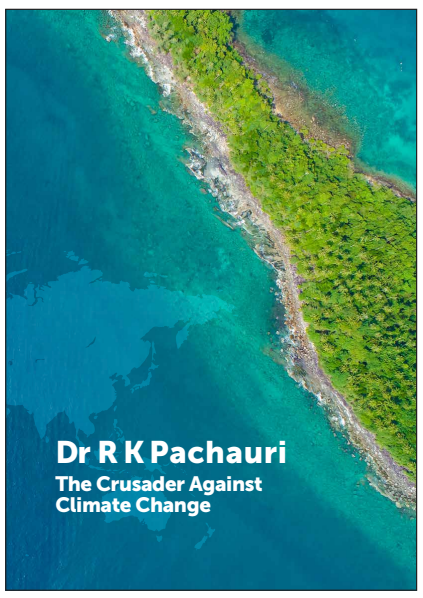
President , TERI Alumni Association

"It is a wonderful opportunity for the Alumni association to launch his second Tribute book."

DR VIBHA DHAWAN

Director-General, TERI

"He will shower his blessing on TERI from the heaven."



Dr R K Pachauri: the crusader against climate change is neither an assessment of his life and work nor a compilation of expressions of good wishes. Instead, it shows the international dimension of his work, from Norway to Mexico and from Japan to the United States, because for him the whole world was one, not divided into the North and the South or the East and the West but one large family. He gave his all to whatever he did, from furthering the interest of his school to steering the representatives of scores of nations with conflicting interests and divergent views towards a consensus.

The battle against climate change continues, but the torch has been passed to the next generation. Its members will find much in this book to inspire them, and those of the generations before them will take comfort from the fact that their efforts have not been in vain.

Link to download Dr R K Pachauri book https://www.teriin.org/sites/default/files/files/Book_on_Dr_RK_Pachauri_II.pdf

Dr R K Pachauri archives link https://rkpachauri.org/

Virtual Hall: Gir Auditorium

A DIALOGUE WITH SADHGURU ON OUR FRAGILE PLANET

SADHGURU
Founder- Isha Foundation

> Let us all strive to save the soil, let us make this happen.

Actionable Messages

Message 1: Young generations have to be one step ahead when it comes to taking responsibility for saving our planet.

Message 2: To see the soil as a living entity and to keep it as a legacy for future generations is the most fundamental responsibility we have.

Message 3: Soil Health Card scheme launched by The Prime Minister of India is a good step but all the resources will manifest only when the people are willing to address the needs of their long-term well-being and support these kinds of steps with their own actions.

The session was about the importance of soil conservation and sustenance, and how the young generation has a key role to play in achieving the goal of a sustainable life.

Sadhguru emphasized on ways to inspire the youth. One way to inspire the youth is through music because music has power to touch the youth and has a massive influence on young generation. Soil health is very important as soil plays an important role in sustainable growth of life and our planet—therefore, increasing the presence of organic content in the soil. For that, we have to use several methods of putting the organic content back into the soil by using different methods, for example, growing maize crop in fields and when it develops enough then chopping it off and adding it back as manure. Farmers are reverting to tree-based agriculture instead of tilting soil each season and growing common crop— hence increasing the amount of the photosynthesis occurring on the land and getting the desired carbon content in the soil. It can lead to rise in water table, soil fertility, and improved carbon content in the soil, which results in better moisture holding capacity—thus reducing the excessive need of water for irrigation purpose. Because excessive irrigation also leads to soil quality destruction, therefore, the eco-biology of the soil is needed to be brought back because if the soil is weak the produce grown in that soil will also be deficit in nutrients and the consumers will become even weaker as we are all carbon life forms.

While apprising about his movement 'Save Soil', Sadhguru notably focused on how the different climatic zones across the globe are affecting the soil ecology. A survey has shown that majority of the population of countries like the USA is facing vitamin and mineral deficiencies, and how 62% of the India's land has less than 5% of the required carbon content. Soil regeneration is very important with respect to the safe level of CO_2 emissions. We can reverse all the emissions till date in 12–15 years just by improving the soil, as 40% of the climate change is because of the misuse of the soil. Human beings need to understand this that we cannot break one part of chain and suppose that the cycle will hold up.

Sadhguru informed that the 'Save Soil' campaign was going to be launched in March 2022, with around 192 countries involved and it will bring different global organizations, world leaders, and common people together to bring global awareness about the alarming rate of the worldwide degradation of soil as it may have massive impact on food and water security, climate change, and climate-related disasters. Hence, a healthy soil quality and soil diversity is much needed. It is a high time to change the potential of the youth of the country and the world to an actionable reality.

Virtual Hall: Sariska

FOSTERING ENERGY TRANSITIONS IN INDIA

Speakers: Mr Alok Kumar, Secretary, Ministry of Power, Government of India; Mr Rakesh Nath, Former Member, APTEL and Former Chairperson, Central Electricity Authority; Mr Sanjay Dubey, Principal Secretary (Energy), Government of Madhya Pradesh; Dr Damm Winfried, Programme Director of Indo–German Energy Programme (IGEN) ; Mr S.R. Narasimhan, Chairman and Managing Director, POSOCO; Mr Ajay Telgaonkar, Chief Engineer, Financial and Commercial Appraisal, Central Electricity Authority; Dr A.K. Tripathi, Adviser, MNRE; Col Vijay Bhaskar, Managing Director, Hamara Grid Private Limited

India's economic growth is highest among the world over the past year. With the announcement of net zero by 2070 and the target to meet 50% energy from renewable sources by 2030, India is moving towards new model of economic growth without the dependence on carbon-intensive power. Net zero should not just limit to reducing carbon emissions but also to benefit citizens of the country in terms of affordable and reliable power supply. The session discussed the evolution of demand and supply part of the power system during energy transition phase.

The esteemed panellists of this discussion shared their thoughts about energy transition and the insights for a smooth transition. These thoughts vary from increasing capacity addition in biomass and hydro energy, creating green jobs, developing carbon market, energy efficiency, VGF for battery storage, importance of resource adequacy planning at state level, forecasting tools availability with states, demand-side management.

MR ALOK KUMAR
Secretary, Ministry of Power

> India has a good track record towards tackling the climate change.

MR RAKESH NATH
Former Member, APTEL and Former Chairperson, Central Electricity Authority

> Resource Adequacy Planning at the state levels should be based on a bottom up approach.

Actionable Messages

Message 1 Periodic review of the evolution of technologies, cost trajectories, and consumer demand is a must.

Message 2 Security and reliability of the grid is equally important along with supply and demand planning.

Message 3 Generating sources like biomass or hydro are distributed throughout the nation in comparison to solar & wind. Hence an additional importance on these sources is required as they can create green jobs.

Virtual Hall: Gir Auditorium

COLLECTIVE ACTION FOR ENSURING A SUSTAINABLE AND EQUITABLE FUTURE

Chair: Mr Nitin Desai, Chairman, Governing Council, TERI
Release of Act4Earth Manifesto and Act4Earth Strategy Paper: Ms Nivedita Cholayil, Research Associate, TERI; Ms Anuradha Mathur, Associate Fellow, TERI
Special Remarks: Ambassador Manjeev Singh Puri, Distinguished Fellow, TERI
Special Remarks: Ms Kathleen McGinty, Vice President and Chief Sustainability Government and Regulatory Affairs Officer, Johnson Controls
Vote of Thanks: Dr Shailly Kedia, Senior Fellow, TERI
Concluding Remarks: Dr Vibha Dhawan, Director-General, TERI

MR NITIN DESAI

Chairman, Governing Council, TERI

"Earth is one but world is not, it is important to bring the world together through collaborations."

MR ABDULLA SHAHID

Foreign Minister, Maldives, President of the 76th Session of the UN General Assembly

"We must breathe new life through multilateralism."

MS KATHLEEN MCGINTY

Vice President and Chief Sustainability Government and Regulatory Affairs Officer, Johnson Controls

"Blessed to be alive at this moment of collective history, privileged to be here and looking forward to walk together towards reducing emissions."

MR MANJEEV SINGH PURI

Distinguished Fellow, TERI

"We want friendships, friendships in terms of partnerships and collaborations to work together for emission reductions."

Mr Nitin Desai enlightened the session by sharing the happiness of The Energy and Resources Institute (TERI) celebrating World Sustainable Development Summit from past 20 years. The Earth is one but the world is not and it is important to bring world together. This summit is one way of bringing different people from different countries and regions to come together. Lately, in 1992 in Rio Summit everyone realized that governments need to act. However now we understood that even non-governmental actors also play an important and equal role. The non- governmental actors should come together and it should be their primary motive to influence government. Also, other actors like corporates, researchers, think tanks, should also act to overcome climate change challenges. Hence, World Sustainable Development Summit is trying to bring all these actors together and change thoughts with each other. Today, as end day of the summit the team launched #ACT4EARTH which pledged to Act for Earth by reinvigorating current multilateral systems, developing multi-level and poly-centric approaches to govern and protect global common, inviting different stakeholders, avoiding wasteful consumption, advocating for paradigm shift, critically examining the dominant narratives, calling upon the global community to bridge the gap between mitigation and adaptation, ensuring policy coherence, and communicating issues related to climate change. The overarching objective for Action4Earth would be to drive ambitious and urgent action on climate change and sustainable development through knowledge, dialogue, and capacity building. After the launch of Action4Earth, Mr Abdulla Shahid also shared his perspective for the importance of multilateralism. He said that there is an urgency to take actions which is not possible without the involvement of everyone and no one should be left behind. Mr Shahid also shared the significance cooperation to achieve targets set in COP26. He as a citizen of Maldives understands the urgency of climate actions as they are frontline to sea level rise. Ms Kathleen McGinty was really grateful of TERI to uniquely bring together the spectrum from research to technology to actions. Also, this event happening every year brings everyone together to share their thoughts with each other. Followed by her thoughts Mr Manjeev Puri is really delighted to have such partnerships and collaborations which made this event a success. Lastly, Dr Vibha Dhawan and Dr Shailly Kedia ended the session by thanking all the participants, stakeholders and organizers to make this event a success.

Actionable Messages

Message 1 Multinational collaboration initiatives need to be advanced for climate actions. This will help to have new initiatives across policy areas and have existing international support.

Message 2 World Sustainable Development Summit event shows equal participation from top level and grassroot level stakeholders. It was inclusive of all the stakeholders from government, policy makers, financial institutions, local and regional level stakeholders.

Message 3 The equality is also important that should be focused for climate action this includes gender equality as key.

Virtual Hall: Sundarbans

GLOBAL AGENDA FOR INDUSTRY TRANSITIONS – RELEVANCE, CHALLENGES, AND OPPORTUNITIES FOR INDIA

Welcome Address: Mr Edwin Koekkoek, First Counsellor, Energy and Climate Action, EU Delegation to India
Special Remarks: Ms Rajasree Ray, Economic Adviser, Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India
Session Chair: Ambassador Manjeev Puri, Distinguished Fellow, TERI
Session Chair: Ms Johanna Lissinger Peitz, Ambassador for Stockholm+50, Swedish Ministry of Environment; Dr Ashok Kumar, Deputy Director General, Bureau of Energy Efficiency; Mr Dan Dorner, Head of Clean Energy Ministerial Secretariat; Mr Mahendra Singhi, Managing Director and CEO, Dalmia Cement (Bharat) Limited; Mr Prabodha Acharya, Chief Sustainability Officer, JSW Group; Dr Antje Berger, Counsellor, Climate and Environment, Embassy of Federal Republic of Germany; Mr Girish Sethi, Senior Director – Energy, TERI; Mr Jai Kumar Gaurav, Senior Advisor, Climate Change, GIZ-India; Dr Gokce Mete, Head of LeadIT Secretariat, Stockholm Environment Institute; Dr Gokce Mete, Head of LeadIT Secretariat, Stockholm Environment Institute

The Global Agenda for Industry Transitions – relevance, challenges and opportunities for India thematic track focused on the importance and timeliness of multi-stakeholder initiatives such as Leadership Group for Industry Transition (LeadIT) and Strategic Partnership for the Implementation of the Paris Agreement (SPIPA), in driving global industry transitions and the challenges and opportunities they present within the Indian context.

In his welcome address Mr Edwin Koekkoek emphasised the important role that industry transition will play in achieving clean energy transitions. Setting the context of the session, Mr Girish Sethi emphasised the growing global interest in industry transitions. Sectors such as iron and steel, cement and fertilizers that were once viewed as 'hard-to-abate' are now being seen as 'possible-to-abate' sectors.

Ms Johanna Lissinger Peitz highlighted the role that LEADIT can play in facilitating heavy industries to reduce emissions and ensure Just Transitions. The Stockholm + 50 Conference, which will be held in June 2022, will commemorate 50 years since the 1972 United Nations Conference on the Human Environment, held in Stockholm. This year's Conference will be an opportunity for various stakeholders including businesses, governments and civil society to work together on various issues.

In her Special Remarks, Ms Rajasree Ray highlighted that HTA sectors contribute to approximately 30% of global carbon dioxide emissions and need to play a critical role in achieving the global transition to a low-carbon development pathway. Several initiatives and policies undertaken by the Government of India to help India achieve its climate targets were highlighted. She emphasised the need for investment and collaborative partnerships to scale up of low-carbon technologies such as green hydrogen, fuel cell, e-mobility, and clean energy storage.

Dr Ashok Kumar shared that industry transition is ongoing in India and highlighted the significant impact of the Perform, Achieve and Trade (PAT) Scheme. The Scheme has led to significant savings and improvements in energy efficiency for Indian industries.

MR MAHENDRA SINGHI
Managing Director and CEO, Dalmia Cement (Bharat) Limited

> Collaboration and partnerships between all stakeholders are needed across Governments, and industry. The LeadIT platform can support cross-sectoral collaborations between industry stakeholders.

This was then followed by a presentation by Mr Jai Kumar Gaurav who shared details on the Strategic Partnerships for the Implementation of the Paris Agreement (SPIPA) Project. Transitions in four focus sectors including iron and steel, ammonia, petrochemicals, and cement, are being examined under the project. Sectoral studies, stakeholder discussions, and workshops are being undertaken across these sectors to help develop sectoral road maps for transitions.

The panel discussion, chaired by Ambassador Manjeev Puri included representatives from LeadIT Secretariat, Clean Energy Ministerial, and the Embassy of Federal Republic of Germany and leading CXOs from Indian industry.

Dr Gokce Mete provided an overview of the initiatives of the LeadIT platform. LeadIT has 16 member countries and 19 global companies. The platform is working on several initiatives on industry decarbonisation and is engaging various stakeholders including policymakers, industries, and civil society.

Mr Mahendra Singhi shared insights on the role that platforms such as LeadIT can play in facilitating partnerships and collaborations. He emphasised the need for financial support for the deployment of new low carbon technologies such as carbon capture, use and storage (CCUS), which will be critical for the cement sector to achieve carbon neutrality.

In her address, Dr Antje Berger emphasised the strong partnership between India, the EU, and Germany towards achieving global climate goals. She highlighted that initiatives such as the EU Innovation Fund, LeadIT and the SPIPA project will take forward actions on industry transitions.

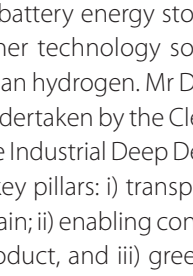
Mr Anirban Ghosh highlighted four key areas of focus for industry transitions: i) clean operations; ii) clean materials; iii) clean products; iv) circularity. Investment and research in battery energy storage technology is vital for scaling up other technology solutions such as electric vehicles, and clean hydrogen. Mr Dan Dorner shared insights on the work undertaken by the Clean Energy Ministerial (CEM), including the Industrial Deep Decarbonisation Initiative (IDDI). IDDI has 3 key pillars: i) transparent data practices across the supply chain; ii) enabling consistent and standardised of low carbon product, and iii) green public procurement. India will host the Annual Ministerial meeting in 2023. The Meeting will be a platform for huge synergies and will be an opportunity for India to elevate its goals on climate on a global platform.

Mr Prabodha Acharya highlighted the important role of the steel sector in both economic development and in building climate resilient societies. Technologies such as CCUS and green hydrogen will play an important role in decarbonising the steel sector.

The session brought together various perspectives on opportunities for collaboration and actions required to enable and accelerate industry transitions in India such as public–private partnerships, technologies, finance, policies and regulations.

Actionable Messages

Message 1 Collaborations and partnerships between governments, industries, and civil society will be critical in achieving global low carbon transition.
Message 2 Platforms and initiatives such as Lead IT and SPIPA Project will be important in supporting various stakeholders for achieving global climate targets.



MS RAJASREE RAY
Economic Adviser, Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India

> India has ambitious targets across various areas such as Energy efficiency, Renewable Energy, Forest and bio-diversity conservation and hydrogen. Many meaningful partnerships with all stakeholders are needed to realise the goals of low carbon transition.

Virtual Hall: Kanha

CLIMATE RESILIENCE THROUGH SOLAR IRRIGATION

Welcome Address: Mr Nilanjan Ghosh, Senior Advisor, GIZ India
Speakers: Mr Christopher Beaton, Lead, Sustainable Energy Consumption with IISD; Mr Siddharth Goel, Senior Policy Advisor with IISD; Dr Priya Jadhav, Professor, Indian Institute of Technology Bombay (IITB); Ms Lucie Pluschke, East Africa hub manager for Water and Energy for Food, GIZ Kenya; Mr J K Jethani, Director Scientist-F, MNRE; Mr Shilp Verma, Senior Researcher, Water-Energy-Food-Policies, International Water Management Institute (IWMI); Dr Dipal Barua, Chairman, Bright Green Energy Foundation & President, Bangladesh Solar & Renewable Energy Association (BSREA); Dr Debajit Palit, Director, Rural Energy and Livelihoods (TERI)

MS LUCIE PLUSCHKE
East Africa hub manager for Water and Energy for Food, GIZ Kenya

> When we talk about the climate crisis and water crisis in terms of irrigation and what prevents the resilience of farmers in terms of adaptation is the lack of basic services.

Climate Resilience through Solar Irrigation, was hosted by the research consortium of the International Institute of Sustainable Development (IISD), TERI, and CUTS International. The consortium, with the support of GIZ and the endorsement of the Ministry of New and Renewable Energy (MNRE), GoI has undertaken research on sustainable implementation of solar irrigation in India, in the backdrop of the water-energy-food nexus, where interventions in one area can cause unexpected impacts on another, as well as on ecosystems. This is particularly concerning since climate change-induced rainfall variability is likely to adversely affect agriculture and the impact will be disproportionately felt by poor farmers in developing countries, who may face food insecurity.

In order to achieve the socio-economic objectives of solar irrigation schemes, while minimizing their negative externalities, a guidebook has been developed, with an aim to support state-level policymakers and agencies in implementing solar irrigation schemes sustainably, by maximizing economic benefits while addressing critical questions on social and environmental sustainability.

The thematic track entailed presentation of the guidebook findings and invited experts from South Asia and East Africa to deliberate and discuss ways in which climate resilience in the agriculture sector can be advanced through solar irrigation, with a focus on preventing groundwater depletion in water-stressed regions and supporting marginalized farmers.

Mr Christopher Beaton, Lead, Sustainable Energy Consumption with IISD welcomed the participants and speakers, and invited Mr Nilanjan Ghosh to deliver the welcome address. Mr Ghosh emphasized on exploring pathways for expanding solar irrigation in a way that trade-offs and challenges arising out of the several contributing aspects are managed and the impacts are environmentally sustainable and socially equitable. Mr Siddharth Goel presented the findings from the guidebook in detail.

It was then followed by a panel discussion on Climate resilience through solar irrigation, moderated by Dr Priya Jadhav. Dr Jadhav, in her introductory remarks emphasized the need for optimizing solar pump distribution keeping in mind sustainable development, farmers' income, vulnerable sections of farmers and energy security. A localized approach is needed, where the farmers' needs and external factors such as agro-climatic conditions and cropping patterns are evaluated. Academia could be involved in this. Dr Jadhav then introduced the panelists, and invited Ms Lucie Pluschke to share her views. According to Ms Pluschke, the climate crisis is essentially a water crisis in the context of, and in this regard, resilience is hindered by lack of access to basic services.

MR NILANJAN GHOSH
Senior Advisor, GIZ India

> One of the broad challenges we face is that we should as a country or region look towards it (solar irrigation) as a climate solution or economic solution.

DR PRIYA JADHAV
Professor, Indian Institute of Technology Bombay (IITB)

> The implementation of solar irrigation schemes requires a localized approach and experimentation to optimize the process.

MR SHILP VERMA
Senior Researcher, Water-Energy-Food-Policies, International Water Management Institute (IWMI)

> Irrigation service markets that are created through solar pumps should be buyer friendly.

Mr J K Jethani described the solarization initiatives undertaken by the government for solar pumps. He also explained the pros and cons of different types of solarization mechanisms such as replacing diesel pumps with solar and feeder solarization. He mentioned how studies were being conducted to address the non-agricultural season utilization of solar power. Several challenges and innovations around the PM-KUSUM scheme were also mentioned by him.

Actionable Messages

Message 1 Need to ensure solar pump service markets are buyer friendly.
Message 2 RMS data from pumps should be compiled and analysed for future policy development.

Mr Shilp Verma emphasized on the need for coordination between water and energy departments to solve each other's problems. He also noted that now the approach of water-energy-food nexus is increasingly being adopted to tackle issues of agriculture and irrigation.

Dr Dipal Barua shared experiences from the solar programmes of Bangladesh. He described the challenges of subsidized diesel being made available for diesel pumps in agriculture. He touched upon issues of seasonality of solar and the need for alternatives being explored. The session concluded with closing remarks by Dr Debajit Palit, Director, Rural Energy and Livelihoods (TERI).

Virtual Hall: Bhadra

REDUCING PLASTIC AND CHEMICAL POLLUTION IN THE MARINE ENVIRONMENT

Speakers: Dr Marianne Olsen, Research Director, Norwegian Institute of Water Research (NIVA); Mr Erlend Draget, Senior Advisor, Department of Marine Environment and Pollution Control, Norwegian Ministry of Climate and Environment; Dr Rajeshwara Rao, IAS Special Secretary, NITI Aayog, Government of India; Dr Rachel Hurley, Research Scientist, NIVA; Dr Rachana Arora, Team Leader and Coordinator, Circular Economy Solutions Preventing Marine Litter, GIZ; Dr Merete Grung, Research Scientist, NIVA; Mr Suresh Padmanabhan, Strategy Advisor, Indorama Ventures Public Company Limited (IVL); Dr Paromita Chakraborty, Associate Professor, Department of Civil Engineering, SRM Institute of Science and Technology, SRMIST; Mr Satish Sinha, Associate Director, Toxics Link

Actionable Messages

Message 1 There should be an open dialogue between all actors including scientists, government bodies, NGOs and policymakers.

Message 2 A national framework needs to be developed covering standards, eco design, definition and recyclability of products.

Message 3 There is a need to have policy for plastic waste focusing on recycling along with instruments like green procurement and action plan needs to be developed.

The thematic session provided a valuable insight into the ongoing measures taken by various governments in various countries including India to curb the marine pollution due to indiscriminate dumping of plastics. It also emphasized the need for policy frameworks to bolster the prevention of plastic and chemical pollution of marine environment especially due to persistent organic pollutants (POP). The research challenges, findings and gap related to the area were highlighted which emphasized the need for further research work to achieve reduction of marine pollution at scale and speed. Moreover, a way forward was provided for the implementation of Stockholm Convention in India.

Ms Twinkle Dev welcomed the all the participants on board to the WSDS thematic track on Reducing Plastic and Chemical Pollution in The Marine Environment.

Dr Marianne spoke about the challenges of marine litter which is recognized as the third problem besides climate change and biodiversity loss. She focused on the need to integrate science with policy and mentioned that pollution and social effects are linked. She recognized the need to have collaboration as key to address the issue of marine pollution

Mr Erland Draget spoke about threat to human health and environment due to micro plastic and nano plastic. He mentioned about the existing knowledge gap which hinders action needed in this direction.

Mr Rao state that NITI Aayog has started working with various ministries for plastic management. It is a challenge to address the subject in urban India having around 8000 urban towns. There is a lack of awareness about technology and knowledge instruments. International organization should also be involved to deepen the knowledge. The third tier of government – the urban local body need be involved with various stakeholders.

Dr Girija stated that plastic pollution has global ramification. Inadequate waste management is the driver that is leading to rise in POP. POP is a class of hazardous chemicals that bioaccumulates and biomagnifies. It is has a long range transportation potential.

Dr Racheal emphasized on the need to switch off all sources of plastics into river otherwise clean-up efforts will be fruitless. There are numerous sources of waste that vary across scales making it difficult to fully understand the fate of plastics.

Dr Rachna mentioned working on preventing plastic pollution through EPR and use of digital platform to track, monitor and report leakages in the system. A national framework needs to be developed covering standards, eco design, definition and recyclability of products. "address micro plastic through research" digital dashboard can be used to ensure compliance for single use plastic (SUP). Monitoring has an important role in case of producers, importers and brand owners (PIBO).

DR RAJESHWARA RAO
IAS Special Secretary, NITI Aayog, Government of India

> NITI Aayog will be in the forefront to work all stakeholders.

DR RACHEL HURLEY
Research Scientist, NIVA

> No single method is capable of measuring total load of pollution.

Dr Merete Grung stated that per-and-Polyfluoroalkyl substances (PFAS) are most toxic to human health viturally due to non-degradability. She talked about many international regulations which have come up with a limit for PFAS.

Mr Suresh talked about why polyethylene terephthalate (PET) bottles are preferred. The main reasons for PET being used widely include their reusability, low cost and low carbon footprint as proven by life cycle assessment (LCA).

Dr Paromita mentioned that pollution due to polybrominated diphenyl ethers need to be addressed. The research findings for Tapi River and Daman Ganga River showed that industrial POP (i-POPs) was much higher in open dumps.

Science plays a critical role in supporting the policy frameworks related to plastic waste management and prevention of marine pollution. Research work need to adopt holistic approach as there is no single method for analyzing characterisation and quantification of plastics in water bodies. Research findings have a critical role in framing policies. Legally binding regulations and standards need to be developed for enabling recycling of plastics. Plastic waste and marine pollution is a global challenge requiring local, national and international collaboration.

Virtual Hall: Chinnar

DATA DRIVEN GOVERNANCE FOR URBAN RESILIENCE IN SMART CITIES

Session Chair: Mr Hitesh Vaidya, Director, National Institute for Urban Affairs (NIUA) (Chair)
Speakers: Mr Sanjay Seth, Senior Director, Sustainable Habitat Programme, TERI; H.E. Mr Ugo Astuto, Ambassador, Delegation of the European Union to India; H.E. Mr Freddy Svane, Ambassador, Royal Danish Embassy in India;; Ms Kamilla Kristensen Rai, Counsellor, Delegation of the European Union to India (Co-Chair); Mr Rahul Kapoor, Director, Smart Cities Mission, MoHUA, Govt. of India; Prof. Dr-Ing. Anke Karmann-Woessner, Head of Urban Planning Department, City of Karlsruhe, Germany; Mr Ole Larsen, Director, Climate Adaptation Living Lab, Copenhagen; Prof. Shaleen Singhal, Dean Research and Partnerships, TERI SAS; Dr Vikrom Mathur, Founder, Transitions Research

MR SANJAY SETH
Senior Director, Sustainable Habitat Programme, TERI

"The recent COVID-19 pandemic gave us a better outlook as to how data driven governance could bring a boom in the sphere of urban resilience."

DR JONATHAN DEMENGE
Head of Swiss Agency for Development and Cooperation

"When we speak about resilience, we also need to connect and have the same platform in our understanding of such words in the context of urban."

Actionable Messages

Message 1 Database and data analytics is to assist a gap, which is particularly in terms of science, policy, and practice interface. Hence, the future lies in evidence-based data driven policymaking.

Message 2 Smart cities mission is trying to solve the challenges of three core areas; the quality of life, economic growth of the city and sustainability. This is being done by leveraging technology along with non-technological initiatives to address these three areas.

Mr Sanjay Seth directed the session towards the importance of discussing the relevance of data in today's world and mentioned that "the recent COVID-19 pandemic gave a better outlook as to how data driven governance could bring a boom in the sphere of urban resilience." He also mentioned that the use of technologies and innovative pedagogies changed the course of traditional measures, which were insufficient in controlling the pandemic. Hence, it was imperative to discuss the use of data driven governance in the realm of urban resilience to enhance policy recommendations, management and city planning techniques through integration of various stakeholders.

H.E. Mr Ugo Astuto suggested that "to recover from the economic slump caused by the pandemic, policies must be designed in a way that it does not compromise the low carbon transition that we need in the years to come." Ms Rhea Srivastava set the context of the session towards a resilient urban environment by adapting to data driven governance. Mr Hitesh Vaidya, the chair of the session further elaborated on this and mentioned that "we are all dealing with day-to-day affairs of the city and data becomes a backdrop of these affairs." Mr Rahul Kapoor further developed on this and talked about creating data ecosystems that will help people get the right kind of evidence to understand where the gaps are, what are the outcomes that need to be achieved and where do we stand today in terms of achieving the benchmarks. He mentioned about Smart cities mission and how it is trying to solve the challenges of three core areas in the city, namely; the quality of life, economic growth and sustainability. Prof. Dr.-Ing. Anke Karmann-Woessner gave her perspective on data driven governance and said "For us it's embedding digital principles, digital ethics in the governance and project management's when including new services and solutions that define data driven governance."

Virtual Hall: Kaziranga

IMPROVING AIR QUALITY IN CITIES—GLOBAL ISSUES, LOCAL SOLUTIONS, AND BEST PRACTICES

Speakers: Dr Dr Vibha Dhawan, Director General, The Energy and Resources Institute; Dr Jonathan Demenge, Head of Swiss Agency for Development and Cooperation; Dr Gupta Central Pollution Control Board; Dr Anju Goel, Fellow, The Energy and Resources Institute; Shri Ashish Tiwari, Secretary, Department of Environment, Forest and Climate Change, Government of Uttar Pradesh; Ms Ying Zhang, Project Officer, International Cooperation division, Swiss embassy Beijing; Dr Valentin Foltescu, Senior Programme and Science Officer, Climate & Clean Air Coalition; Ms Neha, Senior Fellow, TERI; Prof Archna Kumar, Behavioural Change Expert, Associate Professor, Lady Irwin College; Prof R. Guleria, Director, All India Institute of Medical Sciences (AIIMS); Shri Ashish Tiwari, Secretary, Department of Environment, Forest and Climate Change at Government of Uttar Pradesh; Ms Prarthana Borah, Director of India, Carbon Disclosure Project (CDP)

Actionable Messages

Message 1 By promoting the practice of sharing of learning challenges and technological proficiency, the global stakeholders can collectively build upon the existing best practices, scientific knowledge, and effective policies for combating air pollution.

Message 2 Clean air project focuses on improved data measurement and analysis, enhanced capacities of city and state authorities to implement cleaner action plans and policies, and on the generation of awareness among all sections of society about clean air action.

The thematic track 'Improving Air Quality in Cities—global issues, local solutions and best practices' discussed future air quality scenarios for developing countries like India, and exchange experience and best practices. The thematic track was composed of two sessions. The first session evidenced national and international experiences on air quality management in cities and discussed the progress made, constraints faced, and the way forward for faster and more effective pollution control. The second session focused on discussing air quality and human health linkages, achievements and challenges, and tools needed to bring behavioural changes in the community on air quality and related issues. The session also focused on clean air action, representatives from the medical community, academia, policy and decision making, media, and NGOs. The session focused on the Clean Air Project in India (CAP India), initiated by the Swiss Agency for Development and Cooperation (SDC), intending to support India's initiative to improve the air quality of four selected cities (Lucknow, Kanpur, Nashik, and Pune); and the Clean Air Project in China.

PROF. R. GULERIA
Director, All India Institute of Medical Sciences (AIIMS)

"Keeping your vicinity clean and preventing throwing of garbage in open areas can act as minor steps that can be taken at an individual level to reduce air pollution."

DR JONATHAN DEMENGE
Head of Swiss Agency for Development and Cooperation

"Swiss Agency for Development and Cooperation is present in 35 priority countries and we are working through multilateral institutions which is active on global challenges such as food security, water, health, or climate change."

THE ROLE OF NATURE IN THE "DECADE OF ACTION" OF THE 2030 AGENDA ON SUSTAINABLE DEVELOPMENT

Session Moderator : Prof. Nandan Nawn, TERI SAS

Speakers: Mr Stephen Contius, Commissioner for the 2030 Agenda and Head of Division, German Ministry for Environment (BMUV); Dr Simon Zadek, Chair, Finance for Biodiversity Initiative; Ms Anshu Singh, Statistical Advisor, Non-Governmental Organisation Cell, Statistical Cell, Sustainable Development Goals (SDG), Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India; Ms Elke Steinmetz, Head of Division, International Cooperation on Biodiversity; Mr Vinod Mathur, Chairperson, National Biodiversity Authority; Ms Raelene Martin, Head of Sustainability, International Chamber of Commerce

The aim of this thematic track was to explore the global achievements towards attaining the Sustainable Development Goals (SDGs) so far, and understand what the way forward looks like. Particular focus was given to policy approaches in India and Germany, and the role of international cooperation in achieving SDG targets.

Mr Stephen Contius mainly emphasized how the pandemic has both been a wake-up call for the world vis-à-vis environmental protection, and at the same time how it has slowed down the process of attaining the SDGs within the stipulated time. Mr Contius pointed out the need for a systems-based approach to make things work in the area of nature for economic development. Dr Simon Zadek proceeded with a discussion on the dynamics of integrating nature and nature-related risks into investment decision making. Dr Zadek started off by presenting a series of staggering statistics that emphasize the need to immediate environmental action. He mainly emphasized on how different approaches are emerging by which nature-related risks are entering investors' decision-making process.

Actionable Messages

In order to measure progress and ensure progress, the means of implementation indicators need to be monitored carefully.

Ms Anshu Singh followed with a discussion of some of the problems that policymakers face because different indicators are defined differently at the national and international level. Ms Elke Steinmetz then followed with a discussion on the key challenges that are present towards attaining a green economy. She pointed out that opportunity costs present in nature-based investments pose a major challenge. Ms Elke also pointed out the importance of considering the "one health" approach by businesses and investors, in addition to nature and climate, while investing in projects aiming to achieve the sustainable development goals.

Mr Vinod Mathur proceeded with a brief presentation on the need of local communities to understand the value of biological diversity, since they are the ones who are entitled and empowered to protect it. He mainly focussed on the issue of "documenting" biological diversity for resource management, through People's Biodiversity Register (PBR) at the local level of gram panchayats (in India) and moving from paper based PBRs to e-PBR and the challenges present in doing so. He opined that grassroots level involvement and organization is the need of the hour. Ms Raelin Martin spoke on the trend of both consumers and businesses becoming environmentally conscious and the positive effect this is having on environmental protection.

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