



Sustainable Development Goals and Dealing with Climate Change

15th DELHI SUSTAINABLE DEVELOPMENT SUMMIT

February 5-7, 2015 | New Delhi, India

EXECUTIVE SUMMARY



FINAL AGENDA

Day 1: February 5, 2015	
0930 - 1045	Inaugural Session
	Lamp Lighting Ceremony
	Welcome Address: Dr R K Pachauri , Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change
	Special Address: Mr Arnold Schwarzenegger , Former Governor, California & Founding Chair, R20: Regions of Climate Action
	Launch of TERI publications
	 Ministerial Addresses - India: Mr Prakash Javadekar, Hon'ble Minister of State (IC) for Environment, Forest & Climate Change, India Mr Suresh Prabhu, Hon'ble Minister of Railways, India
	Inaugural Address: HE Mr Laurent Fabius , Minister of Foreign Affairs and International Development, France & Former Prime Minister, France & President, COP 21
	Closing Remarks: Dr Annapurna Vancheswaran , Director, Sustainable Development Outreach Division, TERI
1045 - 1145	Chair: Mr Nitin Desai, Distinguished Fellow, TERI & Former UN Under-Secretary-General for Economic and Social Affairs
	Video Message: HSH Albert II, Prince of Monaco
	 Panellists: HE Mr Maumoon Abdul Gayoom, Former President, Maldives & President, Progressive Party of Maldives HE Mr Felipe Calderón Hinojosa, Former President, Mexico & Chairman, Global Commission on the Economy and Climate Nobel Laureate HE Dr José Ramos-Horta, Former President, East Timor &
	Chair, High Level Independent Panel on Peace Operations, United Nations • HE Ms Mary Robinson, Former President, Ireland & UN Secretary- General's Special Envoy for Climate Change • The Hon'ble Kevin Rudd, Former Prime Minister, Australia & President, Asia Society Policy Institute
1145 – 1200	Tea

1200 - 1305	Special Session - Leaders' Speak Moderator: Mr Karma Paljor, Business Editor, CNN-IBN Keynote Addresses: SDGs and Climate Change - The Road Ahead • Dr R K Pachauri, Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change The Sustainable Development Goals and the Imperative of Social Transformation • Nobel Laureate Prof. Yuan Tseh Lee, President Emeritus and Distinguished Research Fellow, Academia Sinica Globalize Compassion for Sustainability • Nobel Laureate Mr Kailash Satyarthi, Founder, Bachpan Bachao Andolan & Children Change (1998)
1305 – 1320	Chairperson, Global March Against Child Labour Keynote Address: Solutions for Inclusive, Green and Resilient Cities • Mr Takehiko Nakao, President, Asian Development Bank Chair: Dr R K Pachauri, Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change
1320 - 1415	Lunch hosted by Asian Development Bank
1415 - 1500	 Leadership Panel 2: Sustainable Production and Consumption: Policy and Practice Chair: Ambassador C Dasgupta, Distinguished Fellow, TERI & Former Ambassador of India to the EU, Belgium and Luxembourg HE Mr Abdulla bin Hamad Al-Attiyah, Former Deputy Prime Minister, Qatar & President, Administrative Control and Transparency Authority, Qatar HE Mr Ruud Lubbers, Former Prime Minister, The Netherlands & Member, Club de Madrid Lord John Prescott, Former Deputy Prime Minister & Member of Parliament, House of Lords, UK
1500 - 1615	 Engaging All Stakeholders for the Future We Want Moderator: Mr Nick Ishmael Perkins, Director, SciDev.Net Mr Gyan Chandra Acharya, UN Under-Secretary-General & High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States (UN-OHRLLS) Dr Jaco Cilliers, Country Director, UNDP India Dr Wakako Hironaka, Chair of the Board, Earth Water & Green Foundation & Director-General, Global Environmental Action (GEA) Dr Bindu N Lohani, Vice-President of the Asian Development Bank (ADB) for Knowledge Management and Sustainable Development Dr Pavel Kabat, Director and CEO, International Institute for Applied Systems Analysis (IIASA) Prof. Kazuhiko Takeuchi, Senior Vice-Rector, United Nations University & Director and Professor, Integrated Research System for Sustainability Science (IR3S), University of Tokyo
1615 - 1630	Tea

1630 - 1745	SDGs in a World of Wealth and Income Disparities
1030 - 1745	Chair: Mr Yvo de Boer, Director-General, Global Green Growth Institute (GGGI)
	Chair. Mr 170 de Boer, Brector-deficial, diobar diceir drown institute (dddi)
	Dr Shamshad Akhtar, UN Under-Secretary-General & Executive Secretary,
	United Nations Economic and Social Commission for Asia and the Pacific (UN
	ESCAP)
	Prof. Hironori Hamanaka, Chair of the Board of Directors, Institute for Global
	Environmental Strategies (IGES)
	Dr Alexander Likhotal, President, Green Cross International
	Ambassador Manjeev Singh Puri, Ambassador of India to the European Union,
	Belgium and Luxembourg
	• Dr P C Maithani , Director, Ministry of New and Renewable Energy (MNRE),
	India
1745 – 1900	Sustainability, Climate Change and Corporate Sector Initiatives
	Chair: Mr Venkatesh Valluri, Chairman, Ingersoll Rand India
	Mr. C. Dichard Fodriggi, CEO & Founding Chair, U.S. Cross Deciding Courseil
	 Mr S Richard Fedrizzi, CEO & Founding Chair, US Green Building Council Dr Henrik O Madsen, Group President and CEO, DNV-GL
	 Dr Henrik O Madsen, Group President and CEO, DNV-GL Mr Randal Newton, Vice-President of Enterprise Engineering, Ingersoll Rand
	Mr Glenn Schmidt, Director of Steering of Government and External Affairs,
	Sustainability Communications, BMW Group
	Mr Jeff Seabright, Chief Sustainability Officer, Unilever PLC
	Ms Namita Vikas, Senior President & Country Head, Responsible Banking, YES
	BANK
1915 – 1930	Launch of seventh edition of the Planet for Life Series: Building the Future We
	Want
1930 – 1935	Special Address: Mr Ban Ki-moon, Secretary-General, United Nations (via video)
1935 onwards	Cultural Performance by Junoon followed by Dinner
	Day 2: February 6, 2015
0900 - 1015	Ministerial Session 1: The Agreement that the World Needs at COP 21
	Chair: Sir Suma Chakrabarti, President, European Bank for Reconstruction and
	Development
	TID Mr. Took Took Oceans About Minister of Desirence and Notice 1
	HE Mr Juan José Guerra Abud, Minister of Environment and Natural Resources, Mexico
	HE Ms Lyonpo Dorji Choden, Minister of Works and Human Settlement, Royal
	Government of Bhutan
	HE Mr Sergey Donskoy, Minister of Natural Resources and Environment,
	Russian Federation
	Mr Susheel Kumar, Additional Secretary, Ministry of Environment, Forest and
	Climate Change, India
	HE Mr Lars Andreas Lunde, State Secretary (Deputy Minister) of Climate and
	Environment, Norway
	HE Mr Abdullahi Majeed, Minister of State for Environment and Energy,
	Maldives
	Dr Mukul M Sangma, Hon'ble Chief Minister, Meghalaya, India
	Ambassador Richard Verma, US Ambassador to India
1015 - 1025	Presentation of the 3 rd Nicholas Georgescu-Roegen Awards

1025 - 1045	Теа
1045 – 1245 Thematic Tracks	Challenges in Introducing Clean Technologies (by invitation only) In partnership with EDF
	Technologies for Communities: Improving Groundwater Management in India In partnership with UNDP
	How to Shape India's Sustainable Development Pathways under Climate Change? In partnership with AFD and IDDRI
	Electric Mobility – Shaping the Future of Sustainable Urban Mobility In partnership with BMW
	Special Session on Tackling Climate Change by Legislators: The Road to Paris 2015 (By invitation only) In partnership with the British High Commission and R20
1245 – 1345	Lunch
1345 - 1500	Climate Change Adaptation and Mitigation Chair: Prof. Achim Steiner, UN Under-Secretary-General & Executive Director, United Nations Environment Programme (UNEP) Keynote Addresses: • Dr Naoko Ishii, CEO & Chairperson, Global Environment Facility (GEF) • Mr Ashok Lavasa, Secretary, Ministry of Environment, Forest and Climate Change, India Panellists: • Mr Hideaki Domichi, Senior Vice-President, Japan International Cooperation Agency (JICA) • Dr Peter Holmgren, Director-General, Center for International Forestry Research (CIFOR) • Prof. Nebojsa Nakicenovic, Deputy Director-General, International Institute for Applied Systems Analysis (IIASA) • Ambassador Michel Rentenaar, Acting Director for Environment, Climate, Energy, and Water at the Netherlands Ministry of Foreign Affairs & Netherlands Government Climate Envoy
1500 - 1515	Теа
1515 - 1715 Thematic Tracks	Safe and Clean Transport for Sustainable Cities In partnership with IATSS and IIT Delhi
Thematic Tracks	Challenges in Introducing Clean Technologies In partnership with EDF
	How can Reduction of SLCPs Contribute to Achieving SDGs and a Successful Outcome in Paris? In partnership with Royal Norwegian Embassy and Embassy of Sweden
	Asia's Smart Future Cities In partnership with ADB
1715 – 1800	Keynote Addresses Chair: Dr Prodipto Ghosh, Distinguished Fellow, TERI & Former Secretary, Environment and Forest, India

	Resource Management and Good Governance • HE Mr Kjell Magne Bondevik, Former Prime Minister, Norway & President, The Oslo Center for Peace and Human Rights Tackling Climate Change - Opportunities for Developing Countries • HE Dr Bharrat Jagdeo, Former President, Guyana
1800 – 1815	Special Address: Mr Piyush Goyal , Hon'ble Minister of State (IC) for Power, Coal, & New and Renewable Energy , India
1815 – 1930	Financing Transformational Change and Achieving SDGs in Africa Chair: Dr Fatima Denton, Director of the Special Initiatives Division of the United Nations Economic Commission for Africa (UNECA) • Mr Idrissa Balde, Technical Advisor to the Hon'ble Minister of Environment,
	 Senegal The Hon'ble Jayeshwur Raj Dayal, Minister of Environment, Sustainable Development, Disaster and Beach Management, Republic of Mauritius HE Hon Saviour Kasukuwere, Minister of Environment, Water and Climate, Zimbabwe HE Ms Tumusiime Rhoda Peace, The Commissioner for Rural Economy and Agriculture, African Union Commission
1930 onwards	Climate Change Satyagraha Concert followed by Dinner
0900 - 0930	Day 3: February 7, 2015 Moderator: Mr Nicholas Dawes, Chief Editorial and Content Officer, Hindustan Times
	 In Conversation with Prof. Jeffrey D Sachs, Director, The Earth Institute & Special Advisor to the UN Secretary-General (via video) Dr R K Pachauri, Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change
0930 - 0940	Announcement of the TERI – U Brain TV Partnership Screening of the film on Energy and SDGs
0940 - 1055	 Climate Change: Ethics, Equity and the Poor Chair: Ms Ekaterina Zagladina, President, Permanent Secretariat of the World Summit of Nobel Peace Laureates Dr Rajiv Gupta (IAS), Principal Secretary (Water Supply Department), Principal Secretary (Climate Change Department) & Managing Director, Gujarat Narmada Valley Fertilizers and Chemicals Limited Dr Arvid Hallén, Director General, The Research Council of Norway Ms Naina Lal Kidwai, Chairman, HSBC India & Executive Director on the Board of HSBC Asia-Pacific Dr David M Malone, UN Under-Secretary-General & Rector, United Nations University (UNU) Dr Jukka Mönkkönen, Rector, University of Eastern Finland Mr Suman Bery, Chief Economist, Shell International
1055 – 1105	Tea
1105 - 1300	Oceans and Seas: Governance and Management of Coastal Ecosystems In partnership with UNDP

Thematic Tracks	Urban Transport and Climate Change – Policy Challenges for Indian Cities
	In partnership with TOI Norway and Climatrans
	Are We on Track to Deliver Sustainable Energy for All by 2030? In partnership with SE4All and The World Bank Group
	Bio-economy and Sustainable Development: Revisiting the Policy Agendas in the North and the South In partnership with VITO
	What Next for the IPCC? In partnership with CDKN
1300 - 1400	Lunch
1400 - 1515	Ministerial Session 2: Is Action on Climate Change Imperative and Urgent? Chair: Ambassador Ajai Malhotra, Distinguished Fellow, TERI & Former Ambassador of India to the Russian Federation
	Keynote Address: HE Ms Ségolène Royal , Minister of Ecology, Sustainable Development and Energy, France
	Panellists:
	 Dr Heherson T Alvarez, Commissioner, Climate Change Commission & Former Secretary of the Department of Environment and Natural Resources (DENR), Philippines Hon'ble Leo Brincat, Minister for the Environment, Sustainable Development and Climate Change, Malta The Hon'ble Jean Charest, Partner, McCarthy Tétrault & Former Premier, Québec & Former Minister of the Environment, Canada HE Dr Maciej H Grabowski, Minister of Environment, Republic of Poland Mr Suresh Prabhu, Hon'ble Minister of Railways, India Mr Rajiv Pratap Rudy, Minister of State for Skill Development and Entrepreneurship (IC) & Parliamentary Affairs, India HE Dr Oyun Sanjaasuren, Former Minister for Environment and Green Development; Member of Parliament of Mongolia & President of UNEA Mr Kamalesh Sharma, Commonwealth Secretary-General
1515 – 1535	Presentation of the 11th Sustainable Development Leadership Award and Keynote Address by the Recipient
1535 - 1545	 Special Presentation: Scientific Visualisation for Understanding Energy and Climate Data as Prerequisites for Policy and Action Dr Tim Foresman, Professor and SIBA Chair in Spatial Information Institute for Future Environments - Science and Engineering Faculty Queensland University of Technology

1545 – 1645	Valedictory Session: Vasudhaiva Kutumbakam: Interaction with Faith Leaders for a Sustainable Future
	Chair: Sadhvi Bhagawati Saraswati , President, Divine Shakti Foundation & Secretary-General, Global Interfaith WASH Alliance
	Video Message: Sri Mata Amritanandamayi Devi
	Setting the Context: Mr Takashi Kiuchi, Chairman, E-Square Inc.
	Panellists:
	Dr Kuriakose Bharanikulangara, Archbishop of Faridabad
	Diwan Zainul Abedin Ali Khan, Head of the Ajmer Sharif (Ajmer Dargah)
	Acharya Shri Roopchandra Muniji, President, Manav Mandir Mission
	Ven'ble Bhikkhu Sanghasena, Founder and Head of Mahabodhi International Meditation Centre, Ladakh and Mahakaruna Day
	Pujya Swami Chidanand Saraswatiji, Co-Founder/Chairman of the Global
	Interfaith WASH Alliance, President of Parmarth Niketan Ashram, Rishikesh
	Shri Giani Gurubachan Singh, Chief Jathedar of the Golden Temple (Akal Takht)
1645 - 1650	Presentation of Awards - Young Researchers' South Asian Symposium on
	Sustainable Development
1650 – 1700	Concluding Remarks: Dr R K Pachauri, Director-General, TERI & Chairman,
	Intergovernmental Panel on Climate Change

About DSDS

The Energy and Resources Institute (TERI) strives forth to fulfill its vision of 'working towards global sustainable development, creating innovative solutions for a better tomorrow', through its flagship event the Delhi Sustainable Development Summit (DSDS).

Since 2001, DSDS has been held annually in New Delhi, India, tackling key developmental issues of the times. It has emerged as a forum on global sustainability issues with an accentuated thrust on problems relating to the developing world.

The DSDS series has enjoyed global support; attracted participation from heads of government and ministers, and a host of other dignitaries comprising Nobel laureates, development practitioners, scientists, academics & corporate leaders. To date, the Summit has hosted 36 Heads of State and Government; ministers from over 50 countries; 1500 speakers and delegates from across continents.

The dignitaries and deliberations at the various past editions of the Summit have helped DSDS reckon as a formidable forum on issues of sustainability.

In its 15th year, DSDS focussed on the theme, 'Sustainable Development Goals and Dealing with Climate Change'. The SDGs, which would build on the Millennium Development Goals (MDGs), are seen as a major outcome of the Rio+20 United Nations Conference on Sustainable Development. DSDS 2015 was the first international platform in the developing world, to articulate the expectations of the global community on Sustainable Development Goals.

The following pages summarise the proceedings of the 15th edition of the Summit held in New Delhi, India from the February 5-7, 2015 at Hotel Taj Palace.

Highlights 2015

3 days; 240 speakers and 19 plenaries. A total of 16 Heads of State and Government (current and former) from Australia, California-USA, East Timor, France, Guyana, Ireland, Maldives, Meghalaya- India, Mexico, Monaco, Norway, Portugal, Qatar, Quebec, The Netherlands and UK.

15 Ministers from 12 countries namely, Bhutan, France, India, Mexico, Russian Federation, Norway, Maldives, Mauritius, Zimbabwe, Malta, Poland, Mongolia participated in the proceedings.

The second edition of the media colloquium, an exclusive activity hosted to sensitise journalists on issues of sustainability while reporting attracted participation of 15 journalists from 6 countries. Our media partners for the Summit included *Hindustan Times*, *Mint, CNN-IBN and SciDev. Net* A total of 292 journalists attended the Summit over the four days resulting in over 500 reports across the spectrum – print, electronic and online.

At its 15th edition the Summit engaged youth leaders from across global universities entitling them to an exclusive opportunity to listen, witness and interact with some of the world's greatest thought-leaders. Apart from being a great learning experience, it proved to be a great opportunity for the students to not only discuss issues of sustainability, environment and climate change but also actively engage in taking constructive actions in this direction. 26 Youth Leaders from 13 universities participated in the Summit proceedings.

MESSAGE FROM THE HON'BLE PRIME MINISTER OF INDIA



प्रधान मंत्री Prime Minister

MESSAGE

I am happy to learn that The Energy and Resources Institute – TERI – is organizing the Delhi Sustainable Development Summit (DSDS) – 2015 on the theme "Sustainable Development Goals and Dealing with Climate Change."

In order to be effective, our efforts at poverty eradication and sustainable development must take into account the challenges posed by climate change. I am of the firm opinion that India should view the current global focus on climate change as an opportunity to decisively change the quality of life of its citizens.

We should also work towards a shift on emphasis from "carbon credit" to "green credit", which takes into account initiatives towards clean energy generation, energy conservation and energy efficiency.

I hope the deliberations of the DSDS will lead to fruitful and productive outcomes. I wish the organizers and participants all success

Narendra Modi

03 February, 2015 New Delhi

DAY 1: FEBRUARY 5, 2015

Inaugural Session



Image 1: L-R: Dr R K Pachauri, HE Mr Laurent Fabius, Mr Suresh Prabhu, Mr Prakash Javadekar, Mr Arnold Schwarzenegger, Dr Annapurna Vancheswaran

The session began with lighting of the lamp by the dignitaries, followed by a video presentation on DSDS 2015 that highlighted the theme, "Be there for the future we want." Dr R K Pachauri began his Welcome Address by highlighting the growth and evolution of DSDS over the past 15 years. He focused on TERI's work in the field of research and innovation to meet the challenges of the present climate change disruptions.

Mr Arnold Schwarzenegger congratulated Dr R K Pachauri for the success of the Lighting a Billion Lives (LaBL) campaign. He expressed his admiration for Prime Minister Shri Narendra Modi for leading India on the path of sustainable development. He highlighted the clean energy initiatives in California that can be replicated globally.

Mr Prakash Javadekar said that Sustainable Development Goals (SDGs) need to have different targets for different countries by taking into account the individual inequities and the state of development. He stressed on the significance of the year 2015—when the SDGs will be finalized, climate negotiations (Conference of Parties 21 [COP21]) will take place in Paris, and other major events are also scheduled to take place.

Mr Suresh Prabhu addressed the common goal of 'How to deal with climate change'. He stated that there is a need to establish a unified strategy to deal with climate change. He also emphasized on developing a new economy to integrate food security, climate, and energy security.

HE Mr Laurent Fabius, delivering the Inaugural Address, highlighted the accurate timing of DSDS before the Conference of Parties 21 (COP21) in Paris. He briefed about the approach and expectations of COP21, and gave assurance of transparent, impartial, universal, and differentiated agreement to meet the common objective to reduce global warming. He focused on the contribution of each country and towards increasing financial funds from public and private sources. He also stressed on the fact that the IPCC reports have established the scientific basis of climate change.

Dr Annapurna Vancheswaran gave the closing remarks and also highlighted the presence of 25 youth leaders representing countries across the globe.

Leadership Panel 1: From MDGs to SDGs and Addressing Climate Change



Image 2: L-R: HE Ms Mary Robinson, HE Mr Felipe Calderón Hinojosa, Mr Nitin Desai, HE Mr Maumoon Abdul Gayoom, Nobel Laureate HE Dr José Ramos-Horta, The Hon'ble Kevin Rudd

The session began with the video message of HSH Albert II, Prince of Monaco. He spoke about his government's effort in laying the foundation for sustainable development and added that knowledge sharing and open dialogue are keys to resolving these issues.

Initiating the Panel Discussion, HE Ms Mary Robinson put forward the idea that Sustainable Development Goals (SDGs) and climate change are mutually supported and dependent. She said that the world would have to come to terms with the synergy between the two processes of climate change and SDGs.

HE Dr José Ramos-Horta said that climate change cannot be dissociated from the overseas development agenda and both are interdependent on each other.

HE Mr Felipe Calderón Hinojosa shared a 'climate economic report'. He said that resource efficiency, infrastructure investment, and innovation are drivers to fight climate change and highlighted that solar and wind energies would be 30–50 per cent cheaper by 2020 as compared to imported coal.

HE Mr Maumoon Abdul Gayoom expressed that SDGs cannot be achieved without addressing climate change and that common but differentiated responsibilities need to be taken care of to ensure financial and technical support to vulnerable countries.

The Hon'ble Kevin Rudd said that in Copenhagen, the business community was mostly divided and unhelpful while there exists a binary debate on climate change action and economic development in Paris. He added, "We need to harness the new financial vehicle and the world needs to unite as a single team to win the battle against climate change."

The Chair, Mr Nitin Desai said that all energy alternatives will bring about economic change.

Special Session - Leaders' Speak



Image 3: L-R: Nobel Laureate Prof. Yuan Tseh Lee, Mr Karma Paljor, Nobel Laureate Mr Kailash Satyarthi, Dr R K Pachauri

Dr R K Pachauri stressed on the fact that impacts of climate change are progressively increasing while affecting the environment and the ecosystem. He emphasized that climate change and sustainable development go hand-in-hand and should be dealt as twin challenges. He urged every individual to act as a missionary of knowledge and inspire people.

Nobel Laureate Prof. Yuan Tseh Lee spoke about the political, social, and scientific realms of sustainable development and climate change. To tackle climate change, he stressed on the need for deeper collaboration of the global community.

Nobel Laureate Mr Kailash Satyarthi elaborated on the impacts of environmental degradation and climate change on livelihood, health, and education in rural areas. To address these problems and many others, he opined that proactive approach would be more successful rather than reactive measures.

Keynote Address: Solutions for Inclusive, Green and Resilient Cities



Image 4: Mr Takehiko Nakao and Dr R K Pachauri

Mr Takehiko Nakao began by analysing the Sustainable Development Goals (SDGs) and provided the roadmap on how to proceed with the SDGs. He emphasized that 2015 is a very important year when the SDGs will be finalized and new climate development agreements will be proposed. The SDGs will place environment and social sustainability as its core component to eradicate extreme poverty and incorporate the essence of Millennium Development Goals (MDGs) including education and health. He added that the Asian Development Bank (ADB) will support key points of the SDGs.

There are three important challenges for the development of inclusive green and resilient cities: urbanization of poverty, environmental sustainability, and vulnerability to climate change. Inclusive growth and inclusive cities with education, healthcare, and housing can address the issue of poverty. In India, ADB is supporting the National Urban Health Mission (NUHB) and is also going to support the '100 Smart Cities' initiative. ADB will provide support to develop large drainage systems, elevated roads, and big stormwater reservoir projects in the coastal areas. ADB will continue to play an important role in the development of Asian cities for the success of SDGs.

Leadership Panel 2: Sustainable Production and Consumption: Policy and Practice



Image 5: L-R: HE Mr Abdulla bin Hamad Al-Attiyah, Ambassador C Dasgupta, HE Mr Ruud Lubbers, Lord John Prescott

Ambassador C Dasgupta chaired the panel that focused on the larger question of sustainable consumption and production. He said sustainable consumption involves per capita consumption.

HE Mr Abdulla bin Hamad Al-Attiyah stressed on the impact of unsustainable production. He spoke about the commitment of the Government of Qatar towards developing a long-term strategy for sustainable development, with the help of both public and private players.

HE Mr Ruud Lubbers stated that 2015 is a special year for climate change, green economy and sustainability, and we need to unite to safeguard our common future.

Lord John Prescott highlighted that norms for sustainable production and consumption have to be significantly different from "business as usual". This involves a change in the political will to think of issues from a global perspective.

Engaging All Stakeholders for the Future We Want



Image 6: L-R: Dr Bindu N Lohani, Mr Gyan Chandra Acharya, Mr Nick Ishmael Perkins, Prof. Kazuhiko Takeuchi, Dr Pavel Kabat, Dr Wakako Hironaka, Dr Jaco Cilliers

Mr Gyan Chandra Acharya explained how the new Sustainable Development Goals (SDGs) must be inclusive, keeping in mind all the challenges faced by the least developed countries as they are the most affected, whereas they contribute the least to climate change.

Dr Jaco Cilliers enumerated on how we should manage relationships where there is a difference of opinion and prescribed the top-down and bottom-up approach to succeed in managing issues in an amicable environment.

Dr Wakako Hironaka stressed upon the growing population and the technological advancement and its impact on the environment. She talked about moving from overproduction and overconsumption to avoid depletion of the earth's limited resources.

Dr Pavel Kabat spoke about the integration of science and policy and asked the researchers to participate in implementation of sustainability goals. He emphasized on cross-sector partnership.

Dr Bindu N Lohani emphasized on "everybody has responsibility" and "finance is important to support these agendas (SDGs)". He explained how the relevant goals should be included in investment dialogues in all countries. Prof. Kazuhiko Takeuchi stressed on partnerships and collaborations at the local and global levels. He said partnership could serve as a driving force for NGOs, developing countries, private sectors, and the academia.

SDGs in a World of Wealth and Income Disparities



Image 7: L-R: Dr Alexander Likhotal, Prof. Hironori Hamanaka, Mr Yvo de Boer, Dr Shamshad Akhtar, Ambassador Manjeev Singh Puri, Dr P C Maithani

The session discussed inequality to be the nemesis of sustainability. The most important point of concern for Sustainable Development Goals (SDGs) is inequity since income disparities lead to unstable political state and crime. The panelists pointed out that how, due to uneven distribution of electricity, nearly 45 per cent of India's population still lives without electricity.

They stressed on the provision of universal access to energy for all. The issue of economic disparity needs to be addressed at the global level and SDGs must be reinforced for good

governance at the national, regional, and local levels. SDGs are an embodiment of values to tackle inequalities of income and opportunities and they actually deal with inequality at the micro level.

The panelists also opined that there is a need to find a 'greener model' of economic sustainability and to encourage transformative legislation.

As current policies are lagging behind transformation, agreeing upon global goals is essential for SDGs along with global governance.

Sustainability, Climate Change and Corporate Sector Initiatives



Image 8: L-R: Ms Namita Vikas, Mr Glenn Schmidt, Dr Henrik O Madsen, Mr Venkatesh Valluri, Mr S Richard Fedrizzi, Mr Randal Newton, Mr Jeff Seabright

The session was chaired by Mr Venkatesh Valluri who stressed that business truly plays an important role in driving climate change and environmental sustainability issues. Sustainability requires a shift away from product-based market creation approach to a market-based product creation approach.

Mr Randal Newton said that three elements are necessary to achieve the sustainability goals by 2020— safety of employees and customers, energy efficiency, and developing environment-friendly products. He highlighted the fact that manufacturers should make a commitment to achieve environmental sustainability.

Mr Jeff Seabright observed that a suitable framework for developing a roadmap for private sector activities in sustainability must have three aspects—assessing footprint, handprint, and blueprint. He emphasized on clean sanitation technologies and safe water as the basis for businesses to combine social development along with sustainable growth.

Ms Namita Vikas said that there are three important roles of the banks starting with 'financial inclusion' through which end users are assisted with finance, ensuring reliability amongst the users, and investing in enterprises to cater to livelihood opportunities for the people. She stressed on the fact that it is important for the Indian financial systems to align with the Sustainable Development Goals (SDGs).

Mr Glenn Schmidt stated that in 2007, the BMW Group introduced the 'Efficient Dynamics' model, which focuses not only on increasing efficiency, but also on reducing fuel consumption and CO2 emissions.

Dr Henrik O Madsen opined that regulated collaboration between academics, governance research organizations, and the private sector is required on the path for change and sustainability.

Mr S Richard Fedrizzi highlighted that LEED and GRIHA is the roadmap for increasing efficiency of buildings and reducing the carbon footprint. He felt that the corporates have a bigger role to play in their responsibility towards change for sustainability.

Special Address: Mr Ban Ki-moon, Secretary-General, United Nations



Image 9: Mr Ban Ki-moon during his live video address

Mr Ban Ki-moon began his live video address by commending TERI for organizing DSDS, a strong forum for promoting sustainability, for the past 15 years. He stated that embracing climate change as well as sustainable development is necessary as they are connected and are two sides of the same coin. He also stressed on the fact that governments should provide the framework and private organizations (including think tanks) too must share their ideas to build a more prosperous and resilient world.

He also suggested that countries should intensify their efforts to reduce greenhouse gas emissions by investing in low-carbon technologies for future sustainable growth.

While discussing the Fifth IPCC Assessment Report (AR5), it was observed that since human action is the cause for climate change, it will also be the solution to the problem. Mr Ban Kimoon also stressed on the need to give technological and financial support to developing countries to achieve sustainable development.

DAY 2: FEBRUARY 6, 2015

Ministerial Session 1: The Agreement that the World Needs at COP 21



Image 10: L-R: Ambassador Richard Verma, HE Mr Abdullahi Majeed, Mr Susheel Kumar, HE Mr Sergey Donskoy, Sir Suma Chakrabarti, HE Mr Juan José Guerra Abud, HE Ms Lyonpo Dorji Choden, HE Mr Lars Andreas Lunde, Dr Mukul M Sangma

This session focused on the urgency of taking action in adapting to the impacts of climate change. The speakers also spoke at length about the COP21 Summit in Paris.

Sir Suma Chakrabarti initiated the session by highlighting the key elements of the COP21 Agreement. Some of these key elements were setting of an ambition in terms of a target to mitigate the impacts of climate change. The nature of co-operation needed for adapting to the impacts of climate change.

Mr Susheel Kumar expressed India's wish that the agreement in COP21 would propel the world on the path of comprehensive climate action. He said that a careful balance needs to be maintained between adaptation and mitigation.

HE Mr Juan José Guerra Abud suggested technology transfer from developed to developing nations as a mechanism to combat climate change.

Ambassador Richard Verma stated that US states are not just adapting to energy efficiency and clean energy but is also willing to support India in evolving a clean fuel policy. He highlighted the US mission of reducing carbon emission by 28% by 2025 from 2005 and sticking to goal of maintaining temperature rise below 2 degrees.

Dr Mukul M Sangma emphasized the importance of linking livelihood to sustainable ecology, after discussing the problem of rising number of droughts and floods in Meghalaya.

HE Mr Abdullahi Majeed expressed his concerns of progressively increasing climate change. He elaborated on the various socio-economic issues that were faced by the coastal, low lying islands namely, bio-deliverables, energy access, food security, disaster mitigation and adaptation. He believed that COP21 will be stimulating both for policy makers and decision makers alike. He concluded by stressing that the momentum towards tackling climate change should be maintained.

HE Ms Lyonpo Dorji Choden stated that Bhutan was committed towards people-centric sustainable growth. She also said that Bhutan has high hopes from COP21 to be held in Paris as her country is worst affected by the natural disasters due to climate change.

HE Mr Lars Andreas Lunde stressed on an urgent and long-term action on climate change. He spoke about the Norwegian support to the neighbouring EU nations to achieve 40% reduction of greenhouse gases by the year 2030, thereby adopting the EU policy inspite of not being part of the EU. He stressed on the alignment of SDG's and the new climate change agreement in COP21 for a new passage for sustainable development.

HE Mr Sergey Donskoy said that Russia is geared to present a new paradigm of sustainable development to the world.

Climate Change Adaptation and Mitigation



Image 11: L-R: Prof. Nebojsa Nakicenovic, Dr Peter Holmgren, Mr Ashok Lavasa, Prof. Achim Steiner, Ambassador Michel Rentenaar, Mr Hideaki Domichi, Dr Naoko Ishii

This session assessed the challenges and opportunities the world is facing in 2015 to address mitigation and adaptation challenges.

Dr Naoko Ishii highlighted that transformational change across the three economic systems, i.e., cities, land-use, and energy is essential and possible. Mr Ashok Lavasa said that India is determined to play a proactive role for a positive and pragmatic agreement on addressing climate change issues. There is a need to recognize the difficulties and significance of the principle of common but differentiated responsibilities (CBDR).

Mr Hideaki Domichi stated that Japan is planning to contribute \$1.5 billion to the Green Climate Fund. Japan is also planning to launch a satellite to measure greenhouse gas (GHG) emissions from Asian countries which will help in reducing emissions.

Dr Peter Holmgren highlighted the significant role of forests in dealing with climate change and achieving sustainable development.

Prof. Nebojsa Nakicenovic highlighted the significance of energy efficiency measures in bringing about significant decarbonization and equity as well as achieving the Sustainable Development Goals (SDGs). Ambassador Michel Rentenaar said that both climate action and economic

growth, along with a long-term common goal, i.e., climate neutrality, are needed to rebuild the society. In order to achieve these goals, the strategies of mitigation, adaptation, and implementation must be adopted.

Keynote Addresses



Image 12: L-R: HE Dr Bharrat Jagdeo, Dr Prodipto Ghosh, HE Mr Kjell Magne Bondevik

Dr Prodipto Ghosh spoke about the subsidy on fossil fuels like coal and petrol in India. He emphasized that social sustainability is an important pillar to tackle climate change.

Resource Management and Good Governance

HE Mr Kjell Magne Bondevik stated that countries with abundant natural resources generally have less economic growth. In his view, corruption is the major contributor for this trend. He also highlighted the fact that companies bring expertise and labour from their own countries, which leads to poor capacity building for the host country. He concluded on an optimistic note reiterating the numerous opportunities that exist to utilize natural resources to improve the standard of living of poor people, in spite of the pitfalls that lie along the journey.

Tackling Climate Change - Opportunities for Developing Countries

HE Dr Bharrat Jagdeo stated that there is a need to work on the building blocks to have a successful climate agreement in Paris later this year. According to him, the two elements of the building blocks are: Intended Nationally Determined Contributions (INDCs) and the issue of Climate Finance. Capacity building, while attracting finance, would help combat the effects of climate change. He stated that pledges alone cannot achieve anything, without financial agreements.

Special Address



Image 13: Mr Piyush Goyal delivering the Special Address

Mr Piyush Goyal stated that the idea of renewable energy germinated some 32 years ago. Today, new forms of energy are being explored that have reverence for the environment. He talked about the age-old concepts of "reuse" and "recycle" that are ingrained in the Indian consciousness. He stressed on the fact that on a per capita basis, energy consumption in India is very less, and therefore, India cannot take sole responsibility for the pollution. However, it leads us to think about how to make the best use of renewable energy.

He referred to Prime Minister Shri Narendra Modi's response to a question related to climate change in the joint press conference during the recent visit of President Barack Obama to India, in which the Prime Minister stated that the government does not function under pressure, but with a sense of consciousness for a better environment. He also talked about the various renewable and clean energy initiatives taken by the government.

The Minister said that with efficient use of energy, India can save up to 20–25 per cent of energy, worth \$10 billion. He cited the example of replacing traditional bulbs with LEDs to conserve energy. He lauded Dr R K Pachauri for his efforts to build awareness towards energy conservation and urged him to keep the government updated on environmental issues.

Financing Transformational Change and Achieving SDGs in Africa



Image 14: L-R: HE Hon Saviour Kasukuwere, Mr Idrissa Balde, Dr Fatima Denton, The Hon'ble Jayeshwur Raj Dayal, HE Ms Tumusiime Rhoda Peace

Dr Fatima Denton stressed on sustainable development, economic transformation, inclusive development and quality of development to achieve SDGs, along with the creation of financial architecture and ensuring inclusive development for Africa.

HE Ms Tumusiime Rhoda Peace highlighted the detrimental effects of climate change on the agricultural sector in Africa. She felt that climate finance would be most important to increase the resilience and reduce vulnerability of the African nations.

The Hon'ble Jayeshwur Raj Dayal emphasized that there is a need to reorient and redesign strategies for inclusive and sustainable development. He said that sustainable development in Africa can only be financed from a mix of sources ranging from official development assistance, foreign direct investment, and an enhanced domestic resource mobilization process.

HE Hon. Saviour Kasukuwere said that the developed world should come to the negotiating table to ensure that promises made in the past are realized. He also stressed that in the absence of concrete financial commitment, Africa's contribution to climate adaptation and mitigation would become very difficult.

DAY 3: FEBRUARY 7, 2015

In Conversation



Image 15: L-R: Dr R K Pachauri, Mr Nicholas Dawes, Prof. Jeffrey D Sachs

Prof. Jeffrey D Sachs focused on the importance of the year 2015 in achieving sustainable development goals in relation to climate change. He spoke about aiming at finalizing an agreement on climate change and emphasizing on developing a meaningful financial agreement, which underpins sustainable development.

Citing the importance of the three major conventions to be held in 2015 at Addis Ababa, New York, and Paris, he highlighted the broad objectives of these summits as assuring the future of development (aid) processes like the USAID process, defining climate financing in terms of the \$100 billion commitment, mobilizing private capital to scale up sustainable infrastructure, reforming the regulatory framework to prevent corruption, and adhering to the 2°C upper limit.

Prof. Jeffrey D Sachs said that this could be done by adopting clean energy-based technologies, such as electric vehicles, and scaling up nuclear and solar power generation. He added that it is important to come up with commitments like the \$100 billion per year deal between the rich and poor countries and the "Sustainable Development Solutions Network", which is working in collaboration with 15 countries across the world. He summed up by suggesting the relevance of global partnerships in promoting technological breakthroughs, and added that India, China, USA, and Europe should push towards economic growth with decarbonization.

Dr R K Pachauri concluded by saying that the transition in energy supply needs to be accompanied with the transition in consumption.

Climate Change: Ethics, Equity and the Poor



Image 16: L-R: Mr Suman Bery, Dr David M Malone, Dr Arvid Hallén, Ms Ekaterina Zagladina, Dr Rajiv Gupta, Ms Naina Lal Kidwai, Dr Jukka Mönkkönen

The session focused on the issues of social and economic justice while tackling climate change. Dr Rajiv Gupta said that sustainability is a moral issue, as it impacts the life of future generations. A decisive political leadership is imperative to address the problems of mitigation and adaptation of climate change. "The issue of equity is at the core of the climate change debate," added Dr Gupta.

Dr Arvid Hallén spoke about the importance of a strong political framework along with social innovation and decisive leadership to tackle the issue.

Ms Naina Lal Kidwai highlighted water scarcity as the most important risk facing mankind. She suggested that collective efforts of the government, not-for-profit organizations, corporates, along with citizen engagement can play a vital role in tackling this issue in India.

Dr David M Malone stated that India is the ultimate laboratory where ideas for development can be implemented. He believed that a voluntary-driven approach will aid negotiations in COP21.

Dr Jukka Mönkkönen said that scientific research was the key to solve the issue of climate change and there is a need for an amalgamation of both the natural and social disciplines to tackle climate change.

Mr Suman Bery stated that renewable energy was only part of the answer. The entire problem could be solved if developed countries undertake responsibility for credible pricing of hydrocarbons as well as research in Carbon Capture and Storage (CCS), while developing countries adopt robust and reliable energy access and realistic pricing.

Ministerial Session 2: Is Action on Climate Change Imperative and Urgent?



Image 17: L-R: Mr Kamalesh Sharma, Mr Rajiv Pratap Rudy, HE Dr Maciej H Grabowski, Hon'ble Leo Brincat, HE Ms Ségolène Royal, Ambassador Ajai Malhotra, Dr Heherson T Alvarez, The Hon'ble Jean Charest, HE Dr Oyun Sanjaasuren

Ambassador Ajai Malhotra started the discussion by stating the importance of 2015 in the context of the international agreement on climate change. HE Ms Ségolène Royal said that all the countries possess the technology to bring about change, but what matters is that everyone should act and get involved.

Dr Heherson T Alvarez expressed his concern about the issue of climate change posing a threat to the survival of animal species. He added that climate change also undermines agriculture and food security due to soil degradation and extreme weather events.

The Hon'ble Leo Brincat mentioned that the Sustainable Development Goals (SDGs) and climate change mitigation policies should complement each other. He also mentioned that adaptation measures towards climate change have hitherto been neglected.

With respect to the upcoming Conference of Parties (COP21), the Hon'ble Jean Charest stated that the leadership of the host country is paramount to the success of an international agreement on climate change. He also emphasized the political consequences of climate change, such as forging new trade relations.

HE Dr Maciej H Grabowski suggested that countries across the world should have a common goal, but their responsibilities should be different.

Mr Suresh Prabhu stressed on the urgency to act against climate change, otherwise the costs will be too high.

Mr Rajiv Pratap Rudy emphasized on the need to skill India's population, as only two per cent of the country's total population is skilled at present. He added that a skilled workforce is essential to implement programmes like the National Solar Mission.

HE Dr Oyun Sanjaasuren mentioned that countries will succeed in combating climate change only when there are clear goals, well-defined strategies, and monitoring and evaluation mechanisms. To this end, national and regional integration is very important.

Mr Kamalesh Sharma suggested rapid climate finance policies for the most vulnerable countries. He emphasized on issues like overcoming poverty to increase resilience, development

of a common skill force, and thrust on SDGs. He also emphasized the need of proactive participation of the Commonwealth countries towards this end.

Special Presentation: Scientific Visualisation for Understanding Energy and Climate Data as Prerequisites for Policy and Action



Image 18: Dr Tim Foresman delivering his presentation

Dr Tim Foresman, Professor and SIBA Chair in Spatial Information Institute for Future Environments—Science and Engineering Faculty Queensland University of Technology, gave a presentation on climate change and how technology can be leveraged to understand the data and social trends in order to adapt to the changing sustainability trends. He emphasized on the social responsibility of an individual to bring about sustainable development. Dr Foresman urged the scientific community to use science and technology in understanding the trends of human development and adapting to these trends.

Valedictory Session: Vasudhaiva Kutumbakam: Interaction with Faith Leaders for a Sustainable Future



Image 20: L-R: Ven'ble Bhikkhu Sanghasena, Diwan Zainul Abedin Ali Khan, Shri Giani Gurubachan Singh, Pujya Swami Chidanand Saraswatiji, Dr Kuriakose Bharanikulangara, Acharya Shri Roopchandra Muniji, Mr Takashi Kiuchi

Chairing the panel, Sadhviji Bhagawati Saraswati said that the true movement towards sustainable development requires not only a top-down approach but also a bottom-down approach. She stressed that a change in thought, behaviour, and demand was required across the world, and this change could be best achieved through faith.

Pujya Swami Chidanand Saraswatiji compared the world to a market place and discoursed on the need to turn it into a family place. He said that with the concept of one world, one family, we can make the world sustainable, stable, and strong.

Dr Kuriakose Bharanikulangara deliberated upon the essence of inter-generational justice on climate considerations. He highlighted the moral responsibility of passing on a cleaner, greener, and healthier nature to the next generation.

Raising the need to purify our faith and soul, Shri Giani Gurubachan Singh said that as air, water, and land are essential for our existence, in order to make the environment pure, we must make our own hearts pure as well.

Diwan Zainul Abedin Ali Khan stressed that this is the time to start the revolution to provide a clean earth to our generation.

Acharya Shri Roopchandra Muniji emphasized that the eternal religion, the eternal path, and the eternal truth are nothing but non-violence which he further defined as the "Reverence of Life". The gathering of religious leaders in the Summit discussed about the urgent need to make the religious followers across the world aware about climate change and the corresponding importance of sustainable development.

Ven'ble Bhikkhu Sanghasena emphasized on the need for everyone to come together to understand and stop the expansion that is damaging the ecological balance in the world.

Mr Takashi Kiuchi highlighted the message of 'Shimi Jimi' or 'Heart to Heart', stressing that we need to do away with indifference, which is core to all our problems.

Sri Mata Amritanandamayi Devi joined the discussion through a video message and sent her blessings to Dr R K Pachauri for the successful organization of the DSDS 2015.

LAUNCHES

Global Sustainability Development Report 2015: Climate Change and Sustainable Development: Assessing Progress of Regions and Countries



The first edition of the Global Sustainable Development Report was launched during the Inaugural Session of DSDS 2015. An annual publication, it will assess the progress of regions and countries around the world on the theme of the Summit. The report emphasizes the importance of stabilization climate change for sustainable development, assesses the climate risks of 193 member countries of the United Nations in terms of rising temperature, unpredictable rains, melting glaciers, rising sea level and increasing extreme climatic events. The report further assesses the progress of the countries on various aspects of climate change mitigation and mitigation. The report further, on the pattern of UNDP's Human Development Report, ranks the countries of the world in term of climate risks, historical and current responsibility for climate change and climate adaptive capacity.

Energy Security Outlook - Defining a secure and sustainable energy future for India



The Energy Security Outlook, a TERI publication, is a one-of-its-kind knowledge product that fulfills the need for a comprehensive energy security document on India which evaluates critical choices facing the country. Launched during the Inaugural Session of the Summit, the publication seeks to sensitize stakeholders and evaluate choices on energy security.

During the Inaugural Session, TERI launched an annual research report titled, 'Global Sustainable Development Report 2015', with the theme Climate Change and Sustainability

Launch of seventh edition of the Planet for Life Series: Building the Future We Want



The latest book of the series, A Planet for Life, titled, Building the Future We Want, was launched at the Summit in the presence of HE Ms Ségolène Royal, Minister of Ecology, Sustainable Development and Energy, France; Dr R K Pachauri, Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change; Dr Trancrède Voituriez, Institute for Sustainable Development and International Relations (IDDRI) (Associate Editor of the book); Ms Aude Flogny, Regional Director for South Asia, French Development Agency (AFD).

The 2015 edition of A Planet for Life provides first hand analysis and narrative of ongoing transformation and sustainable development challenges in key countries. It tours five continents to shed light on what countries and regions are actually doing to achieve sustainable development, tackling their own - local and global - problems, and exploring different pathways towards sustainability. It explores implementation issues and financing for development options more specifically, with an overview of key propositions for making sustainable development financing a lever to transform economies and societies.



Announcement of the TERI - UBrainTV Partnership: Communicating for Sustainability

Prof. Kodama, Founder, UBrainTV, Ms Nobuko Kashiwagi, Vice-President UBrainTV, along with Dr R K Pachauri, Director-General, TERI & Chairman, Intergovernmental Panel on Climate Change, made an announcement about the TERI-UBrainTV Partnership.

Since knowledge and research institutions have a much larger responsibility that transcends the mere production of knowledge, there has to be a sustained effort towards information dissemination by which the larger public benefits from the knowledge created. The unprecedented developments in information and communication technologies in recent years has made outreach possible far beyond expectations. TERI has been practicing this through various means of outreach, including the audio-visual medium. It has a dedicated Film & TV Unit, which produces high-quality films on various issues related to sustainable development. Its efforts will further be strengthened through a new partnership with UBrainTV, a young and dynamic media organization, based out of Japan and the UK. Together, they will create a website-TERI-UBrainTV.com, which will bring together various voices and stories on climate change and sustainable development from across the world.

SOCIAL EVENTS

Performance by Junoon & Announcement of LaBL Ambassador



Junoon, the Sufi-Rock band from Pakistan made a special performance at DSDS 2015. They performed several of their own hits, such as *Sayonee*, as well as popular folk songs. The evening was also dedicated to Lighting a Billion Lives, and Mr V V S Laxman, former member of the Indian cricket team, was announced as an LaBL Ambassador.

Climate Change Satyagraha Concert



The Climate Change Satyagraha Concert was a splendid rendition by a young troupe of The Velammal International School, Chennai. The group presented a musical journey spreading the message of 'save earth from the crisis on the planet'. The concert enthralled the audience with the tunes of 'live a life of love always' and was received very well by all.

AWARDS

11th Sustainable Development Leadership Award



The Award was presented to the Former President of European Commission & Former Prime Minister of Portugal, Dr José Manuel Durão Barroso, in recognition of his pioneering efforts to de-carbonize the European economy and to promote renewable energy and energy efficiency. The Award was presented by Mr Suresh Prabhu, Hon'ble Minister for Railways, India.

Dr Barroso appreciated India as a country with a rich culture and heritage. He said that the European Commission agreement is highly ambitious in reducing the amount of greenhouse gases by 40 per cent and important goals have been set for an increase in energy efficiency. He highlighted the challenge of a global agreement between different countries. Dr Barroso added that energy policy goals were also a part of the sustainability goals in the European Union.

3rd Nicholas Georgescu-Roegen Awards



The 3rd Nicholas Georgescu-Roegen Awards at DSDS 2015 in the category of 'Lifetime Achievement' was presented to Prof. Herman Daly, Professor Emeritus, University of Maryland,

for his vision and for taking a courageous stance and swimming upstream against the currents of conventional economic thought. His concept of 'Steady-State Economics' revolted the mind of the orthodox economist. The award in the category of 'Unconventional Thinking' was given to Prof. Jacques Grinevald, Epistemologist and Historian, from The Graduate Institute, Geneva for his pioneering contribution to the 'degrowth' literature and for his service in advancing thinking around anthropocene and bioeconomics.

Young Researchers' South Asian Symposium on Sustainable Development



TERI University hosted a Young Researchers' South Asian Symposium on Sustainable Development during February 3-6, 2015, on the sidelines of DSDS 2015. Three researchers were presented with awards for Best Poster Presentation:

- **Mr Rupak Kumar**, Birla Institute of Technology and Sciences, Hyderabad, for his poster presentation on 'A Sustainable Environmental Solution: Microbial Degradation and reduction of Morpholine in Industrial Effluents'
- **Ms Preeti Agarwal**, Department of Natural Resources, TERI University, Delhi, for her poster presentation on 'Low carbon transportation in Delhi current and future projections under various policy measures'
- **Mr Mohammad Ziauddin**, Department of Policy Studies, TERI University, Delhi, for his poster presentation on 'Top-Down and Bottom-up Approaches in Urban Regeneration Integrative Methodology for Sustainable Urban Regeneration in TOD Influence Zones. Case Study: Delhi.'

THEMATIC TRACKS

Waste Water Management and River Cleaning

In partnership with Innovation Norway



The aim of the workshop was to determine how the corporate sector can create a water safe sustainable society. For waste water management and river cleaning, the speakers recommended – implementation of efficient water management strategies; efficient use of sludge for fertilizer and energy; improved rainwater harvesting systems for groundwater augmentation; water and environment-related courses in colleges and universities; lifecycle cost analysis for waste water treatment systems; and sticking to proven technologies and higher standards. The workshop concluded with the note that the corporate sector should be keen on enhancing water use efficiency.

Environmentally Sustainable and Smart Cities

In Partnership with AFD and UNDP



The track included sessions on: Integrating Environment Sustainability Framework' and the 'Role of ICT in Technology Deployment in the Government of India's 100 Smart City Agenda'. Dr M Ramachandran emphasized the need for empowering and building specialized capacity at

the urban local body level. Mr Amitabh Kant highlighted the need for embedding cities with public transportation, effective water and waste management, good information flow combined with smart governance as instruments for building smart cities. The discussions also explored the role of open data approaches, performance measurement, collaboration with a variety of stakeholders, and the need for foreseeing challenges while formulating policy.

In the second session chaired by Ms Mili Majumdar, a combination of planned infrastructure and ICT and increased use of renewable energy were discussed as elements of smart cities. Various applications of ICT which have been experimented in cities like Jaipur, Bejing, Chandigarh, and Lavasa were discussed.

The Global Calculator – an Interactive and Open-Source Model of the World's Energy, Land and Food Systems to 2050

In Partnership with the British High Commission



The Global Calculator tool presents an exciting opportunity for researchers, students, and policymakers to understand, in order of magnitude, the changes to energy systems and the concomitant implications on land and food. Ms Laura Aylett from the British High Commission demonstrated the working of the calculator. The session produced thought-provoking discussions on how the model should be used. Various pillars of a successful model were discussed such as transparency, applicability, simplicity, etc. The advantage of the Global Calculator is that the model assumptions are transparent and everybody can use and customize it.

Challenges in Introducing Clean Technologies (By invitation only)

In partnership with EDF



This thematic track focused on identifying the challenges faced by the power sector and the need for innovation in all spheres of technology, including fossil fuels, renewables, transport sector, digitization, forecasting models, etc. The key areas identified for low-carbon energy generation were renewables, hydropower, and nuclear energy. Various issues related to low-carbon technologies such as financing, policy synchronization, regulations, grid infrastructure, resource-forecasting, balancing capacity requirements, etc. were also discussed by the panelists. Demand Side Management and Energy Efficiency were also identified as important means to achieve low-carbon sustainable development.

Technologies for Communities: Improving Groundwater Management in India *In partnership with UNDP*



The panelists shared their experiences about the impact of community involvement in groundwater management. They also discussed the existing disconnects in groundwater management system. The establishment of a global governance system to manage this shared resource came as a solution to this problem. Some of the successful case studies done in Karnataka, Andhra Pradesh, and Rajasthan were discussed. The panelists presented alarming facts related to the use of groundwater in India and concluded the session with some key

messages—governance should be aligned with scientific solutions and groundwater science should be demystified to reach out to the local people.

How to Shape India's Sustainable Development Pathways under Climate Change? In partnership with AFD and IDDRI



The interactive discussion characterized India as a country of vast regional diversities alongside, enormous disparities that need to be mitigated by a shared corporate community responsibility. Sustainable development in India needs an intervention in executing policies robustly, coordinating domestic policies, alignment of policy assessments, and efficient incentives. One of the panelists stressed on the fact that economic development and ecological development work in tandem. The challenges faced by the corporates while implementing energy efficiency measures were also discussed. The financial, social, and economic aspects need to work in coordination to pave the way for sustainable environment.

Electric Mobility – Shaping the Future of Sustainable Urban Mobility *In partnership with BMW*



The session started with a discussion on exploring the current transport scenario, prospects and challenges of mainstream Electric Vehicles (EVs) in India, and the relevance of introducing electric mobility for sustainable development. The panelists stressed the need to build a roadmap, rooted in reality for EVs in India in collaboration with industry and research institutes. Presentations were made that covered various aspects of electric mobility and the government's vision for electric mobility in India. The panelists discussed initiatives by those involved in the Indian automobile industry and the way forward.

Special Session on Tackling Climate Change by Legislators: The Road to Paris 2015 (By invitation only)

In partnership with the British High Commission and R20



The session dwelled on exploring the roles that legislators need to play on the Road to Paris 2015 at both the national and subnational levels. The discussions revolved around cooperation for a successful agreement at Paris, as well as implementation measures. Amongst the various themes discussed were issues of livelihoods, threats to biodiversity, investments required for low-carbon growth, the need of raising climate awareness, technology, and finance. The panelists arrived upon consensus that legislators must play a leading role in tackling climate change. It was decided that there was a need to approach frameworks that would address the national and sub-national challenges, amongst the different stakeholders.

Safe and Clean Transport for Sustainable Cities

In partnership with IATSS and IIT Delhi



The session focused on decoding the ongoing three-year study, "Research Framework on Community Design for Traffic Safety", conducted by experts from Japan and IIT Delhi whereby it contextualized the contemporary discussion of 'SMART' cities focusing on 'safety'. It is imperative that the transport sector relies on technology and strategies of change, else the carbon emissions will continue to rise globally. The panelists also stressed that transport should include a holistic approach integrating urban planning, policy measures, and urban sustainability in the sector.

Challenges in Introducing Clean Technologies

In partnership with EDF



The session highlighted key issues such as integrating renewable energy (RE) into the current power grid, increasing the efficiency of existing power units, forecasting power demand and supply of RE, the need for a sustainable and profitable Indian power sector, and cost-reflective power tariffs. The panelists suggested solutions such as technological developments in the integration of RE, use of micro-grids, forecasting modules for demand-supply projection, and a balance between conventional and non-conventional power capacities. The panelists agreed that though regulations to promote RE technologies are in place in India, its implementation needs to be strengthened.

How can Reduction of SLCPs Contribute to Achieving SDGs and a Successful Outcome in Paris?

In partnership with Royal Norwegian Embassy and Embassy of Sweden

The panelists stressed on the need to reduce Short Lived Climate Pollutants (SLCPs) to meet the target of 2oC global temperature. In this context, economy and society need to act in harmony, beyond international boundaries. It was felt that there is a need to bring out the importance of SLCPs in the policy structure and suggest measures to reduce emissions and maximize benefits. One of the panelists stated that climate change and air pollution policies should be coordinated in an effective manner so as to deal with challenges posed by climate change.



Asia's Smart Future Cities

In partnership with ADB



The panelists said that almost 1.1 billion people would live in cities by 2050 and felt that 'resilience should be tackled along with city design'. They discussed about the six major projects which were started in the city of Yokohama to make it a smart city. They explained how smart solutions need to be tailored in line with the aspirations of the city's inhabitants, ability to adapt, its vision and its capacity to change. Strong governance, healthy tax base, and an active civil society would determine the conditions for good governance. The panelists also stressed that a new DNA should be designed for smart cities in India.

Oceans and Seas: Governance and Management of Coastal Ecosystems

In partnership with UNDP



In this session the panelists shared their concerns about the vulnerable and continuously deteriorating state of the coastal ecosystem. The panelists discussed about various coastal cities, highlighting the issues, and the existing potential adaptation and mitigation measures. One of the important strategies for managing the coastal ecosystem, as stressed by all the panelists, was community involvement. It was emphasized that solutions do exist. It is only a matter of finding them through political will, citizen engagement, decentralization of the system, and creating the mechanism that can equalize the power. The discussion concluded with a quote, "Land divides and sea unites".

Urban Transport and Climate Change - Policy Challenges for Indian Cities

In partnership with TOI Norway and Climatrans



This thematic track launched the Climatrans research project, supported by The Research Council of Norway, which will study mitigation and adaptation strategies required for the urban transport sector in India. In this session, the panelists highlighted the policy dilemma faced by the Indian transport sector and stressed on the fact that while public transport-oriented growth can lead to major reductions in CO2 emissions, it will also create a big mobility gap that needs to be bridged. It was discussed that though per capita vehicle ownership in India is currently much lower than in Western countries, it is projected to increase rapidly. The required growth in the urban transport sector should follow a pathway that is low on carbon and climate resilient.

The session emphasized that one of the major barriers in implementation of sustainable transport policy is the highly fragmented institutional arrangement for transport in India. Strong policy incentives can work but the policy setting is often carried out in an ad-hoc and piecemeal manner. In fact, transport policy needs to be integrated with land-use planning, social housing, and economic activity. Local authorities should be vested with stronger powers to raise finances and autonomy to devise regulations. The session ended with recognition of the increased need of mainstreaming mitigation and adaptation.

Are We on Track to Deliver Sustainable Energy for All by 2030?

In partnership with SE4All and The World Bank Group



This session emphasized that sustainable energy is the key to our future. The findings from the Global Tracking Framework (GTF) were presented. It was highlighted that the world is progressing in terms of better access to electricity, thereby moving ahead on the path of the energy efficiency goal of SE4ALL. However, the number of households dependent on solid biomass as primary fuel for cooking has also grown from 2.8 billion to 2.9 billion during 2010–12. It was suggested that as a global institution, SE4ALL facilitates the efforts of respective countries towards the attainment of its goals. In this context, it was also mentioned that GTF and Readiness for Investment in Sustainable Energy (RISE) will help countries to move ahead on the path of sustainable development. During the session the RISE pilot report was launched.

Bio-economy and Sustainable Development: Revisiting the Policy Agendas in the North and the South

In partnership with VITO



The objective of the discussion was to articulate inputs for framing an India-EU agenda for bioeconomy, especially from the science, technology and innovation, and industrial policy perspective.

It was discussed that there is a need for the bio-economy vision to go beyond science and technology to connect to the economy and sustainable development issues. The focus should be on the supply of bio-resources along with demand-side technology areas. There is a need to develop participatory approaches for engaging with different stakeholders, including industry, governments, research organizations and community and civil society. The other important areas include stronger data, enabling policy environment, industry-research linkages, and promoting entrepreneurship.

What Next for the IPCC? In partnership with CDKN



This session emphasized on the need to bring out updates on recent scientific research for easy dissemination of the findings and processes of the Intergovernmental Panel on Climate Change (IPCC). Information analysis needs to monitor, report, and verify their impacts. The IPCC

should also seek relevant scientific data from the literature published in local languages of developing countries. Integration between the Working Groups and the groups deliberating on sustainable development issues, such as poverty and food security, will make the IPCC more impactful. The mismatch between the political rush for action and inadequate time to make significant improvements in scientific models and assessments was also pointed out during this session. In the end, the participants agreed that the basic structure of the IPCC should be kept intact, leaving enough space for innovations and adjustments for specific and timely updates, integrated comprehensive findings, greater representation of developing countries, and better communication.

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