Dr Ajay Mathur chaired the session. In his keynote address, Mr Rajat Gupta began by emphasizing on the need for the report by drawing attention towards the global climatic crisis. He said that the climate change has already started showing severe impacts at multiple spatial levels and will only intensify if not taken care of. The report tries to link climatic models with economic projections by taking into consideration nine cases that exemplify the effects experienced due to climate extreme and realizes the proximity to the physical thresholds. Another geospatial assessment was also carried out by examining six indicators, namely, liveability, workability, food systems, physical assets, infrastructure services, and natural capital, for understanding the potential socio-economic impacts.

The major findings of the impact assessment revealed that about 30% of job types, employing about 65% of workforce globally, are at the risk of exposure to extreme heat. The impacts of climate change are expected to be non-linear according to the results. The report also suggests a major shift in the natural biome with consequential environmental changes. The shift was also closely associated to the GDP levels of the countries assessed under the above-mentioned parameters.

Mr Gupta concluded by suggesting three possible solutions to the grave situation. These included decision-making, adaptation, and decarbonization to reduce future risks. He stated that India stands at the brim of an enormous catastrophe with heat waves, increase in sea levels, and consequential impacts on agriculture. However, he also believed that digitization and automation can prove to be of an advantage when adapting to the climate.

Dr Ajay Mathur ended the session by appreciating the report and saying that it opens up a new area of thought.
The speakers discussed about the various opportunities and challenges that India is currently facing on its journey towards the achievement of SDG target 6.1. This target calls for universal and equitable access to safe and affordable drinking water for all.

Dr S K Sarkar highlighted that the poor and vulnerable sections of society bear the brunt of lack of good quality water and poor sanitation. There is a need for local, national, and international efforts to achieve universal and equitable access to safe drinking water in India.

Mr Parameswaran Iyer highlighted that several milestones have been achieved under the Swachh Bharat Mission (SBM). The government has recognized the institutional challenges in water management and the integration of water institutions has started with the formation of the Ministry of Jal Shakti. He said that holistic planning, including source sustainability, distribution, greywater reuse, and partnerships, is crucial towards achieving the target of water for all.

Mr Dan Alluf highlighted Israel’s four pillars of water management (regulation, management, technology, and awareness). In Israel, 90% of urban water is reused and the awareness towards water and its management is instilled in the youth from a very young age for better understanding of the effective use and management of water resources.

Mr Cherian Thomas highlighted the linkage between sanitation and water resources and the problem of water contamination. He explained how the availability of good quality of water can improve the lives and economy of the rural community.

Dr Haraprasad Vaddiparthi stressed on the concept of self-supply and water management. There is a need to focus on integrated demand and supply management of water at the local level, including creation of local infrastructure for source sustainability and management of household wastewater.

Mr R R Rashmi introduced the session, referring to the inter-linkages between energy and industry transition. He set out the challenges faced in India, where demand for key materials, such as steel and cement, are set to expand rapidly in future to meet development needs. He felt that even when implementing energy efficiency and resource efficiency measures, significant emissions would remain and so, clearly, new solutions are required. Mr Suvjoy Sengupta felt that industries are a large part of global emissions today and are only set to rise further without intervention. He highlighted the solutions that McKinsey have explored, which include the use of new fuels such as hydrogen, the electrification of low temperature heat processes, and so on.

Dr Måns Nilsson outlined his view on companies’ approach to decarbonization in Europe. He saw the issue of decarbonization and climate change moving from an issue of Corporate Social Responsibility (CSR) to now something being discussed in boardrooms. Mr Dr Måns Nilsson, Executive Director, Stockholm Environment Institute; Mr Gurdeep Singh, Chairman & Managing Director, NTPC; Mr David Turk, Head of Strategic Initiatives, International Energy Agency; Mr Suvjoy Sengupta, Partner, McKinsey & Company
The session began with Mr Anand Kumar stressing the need to put pressure on the developed economies to earmark their investment portfolios, in order to allow the flow of concessional finance to the developing countries, so that universal energy access can be achieved. He highlighted the innovative ways of financing that have been explored so far in India, and that have been instrumental in mobilizing green finance. During the panel discussion, Dr Surendra Babu highlighted the nature of financial challenges in sectors including farming, agriculture, and cultivation from the perspective of the development banks in India. He threw light on the innovative project funding mechanisms that NABARD has explored, namely, watershed development fund, tribal development fund, etc. Mr Deepak Bagla discussed the role of investment promotion, startups, and innovation in mobilizing climate finance. Prof. Kelly Sims Gallagher highlighted the role of national- and state-level policies in mobilizing private sector finance.

Dr Adonai Herrera-Martínez and Mr John Roome gave a different perspective to green finance through the lens of multilateral development banks (MDBs). Dr Herrera-Martínez focused on how climate finance can be developed by MDBs and the private sector. He spoke about the role of MDBs in mobilizing funds for climate projects and focused on how finance instruments should be tailored to help trigger policy reforms. Mr Roome talked about climate finance while iterating the fact that sustainable development and climate action are about climate finance, making regular finance climate smart. The discussion of climate finance is not limited to the short-term quantum of money, but how to use the money to unlock the private sector and public sector finance, to achieve the scale and ambition that is necessary to move the climate agenda forward.

The session started with an introduction of Sustainable Development Goal (SDG) 14, which stands closest to blue economy comprising life under water, sustainable fishing, preservation of marine ecosystems, and both offshore and onshore renewable energy generation. The discussion was on the contribution of blue economy to the global gross value added (GVA), which is expected to double between 2010 and 2030. According to the latest estimates by the Government of India, blue economy contributes around 4.1% to the GDP, but this might be underestimated as the activities under blue economy are not defined. Out of the 10 pillars of interim Union Budget 2019–20, the sixth was development of blue economy and around 40 state departments are directly engaged in blue economy activities. Three major pillars have been identified under this policy for the development of blue economy, namely, informatics, bioengineering, and new materials. By 2030, India aims to attain significant technological development in the fields of renewable energy, and food. Blue economy in Norway is estimated to increase by 40% by 2050. Although dependence of Norway on oceans is immense, it also recognizes the threats because of climate change and human activities, such as illegal fishing and increasing ocean pollution. Norway has been urging for an integrated oceanic strategy at the national and global levels. It recommends India to engage in a sustainable manner in blue economy, engage in internal agreements, and enable technology transfer through strategic cooperations. It was also discussed how Monaco has cooperations. It was also discussed how Monaco has

**PLENARY-VII**

**Blue Economy for Agenda 2030 – Aligning Economic Development for Sustainability of Oceans**

Chair: Ambassador Chandreshkhar Dasgupta, Distinguished Fellow Emeritus

Keynote Address: Mr Ratan P Watal, Member Secretary, Economic Advisory Council to the Prime Minister, NITI Aayog

Panellists: Dr M Rajeevan, Secretary, Ministry of Earth Sciences, Government of India; HE Mr Hans Jacob Frydenlund, Ambassador of Norway to India; HE Mr Patrick Medecin, Ambassador of Monaco to India and Japan
The session commenced with Mr Nitin Desai introducing the panelists. Dr Rajiv Kumar commended TERI for completing twenty years of WSDS and stated that NITI Aayog has been monitoring, reviewing, mainstreaming and promoting SDGs by fostering cooperation and competitive federalism. He also stressed on the fact that states need to play an active role in order to achieve SDGs. It thus becomes imperative to recognize best practices across the nation and replicate it elsewhere in each sector. He believed, in doing so, NITI Aayog plays an important role by bringing all the stakeholders and best practices on the table. He profusely talked about the competitive federalism wherein states get into competition across India in order to achieve higher ranking under different indices. He believed that, “If India does not achieve the goals by 2030, the world will fail.” However, he added that India is putting in all the possible efforts, which is evident from the recent report on Poverty Index wherein a huge deduction in the total population living under the poverty line was observed. New schemes, such as Ujjwala, Jan-dhan Yojna were also credited for fast-tracking the success of SDGs.

Ms Shoka Noda started by appreciating India for its commitment to the SDG programme and echoed Dr Rajiv Kumar’s view that “if India succeeds, the world will succeed.” She stressed on the fact that the most important part of the SDG programme is to totally commit to these and that the most important factor in the success of this programme is its fast implementation.

Mr Atul Bagai explained that the SDG programme includes goals that are “something each and every nation has as a part of national planning process.” He appreciated how India has taken up this programme and integrated it with the national policies. He said that unless a country takes these goals as national goals, instead of seeing them as UN policies, one can never succeed. By stressing on the fact that we have just ten years, he implied that we have very less time left. He added that capacity building at the state government level is really the key, and also that interconnectivity between government departments should be achieved.

**YOUTH CLIMATE CONCLAVE**

The Youth Climate Declaration on Climate Action was held today in the presence of Dr J R Bhatt, Adviser to the Climate Change, MoEF&CC, Government of India, Mr Raimund Magis, Deputy Head, Delegation of the European Union to India, Mr Atul Bagai, Head of Country Office (India), UNEP, Mr Nitin Desai, Chairman, TERI, and Dr Ajay Mathur, Director General, TERI. The Declaration marks the culmination of the ‘Youth Climate Conclave’, a 3-day programme during which 85 selected students participated in awareness building sessions and deliberations to present their views about issues related to climate change.

The Conclave was organized by the EU, GIZ, TERI, and CEEW as a part of the Strategic Partnership for Implementation of Paris Agreement project of the EU with the MoEF&CC as the nodal ministry. During the Conclave, students attended informative sessions on key facts regarding climate change science and impacts, the international negotiation process (UNFCCC, the Kyoto Protocol, and the Paris Agreement), and the main negotiation issues. The programme also included a 1-day simulation of a UNFCCC negotiation where students were divided into five negotiation groups through which they discussed challenges and possible solutions to climate change, with a specific focus on the role of the global youth.

At the opening session of the Conclave on January 29, 2020, Ms H Faergemann, First Counsellor - Environment, Climate and Energy Counsellor, EU Delegation to India graced the occasion along with Dr Bhatt. Dr Livleen K Kahlon, Associate Director, Environment Education & Awareness, TERI; Dr Arunabha Ghosh, CEO, Council on Energy, Environment and Water; and Dr Ashish Chaturvedi, Director-Climate Change, GIZ-India also addressed the youth. Ms Ashwini Singh, First Secretary, Fiji High Commission in New Delhi informed students about the perspective of the Small Island Developing States. Officials and experts from MoEF&CC informed about the perspective of Like-Minded Developing Countries and G77+China.

The Youth Climate Conclave was launched on October 4, 2019, and included a series of activities such as photography and blogging competitions for youth, whose winners were awarded alongside the presentation of the Youth Climate Declarations at the World Sustainable Development Summit. The list of winners is given below.

**Photography Contest**

**Category A:**
- First Position: Varsha Bajaj, Gyan Bharati School, Saket, New Delhi
- Second Position: Kharak Sanghavi, Subodh Public School, Jaipur, Rajasthan
- Third Position: Jonas C Givi, Chinmaya Vidyalaya Vadhula, Kochi, Kerala

**Category B:**
- First Position: Arpita Nayak, ITM Business School, Kharghar, Navi Mumbai, Maharashtra
- Second Position: Akshat Shrivastava, TERI School of Advanced Studies, Vasant Kunj, New Delhi
- Third Position: Vibhav Vikram Tungare, ITM Business School, Kharghar, Navi Mumbai, Maharashtra and Harshita Sharma, TERI School of Advanced Studies, Vasant Kunj, New Delhi

**Blogging Contest**

**Category A:**
- First Position: Grace Shalom Moses, Anita Methodist Matriculation Hr. Sec. School, Chennai, Tamil Nadu
- Second Position: Ryan Pathak, Sanskriti the Gurukul, Guwahati, Assam
- Third Position: Riya, D A V Centenary Public School, Tehana, Haryana

**Category B:**
- First Position: Siddhant Kumar, TERI School of Advanced Studies, Vasant Kunj, New Delhi
- Second Position: Garima Uperti, University of Lucknow, Uttar Pradesh
- Third Position: Sneha Shahi, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat
Mr Nitin Desai commended Prof. Nicholas Stern on connecting the challenge of climate change to the mainstream economic policy. He lauded Mr Jayant Sinha for his long stint in the world of finance coupled with social work.

Mr Sinha started his address by introducing the ‘farm to green frontier’ development model. He compared this to the traditional perspective of ‘farm to factory’ model, which strives on the combination of urbanization and industrialization. Mr Sinha stressed on the need to increase the number of companies of high productivity and high sustainability. He concluded that to reach $10 trillion GDP, there is the need to push entrepreneurship in green industries.

Addressing the current global scenario, Prof. Stern said, “the drive to the zero carbon economy is the growth story.” According to Prof. Stern, there is an urgent need to reduce emissions absolutely by 40% in these coming 20 years, which would require radical change and strong policy. He commented that change is possible with rapid technological changes, international agreements, and pressure from the young people.

Dr Ajay Mathur concluded WSDS 2020 by reminiscing the start of the Summit on the national and international dialogue of the need for sustainable development. He proudly mentioned the new partnerships that WSDS formed, such as the Indo-Swiss Program on Air Pollution and other technological partnerships among people across the system. WSDS 2020 launched almost 15 reports and included esteemed panelists from across the world. Dr Mathur profusely thanked the 21 partners of WSDS 2020. He lauded the 15th Sustainable Development Leadership Awardee, Prof. Jeffrey D Sachs, for his perseverance in mainstreaming sustainable development and the SDGs. He closed the Summit by thanking IFAT Delhi, all TERI colleagues, and all involved in the successful completion of WSDS 2020.