

COP26 CHARTER OF ACTIONS

RALLYING THE GLOBAL COMMUNITY
FOR AN EQUITABLE CLIMATE AGENDA



National Conference on COP26 Charter of Actions

Date: 13 October 2021 (Wednesday)

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The Energy and Resources Institute

The Energy and Resources Institute (TERI) is an independent, non-profit organization, with capabilities in research, implementation and outreach. It has multidisciplinary expertise in the areas of climate change, natural resources, environment, energy, and sustainable development goals. TERI's research and research-based solutions have had a transformative impact on industries and communities. It has fostered international collaboration on sustainability action by creating a number of platforms and fora. The research has translated into technology products, technical services, as well as policy advisory and outreach. Headquartered in New Delhi, TERI has regional centres and campuses in Gurugram, Bengaluru, Guwahati, Mumbai, Panaji, and Nainital.

World Sustainable Development Summit

The World Sustainable Development Summit (WSDS) is the annual flagship event of The Energy and Resources Institute (TERI). Instituted in 2001 as the Delhi Sustainable Development Summit (DSDS), the Summit series has marked 20 years in its journey of making 'sustainable development' a globally shared goal. Over the years, the Summit platform has brought together thought leaders, heads of state and government, scholars, corporates, youth groups, and civil society representatives from across the world. The 21st edition of WSDS will be held on 16-18 February 2022, under the theme: *Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future*.

COP26 Charter of Actions

The 26th UN Climate Change Conference of the Parties (COP26), to be held on 1-12 November 2021 in Glasgow, will aim to mobilize the action on mitigation, adaptation, and resilience, and strengthen the narrative for better alignment with sustainable development goals. The Energy and Resources Institute (TERI) is preparing a COP26 Charter of Actions, which will assimilate questions and challenges posed by key sectors in India, propose probable and sector-specific options that can advance climate action and ambition in the country, and also highlight normative implications for the global climate agenda. The outcomes of COP26 and the messages from the Charter will also be discussed at a plenary session at the World Sustainable Development Summit (WSDS) to be organized by TERI on 16-18 February 2022.

Documentation

The documentation is not an exact transcription and some editing was done to make the messages clearer for the reader.

Acknowledgment

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WORLD SUSTAINABLE DEVELOPMENT SUMMIT SERIES
National Conference on COP26 Charter of Actions
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Key messages

- **Science calls for ambitious and urgent action:** The latest report of the Intergovernmental Panel on Climate Change presents a very troubling forecast for the world, and for South Asia, predicting that the region will see hotter weather, longer monsoons and increasing droughts. It is clear that we need not just ambitious action, but urgent action. The report calls for concerted actions by all countries, especially developed countries, who must take the lead. It is a clarion call for the developed countries to fulfil their promise of the USD 100 billion per year goal on climate finance.
- **COP26 will be a significant moment for raising climate ambition:** COP26 is going to be a pivotal moment for the world to come together to accelerate action on climate. It may be our last opportunity to meet the target of keeping global warming to below 1.5°C. In this regard, COP26 should focus on climate finance in scope, scale and speed along with development and transfer of technologies and capacity building support.
- **Indian leadership remains key:** Although India has low per capita emissions, it remains a key player not only because of the aggregate potential to reduce GHG but also as a lead market country, and a country that can show normative and entrepreneurial leadership when it comes to international climate action. India has consistently advocated for the principles of UNFCCC in terms of equity and climate justice, as well as sustainable lifestyles and consumption.
- **Is achieving net zero by 2050 enough?** These are some of the gaps and assumptions in the understanding of net zero, and these assumptions are being co-opted into an overall scheme of net zero, and being projected as a solution. As per Article 4.1, countries have signed to a collective global goal of net zero by the second half of this century. However, there can be no single magical year in which every country, individually, can achieve net zero. Whether it is the most technologically advanced countries, or the low income countries, who are comparatively poor in terms of technology and infrastructure, it is not realistic to expect all countries, individually, to reach net-zero by 2050.
- **Greener policies are crucial for post COVID-19 recovery:** Most of the infrastructure that will exist in 2050 has still not been built. It will take trillions of dollars of investment per year to build most of it, and most of this infrastructure need to be set in developing countries. Thus, developing countries need to shift their recovery spending away from harmful investments that fuel the planetary crisis and more towards building this infrastructure.

- **Climate change needs to be a household issue:** There is a need to change the climate change narrative to a household narrative in India. Climate change is becoming the job of only technocrats, diplomats and domain experts. We need a movement that brings in each and every household in the country, and unless this is done, we may not be able to reach the targets and ambitions that we are setting for ourselves.
- **India should update and submit its NDCs:** A key indicator of the success at Glasgow will be the submission of new NDCs by many parties to the Paris Agreement, including India; these NDCs should be collectively sufficiently ambitious to achieve the 1.5°C target. India should update its NDCs by outlining sector-by-sector plans to bring about development and climate co-benefit-based changes in key sectors. We need to rapidly decarbonize our electricity sector and achieve not merely renewable energy capacity targets, but also targets in terms of carbon per kilowatt hour (outcome target).
- **Adaptation policies need more investment:** We have already used a considerable share of the carbon space, which means that considerable warming has already been logged in in the atmosphere, which is will lead not only to an environmental problem, but also a social problem, for instance, in terms of climate change induced migration. Moreover, although a lot has been talked in terms of adaptation, very less capital has actually been earmarked. Thus, adaptation and the finances for it have to be considered very carefully and deeply.
- **The concept of equity needs to be redefined:** There is a need to define equity in the way it should be defined in 2020; not in the way it was defined in 1990. This will require internal resources as well as external help; hence, it makes sense to define equity in a way that leads to a cooperative framework rather than the dispute that is occurring at UNFCCC.

Event Proceedings

Welcome Addresses

Vibha Dhawan, Director General, TERI



The message from the latest IPCC report is very clear. We need not just ambitious action, but immediate action; we do not have any time. The recent floods in New York and Germany and the natural calamities in different parts of the world clearly show that we need to act urgently. Therefore, the upcoming COP is extremely important. Successful climate negotiations at COP26 will further our fight against climate change.

TERI believes that steering discussions around COP is imperative, and hence, we are organizing this National Conference on the key themes and issues around COP26. In the month of August, TERI organized five stakeholder roundtable discussions to gain inputs for the Charter and seek validation on the key messages emerging from the Charter. I take great pride in announcing that the Charter will be formally launched at the COP26 in Glasgow on 6 November at a UNFCCC side event.

Natalie Toms, Counsellor Economics and Prosperity, Foreign Commonwealth and Development Office (FCDO), British High Commission

We are at the threshold of an immensely important event. In less than two weeks, leaders from all over the world will be travelling to Glasgow for UN's 26th COP meeting on climate change. UK took great pleasure in collaborating with TERI over the last year on a series of stakeholder discussions and dialogues on a wide range of climate-change related themes involving sector experts, scientists, economists, practitioners, civil society, academia, and youth. We are finally here today at this session that represents the culmination of this work.

Climate change is here and it is real. The latest IPCC report presents a very troubling forecast for the world and for South Asia, predicting that the region will see hotter weather, longer monsoons and increasing droughts. As the



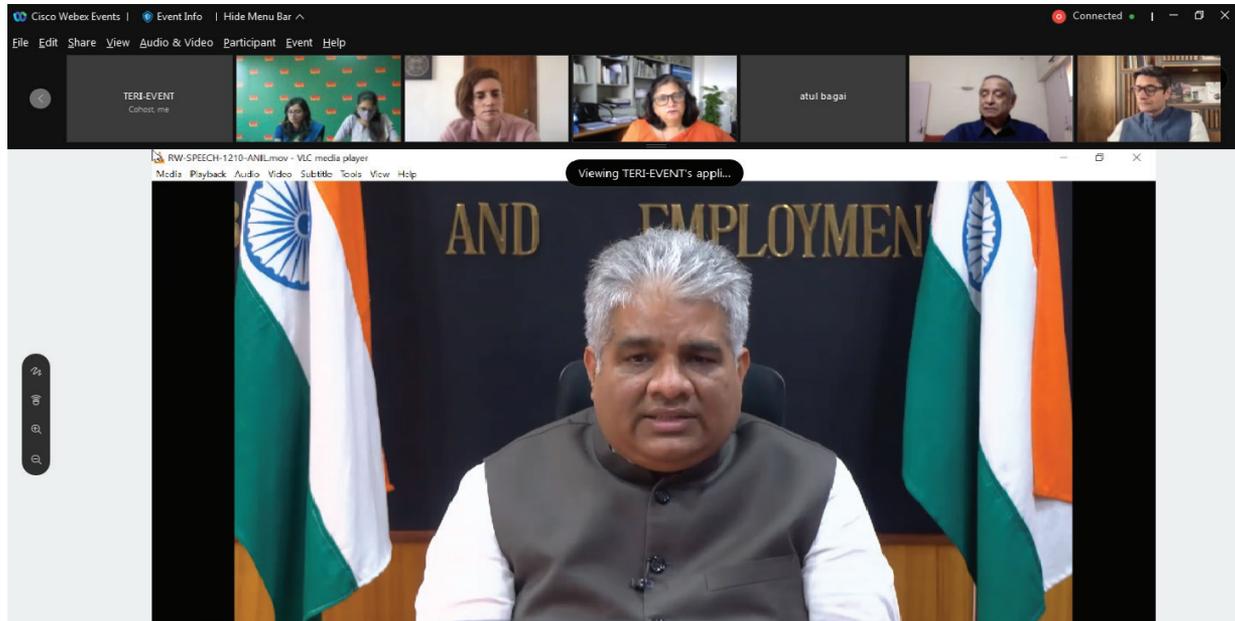
global warming increases in the next two decades, COP26 is going to be a pivotal moment for the world to come together to accelerate action on climate. It will be our last opportunity to keep global warming to below 1.5°C.

I believe that we can keep this hope of maintaining the global warming to below 1.5°C alive. The International Energy Agency has set out pathways that show exactly how to achieve this target. However, for this, we need to work together. In the UK, we have committed to a new NDC that sets a target of 78% reductions by 2035 and a path to net zero by 2050.

India is also taking important steps. The UK recognizes the principle of common but differentiated responsibility. We believe that India has the opportunity to be at the forefront of a new global green transition. It has already reduced the emission intensity of its economy. The UK and India are working together to tackle climate change under the UK-India Roadmap agreed by our Prime Ministers in May 2021.

Ministerial Address

Bhupender Yadav, Union Minister of Environment, Forest and Climate Change, Government of India (video message)



I am happy to see The Energy and Resources Institute (TERI)'s work in preparing the 'COP26 Charter of Actions'. The document has taken a holistic approach, touching upon issues closely aligned with India's priority areas, including issues related to equity, energy, green finance, adaptation and resilience, nature-based solutions, energy, business and industry, and clean transport, all of which are important areas to drive climate action as far as India is concerned. I am confident that this initiative will provide directions for charting a course for equitable and sustainable climate actions in India and for the world.

Climate change is the defining issue confronting humanity right now. The impacts of climate change in the form of extreme weather events are being felt in different parts of the world. The need of the hour is a comprehensive set of actions, within socio-economic and developmental contexts, to deal with the catastrophes related to climate change. Concerted actions are needed in terms of cooperation between all countries, with developed countries taking the lead on climate actions through mitigation, adaptation, and provision of support to developing countries in terms of climate finance, capacity building and technology transfer.

The recently released report by IPCC (Intergovernmental Panel on Climate Change) has sounded alarm bells louder than ever; it is a clarion call for the developed countries to undertake immediate deep emission cuts. India is a committed constituent of the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement, and I am hopeful for a successful and balanced outcome at COP26.

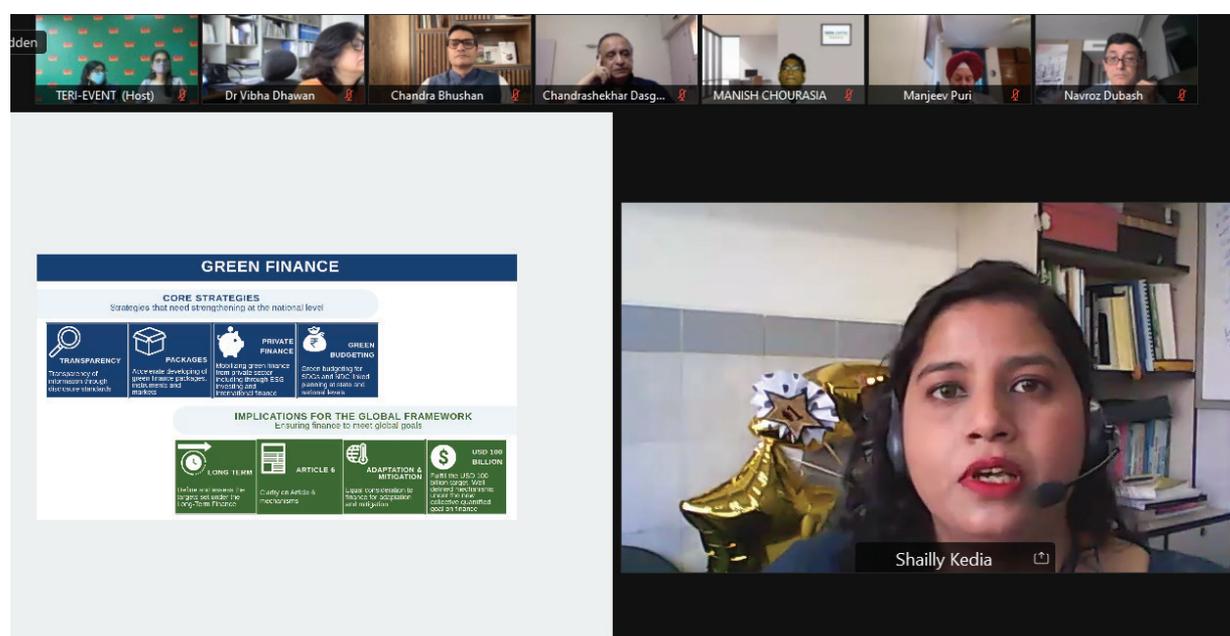
India has taken several actions under the visionary leadership of our Hon'ble Prime Minister, Shri Narendra Modi to tackle climate change by taking several initiatives including, inter-alia, implementation of the National Action Plan on Climate Change, National Adaptation Fund on Climate Change, Pradhan Mantri Ujjwala Yojana, Faster Adoption and Manufacturing of Electric Vehicles scheme, setting up of International Solar Alliance, Coalition for Disaster Resilient Infrastructure, Leadership Group for Industry Transition; moreover, it has put in place an ambitious National Hydrogen Mission and continued efforts to decouple its emissions from economic growth. India has an aspirational target of installing 450 GW of renewable energy by 2030. Indian Railways has set an emissions target of becoming net zero by 2030. However, ambitious climate action in developing countries is dependent on ambitious support from developed countries under the Paris Agreement. India has repeatedly called upon the developed countries

to fulfil their promise of the USD 100 billion per year goal. In this regard, COP26 should focus on climate finance in scope, scale and speed along with development and transfer of technologies and capacity building support.

Developing countries are highly vulnerable to climate change impacts, and India's large population is dependent on climate sensitive sectors for livelihoods. As a result, the fight against climate change cannot be undertaken by governments alone. Private sector companies should be encouraged to play a role in developing breakthrough technologies and mobilizing finance. Equity and climate justice are the touchstones of any global climate response. Mechanisms such as long-term strategies and global stock-take have to duly account for adaptation, finance, technology and equity considerations.

Presentation on the COP26 Charter of Actions

Shailly Kedia, Associate Director, TERI (on behalf of the study team)



This year started on a note of optimism with the United States showing strong commitment and leadership on climate action. The assessments made by UNFCCC do not paint a rosy picture and with the existing NDC commitments, we are set to breach the emission reductions mark needed to meet the 1.5°C global goal and even the 2°C global goal. Although revised pledges, and assuming that they are fulfilled, still give a glimmer of hope to realize the 2°C global goal, considering the dire consequences of even a 2°C, these existing efforts are highly inadequate.

Much more is needed especially from developed countries, who should move toward net-negative and not net-zero by 2050. Although India has low per capita emissions, it remains a key player not only because of its aggregate potential to reduce GHG but also because it is a lead market country and a country that can show normative and entrepreneurial leadership when it comes to international climate action.

The Charter is TERI's effort for rallying for an equitable climate agenda nationally and internationally. The Charter is an initiative under TERI's flagship Track-II event - the World Sustainable Development Summit. COP26 Charter of Actions, is a knowledge document that will propose options which can advance climate action and ambition in India. From the experiences of India, the document will also highlight the implications for the normative framework of the global agenda on climate ambition and action. The approach is through descriptive research and stakeholder

consultations. Five stakeholder consultations were held in August this year for validation and to get further inputs on initial findings.

The outcomes of COP26 and the messages from the Charter will also be discussed at a plenary session at the World Sustainable Development Summit (WSDS) to be organized by TERI on 16-18 February 2022. On behalf of the TERI study team, I would like to acknowledge our partners – MOEFCC, British High Commission, Bloomberg Philanthropies, Shakti Sustainable Energy Foundation, Tata Cleantech Capital and Rockefeller Foundation. The Charter covers the seven themes of equity, green finance, adaptation, nature-based solutions, business & industry, renewable energy and transport. The Charter team includes 36 authors and 9 reviewers.

Equity and Climate Justice

The global stocktake is to take place at COP28 in 2023. It is imperative that the progress made by countries is assessed considering the principles of equity well before the global stocktake that is to occur at COP28 in 2023. The terrain of equity from the perspective of a developing country needs to be framed more comprehensively than mitigation and would need to consider aspects related to adaptation, climate finance and technology transfer.

To ensure equity and climate justice, long term climate actions need to consider both mitigation as well as adaptation along with finance and technology needs. Article 7.2 of the Paris Climate Agreement recognizes the role of adaptation as being key to the long-term global response to climate change. However, long-term strategies formulated and communicated under Article 4.19 of the Paris Agreement at the moment only focus on low greenhouse gas emission development strategies and do not consider adaptation to climate change.

India can assume the role of an entrepreneurial leader by leading developments in breakthrough and disruptive technologies. Moreover, India can be norm leader by building shared understanding on sustainable consumption, adaptation and non-anthropocentric notions around equity and climate justice.

Green Finance

Post COVID recovery, in the short term, there is a critical need to lay the foundations for an enabling environment for green finance while building awareness and capacity of key stakeholders. There is also an urgent need to distinguish climate finance from green finance, the former being a subset of the latter and is a specific area of concern for climate negotiations. Decision-making processes for state budgeting and national budgeting have the potential to be reformed using NDC-aligned and SDG-aligned budgeting or green budgeting framework.

The global goals of financing need to be urgently realized. The USD 100 billion promise needs to be fulfilled. There is a need for well-defined mechanisms under the new collective quantified goal on finance. Green finance mobilization from private sector including through ESG investing and international finance is the need of the hour. Transparency of information through disclosure standards in financial systems is needed.

Adaptation

India should develop a National Adaptation Plan, as per the provisions of the Paris Agreement. Research gaps need to be addressed by investing in science-based tools and building datasets; moreover, the role of the private sector should be augmented in adaptation and resilience building.

A crucial question regarding COP26 is whether COP26 will be an Adaptation COP. Despite the inherent need of adaptation in strengthening climate action, a key area of concern remains the inability to quantify or map the progress in absolute terms. In the absence of such measures, momentum in addressing adaptation needs may be lost.

Nature-based Solutions and Agroforestry

Trees outside Forest (TOF) form nearly 38% of the carbon sink in forest and tree cover of the country. Agroforestry has a huge potential in India - it can contribute more than 2 billion tonnes of CO₂e by 2030 if the government puts in place appropriate incentive mechanisms for farmers or producers.

An ecosystem based approach by considering terrestrial, coastal and marine ecosystems is required. Towards this, there needs to be larger synergies among the provisions of all three Rio Conventions.

Business and Industry

The growing eminence of sustainability disclosures through SEBI introducing BRSR guidelines would motivate many businesses to mainstream ESG and climate action efforts while strategizing their action plans and also aiding financial institutions like banks, credit rating agencies, and other financial institutions in investment decisions.

In the medium to long term, the role of industries in developing disruptive technologies, especially in hard-to-abate sectors, would be crucial. Private sector can be leveraged to enhance the country's adaptation efforts and build climate resilient infrastructure complementing the goals of initiatives such as the Coalition for Disaster Resilient Infrastructure.

Renewable Energy

India has consistently stepped up its RE capacity targets to 175 GW by the year 2022, and 450 GW by 2030. Apart from supply side measures, there is also a need to enhance demand for renewable electricity by pushing technologies such as electric vehicles.

For power sector de-carbonization through large-scale deployment of renewable energy, viable energy storage alternatives will be needed to meet evening peak demand. To realize Goal 7 of the SDGs, along with large scale renewable energy deployment, there is need to raise awareness and deploy innovative models for ensuring energy access to improve livelihoods and well-being in rural areas through options such as distributed renewable energy.

Sustainable Mobility

Low carbon transport must be equitable and available to all, not just private vehicle owners. A common fund for investment in low carbon transport infrastructure can be set up.

The technical knowledge base and build capacities for transport planning including non-motorized transport must be improved.

Conclusion

The science is clear. We cannot delay climate actions. Climate impacts are already being felt. India has many ambitious policies in place and there is much that India can do in terms of climate actions domestically.

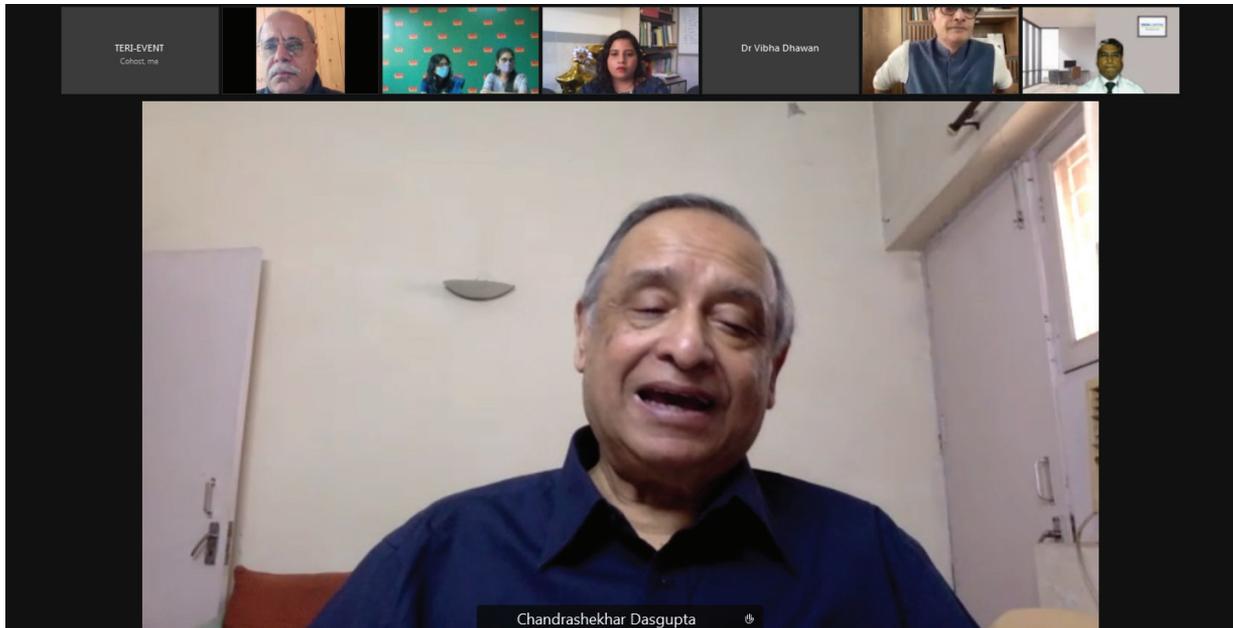
However, India will have to assume a leadership role and rally the global community. Current technologies are not sufficient for meeting the global climate goals and we need disruptive technologies to address the issue of removing the accumulated GHG in the atmosphere.

There may be efforts to vilify India for not doing enough. Initiatives such as ISA, CDRI and LeadIT demonstrate India's entrepreneurial leadership. Although India should take on concrete commitments and announce these, India's leadership in upholding climate justice and the development imperatives of developing countries is a must. India will also have to take the role of a norm leader and promote shared understanding around redefining just transitions adaptation and climate justice.

Panel Discussion: Beyond Net-Zero: What Short and Long-term Strategies are needed for Realizing the Twin Goals of Climate Stabilization and Equity?

Chair: Chandrashekhara Dasgupta, Distinguished Fellow Emeritus, TERI

The chair welcomed the Panellists who are some of the most prominent visionary thinkers on the subject in India. In his introductory remarks, he said that the developed countries should move towards net negative by 2050 and not merely net zero. This raises a very important question not only from the point of view of equity but also national circumstances. There can be no single magical year in which every country can achieve net zero. Whether it is the most technologically advanced countries, or the low income countries who are comparatively poor in terms of technology and infrastructure, it is not realistic to expect all countries to reach net-zero by 2050. There is a normal



time lag between the countries that take the lead in implementing new technologies and the ones that follow suit as economies of scale bring down the cost of these technologies.

Srinivas Gotru, Joint Secretary, United Nations Economic & Social (UNES) Division, Ministry of External Affairs, Government of India

In the lead-up to COP26, throughout this year, we have come to realize that there are several issues or policies that are extraneous to the COP discussion itself, but have come into the discourse. We see that there is a big push and growing call for adoption of some of these policies. One of these is on net zero and also about updating of NDCs. However, there are other issues on which there is no consensus yet, for instance on the global methane pledge or phasing out of coal. Some of these other issues that are currently not on the table for COP have also started creeping in.



Coming to the topic of net zero, Mr. Gotru highlighted that according to the UNSG's Website, more than 130 countries have spoken about net zero, but not all of them have pledged to attain it. Moreover, there is a difference of view on how many countries have actually put it in policy documents and how many are actually translating them into NDCs.

He talked about some of the limitations of this concept of net zero in terms of how much of the actual science can support, for instance, land-based sinks, allowing this kind of absorption to take place given the limits of the ability of forests to trap CO₂ emissions in perpetuity, and also on the limits on the technology and how these can be scaled to be economically viable and start making an impact on global level in terms of CO₂ emissions. These are some of the gaps in the understanding of net zero, and which are assumed by many. These assumptions are being co-opted into this overall scheme of net zero and being projected as a solution.

There are strong voices beyond the governmental spaces that highlight the sidelining of some of the foundational principles of climate action and negotiations. The Western media, in particular tends to take a unidimensional view of this and that narrative needs to be balanced.

There is the question about available carbon space and how much of the remaining carbon space is available for the developing world and the non-developed world in that sense. Although estimates vary depending on what kind of global warming scenario the IPCC is projecting, the fact remains that between the US, EU countries and China, the cumulative emissions have already crossed 50 per cent of that space. Hence, how much of it is left for everybody else is something that certainly concerns India, and indeed, it should concern most of the world, because we are talking about just a group of about 29 countries that are occupying the entire space.

If that carbon space is going to be vacated at all to enable other countries to grow, it includes the other part of this net zero argument, which has not been highlighted sufficiently in discourses.

The Paris Agreement, despite its many criticisms about how it compromised on some of the foundational principles, does seek to find a balance between the finance and the technology aspects; however, this has not really come across very clearly, in terms of what are the enhanced commitments that countries can make in terms of finance or technology. The USD 100 billion target, which is yet to be reached, has now a higher level. Hence, the cost of this just or green transition is running into trillions of dollars. The cost of whatever scenarios that we are projecting is something that needs to be highlighted in the international discourse and negotiated to evolve a balanced outcome in the COP.

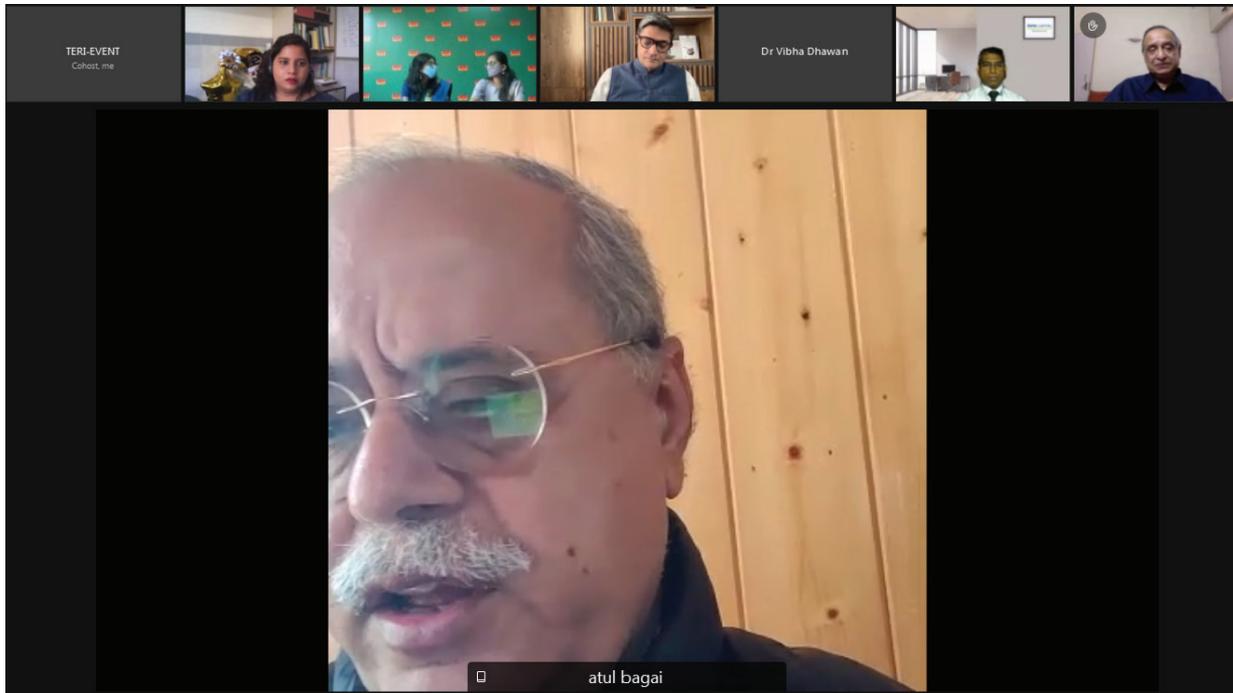
He also highlighted how Indian ethos supports harmony with nature and how sustainable lifestyles and consumption should be encouraged. India's electricity consumption is probably less than 50 per cent of what is consumed worldwide, and our emissions are also 60 per cent less. Given that framework with an aspirational middle class, the fundamental question is how much limitations can you impose and what is the cost of imposing it. That is really the dilemma for India; a large part of the developing world is also looking at that, and how we rebalance this entire discourse to achieve this balance.

Atul Bagai, Country Director - India, United Nations Environment Programme

We are putting extreme pressure on our planet, and the damage that we are causing to human health, to the peace and prosperity is clearly visible. Mr Bagai highlighted the recent remarks made by the UN Secretary General on how the planet is being hit by a triple crisis of climate change, nature and biodiversity loss, and pollution. This triple crisis affects every aspect of our lives in every country of the world.

What I want to speak about today goes deeper than science and economics. It cuts through the heart of one of the greatest challenges of our times and how can we simultaneously realise the goals of climate stabilization and equity, and find the elusive ideal of sustainable development at a macro level. We need to get our act together to get back on track for the 1.5 °C goal. We need to set our target for the 1.5 °C goal; moreover, the net zero ambitions need to be scaled up.

The first point made Mr. Bagai is about recovering from the pandemic and how we need to lift people from poverty, hunger and ill-health. It is crucial that we avoid the mistakes of the past. Infrastructure that supports



human development or wellbeing is needed, but we need to do it differently than we have done in the past. Today, we really have an unprecedented opportunity to do just that. Most of the infrastructure that will exist in 2050 is still not been built; it will take trillions of dollars of investment per year to build most of it, and most of these infrastructure are to be built in the developing countries. Developing countries need to shift their recovery spending away from harmful investments that fuel the planetary crisis. More than 80% of the 2.25 trillion in recovery spending is still going towards business as usual, which is a grave mistake. These investments will lock in greenhouse gas emissions, pollution and biodiversity loss that are already underestimating our wellbeing. We really need to invest in greener technologies and green investments because business as usual investments does not make economic sense any longer.

While the forests need to be increased in terms of coverage, there are many nature-based solutions. Eco-DRR is one of the ways to bring in adaptation and reduce the adaptation gap that exists today.

Climate change is becoming the job of only technocrats, diplomats and domain experts. There is a need to change the climate change narrative to a household narrative in India. He added that the multilateral dialogues that are happening are very critical to reach international agreements. We need a movement that brings in each and every household in the country, and unless that gets done, we may not be able to reach the targets and ambitions that we are setting for ourselves. Moreover, the people who are being affected by climate change impacts should be involved in finding solutions to climate change.

Navroz K. Dubash, Senior Fellow, Centre for Policy Research

As we approach COP26, we need to determine the state of climate governance. There is heightened global appreciation of the cost of climate change, fuelled in part by the hard-hitting IPCC report. There is a collective sense that we have climate change already upon us; there is also a growing sense that climate change and mitigation in particular may actually bring some opportunities, in terms of low-carbon growth, and this is something that we should think about more seriously. These opportunities are really driven by the declining price of renewable energy as compared to coal, on average, around the world. However, we cannot be complacent about this; the transition to a low carbon future is not going to be automatic or easy.

Global COPs and discussions notwithstanding, the locus of action is firmly in countries, and countries will only go as fast as their national politics around climate change allow them to go. Outstripping a national political



consensus will be an enormous challenge. He cited the tussle going on in the U.S. for the infrastructure bill. Though international politics can help, and could provide an accelerated source of support, the home turf or the national politics is the real platform.

The attraction of the net zero targets is that they provide, what seems to be, a clear clarion call: we have to get to zero, not well below 2 °C, but zero. This means that we have to decarbonize completely or find ways of increasing sinks in various ways. This target has mobilized considerable action, but the most productive part is that it has mobilized some action from corporates and communities. As a global driver or a national driver, there are more complications involved. It is unrealistic to expect all countries, especially the least developed ones, to achieve the net zero target by 2050. A net-zero conversation does not really sidestep the long-standing conversation on burden share or opportunity sharing. However, there is a bigger problem: the net-zero formulation risks becoming a fairly hollow construct. It risks becoming a pressure valve that allows countries to say that they are doing something in the distant future taking the pressure off from the present. We should ask the countries that set their net-zero pledges if they are front loading their pledges or are they back loading them.

If India sets a net-zero target by say, 2070, it will make other countries happy, but this would not make much of a difference from what India does today. 2070 is as far in the future as 1970s in the past. In what ways are we going to act today based on our views of a 2070 world? If we discuss this, 2070 can be a part of the conversation; it will help sub-national action. However, it cannot become a unitary political conversation about how we tackle climate change.

For our own sake, India needs to be a part of the virtual cycle of driving other countries to do more, but also doing more ourselves. India should update its NDCs in terms of updating the intensity targets; however, there is no evidence that intensity targets drive anything in particular. The focus of our NDCs should be sector by sector plans - not so much targets - to bring about development and climate co-benefit-based changes in key sectors. We need to rapidly decarbonize our electricity sector, not merely renewable energy capacity targets, but also targets in terms of carbon per kilowatt hour (outcome target), transport, congestion of cities, air quality and so on.

There is a need to aggressively think about a just transition in coal sector, and prepare groundwork for that transition to happen in ways that are not socially disruptive. We will need a few high-profile announcements. It is time for us to think about ramping up the legal and institutional frameworks of climate change. Moreover, it is time for an announcement that India will not build any more coal power plants beyond the ones that are already there in the pipeline.

It is time to think about a law that does not regulate carbon but mainstreams a low-carbon future development, and we need an institutional structure that is up to the task. Though MoEF&CC is the nodal agency, it does not have either the authority or the expertise to play the coordinating role.

Moreover, it is time for us to think very hard how we are going to take on this equity issue in the forthcoming global stocktaking. The transaction costs and the need to actually manage this transition in a way that does not place the burden on the poorest, is the reason for the equity conversation. Countries like India need the time and space to determine how to make this transition. We need to reframe the equity conversation, but we need flexibility as well as financial and technological support.

The debate on the allocation of carbon space is passé. In the past, for instance, the BASIC (Brazil, South Africa, India and China) countries set their proposals. For example, India may set a target that we should get a certain amount of carbon space considering the limitation that the country is a developing country, and the target is approved.

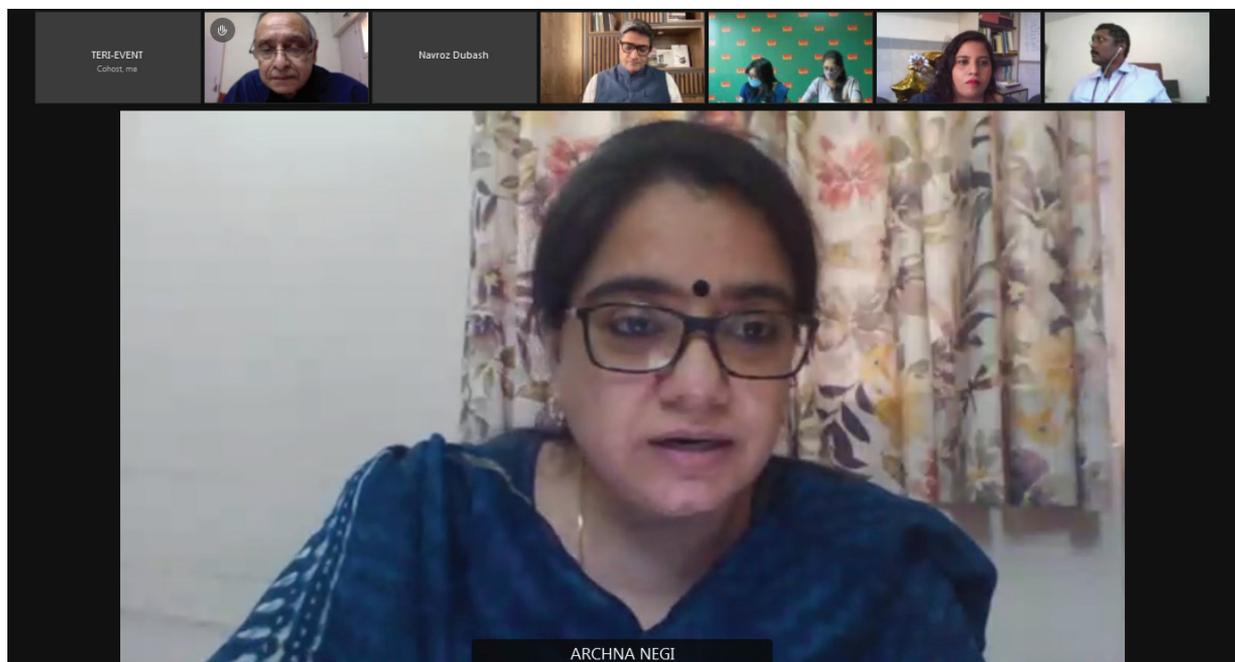
Beyond a point, fighting incredibly strenuously for the right to something that you do not particularly want to use, at some point becomes self-defeating. My issue is that we are collectively fooling ourselves if we think that setting net zero targets will automatically translate back to shifting of national politics.

In some countries, net zero might lead to accelerated action, such as in the United Kingdom or Norway, but in other countries such as India, it will be a pressure valve because our interests lie in finding as many creative ways as possible to harness the gains of a cheap ever cheaper renewable energy for the poorest. We need to force our system to go as fast as possible. Dr Dubash does not think net zero will do that.

Archna Negi, Associate Professor, Centre for International Politics, Organization & Disarmament, School of International Studies, Jawaharlal Nehru University

The International Energy Agency tells us that while the countries that are pledging net-zero is increasing, the pledges, even if fully achieved, still fall well short of achieving the target of 1.5 °C. This means that we are already on the road to violating Article 2 of the Paris Agreement, which mandates a global response to climate change that will ensure that global average temperatures will remain 2 °C above pre industrial levels, and even to pursue efforts to limit this increase to below 1.5 °C.

Clearly, COP26 is very critical, and she cited the recent remarks of COP26 President-Designate Mr Alok Sharma that Paris promised and Glasgow must deliver. The focus of UK's work includes the focus on the net zero emissions



targets, step up action on adaptation and resilience, the question of delivering the USD 100 billion climate finance commitment, and increasing the collaboration on these objectives.

The systems put in place in Paris need to be tested. One question would be is the Ratchet mechanism working? A key indicator of the success at Glasgow will be the submission of new NDCs of many parties to the Paris Agreement, which are collectively sufficiently ambitious to achieve the 1.5 degree Celsius target.

One of the requirements for a successful outcome at Glasgow would be whether the developed countries would honour the promise of mobilizing USD 100 billion per year to support climate actions in developing countries in particular; equally important would be strengthening of the ability to adapt to the climate impacts.

The broader call by the UK is to achieve net zero by 2050. A lot of renewed focus is being put on newer NDCs that countries are being asked ahead of COP26. A large part of the climate negotiations before Paris, was just to keep them on track at UNFCCC, and not allowing the climate agenda to pass on to other fora. One of the important things to watch out for as far as India's climate diplomacy is concerned is related to fact that India is slated to be among the countries that will suffer from the worst impacts of climate change. The second driver is the development aspirations that India has been talking about. The third aspect is about the strategic concerns that will drive what India does in COP26, which will be derived from a lot of action that happens outside the COP track, including G20 and BRICS.

One of the pressure points that India as a negotiator will face will be that it is one of the G20 nations that has not yet submitted a revised agenda on raising its climate ambitions. Another pressure point for India also comes from being a member of QUAD, which met for the first time in person; there was a joint statement that expressed the common intention of all QUAD countries to update their NDCs before the COP26. Japan and the US have already done so; Australia and India will then have to live up to what they promised.

The principles of equity, per capita carbon space, and historical responsibility have been a part of climate negotiations. Defining climate justice as distinct from and additional to these principles will add value to this.

The acceptance of normative leadership at the international level will stem from a uniformity in application of the idea at the domestic level.

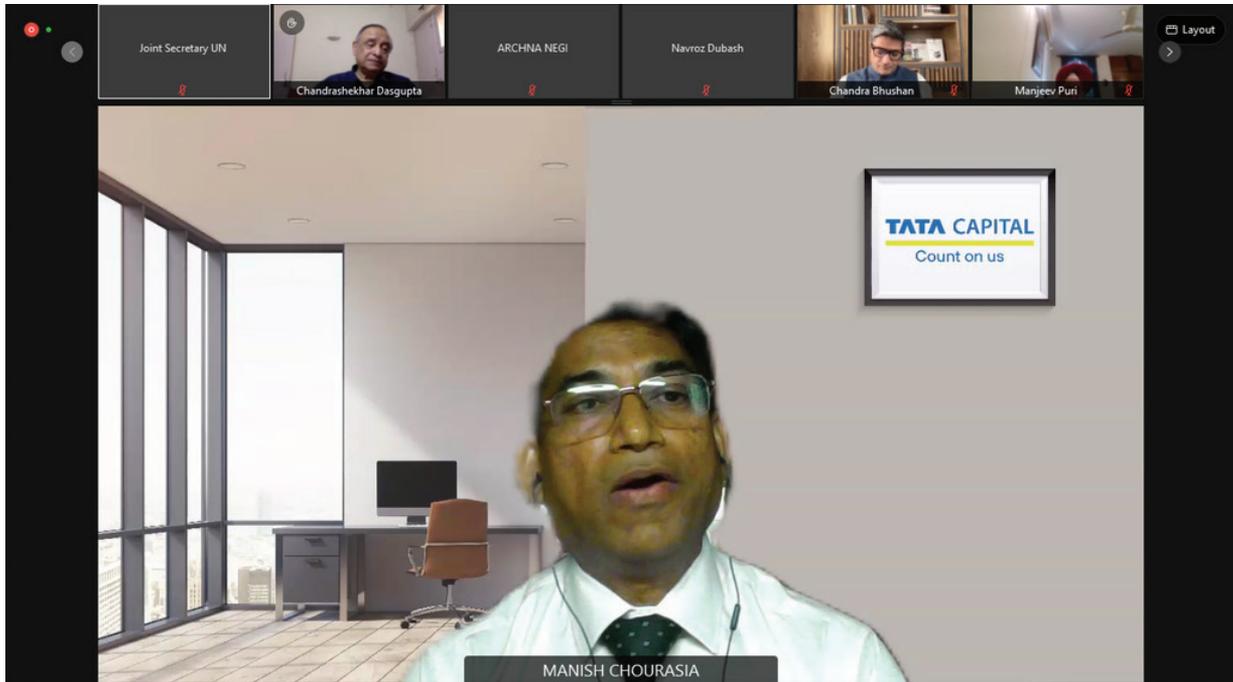
The whole semantics of net zero is not new; it goes back before the Paris agreement to the Kyoto protocol, and the UNFCCC; ultimately, the discussion on net emissions is that the equation is the same - how much of the emissions is put out there, and how much is taken back in. Hence, net zero is just a fancy way of packaging it: the requirement is to put some sort of a dateline on making domestic level changes and policy action.

Something that needs attention in international politics and international diplomacy, in particular, is adaptation. The free rider problem that is found in mitigation aspects, is not as applicable to those relating to adaptation. Hence, adaptation is something countries have to do. They cannot sit back and say, "If somebody else is fixing the climate problem, then I am going to get a free ride on that." Hence, adaptation should work both in terms of balancing the financing part and the execution part because international law works on very soft mechanisms; there are no jails and police for violations. Therefore, even the aspects of national communications need to be strengthened legally at that level.

Manish Chourasia, Managing Director, Tata Cleantech Capital Ltd

The politics around climate change is highly complex; if you see the cumulative emissions and if you see the per capita emissions, most of it is from the developed world and from just two or three countries. Unfortunately, going forward, while the developing countries, on a per capita basis, will contribute a very small chunk to the emissions, on an aggregate basis they will have to play a very important role because the emissions in these countries are likely to be very high, especially, if they follow the same carbon intensive pattern of growth which has happened in the past.

Naturally, politics is complex but it is extremely important to remember that climate change is a global problem and it requires global cooperation. Technology, finance and policy are three important pillars in fighting climate



change. As far as technology & finance are concerned, developing countries will need a significant support from the developed world.

When it comes to finance, considerable attention is given to the fact that a considerable amount of money is required to actually fight the climate change; however, if you see the statistics, on an average, the global savings have been around USD 20 trillion per annum. There are various estimates of what we require to fight climate change, and they all vary. Most of this is just about 15 to 20 per cent of the global savings. This is not very high when we consider that climate change is threatening our existence. The key challenge is that most of the savings are in the developed countries, whereas the requirement is in the developing countries. The very fundamental requirement to fighting climate change is the transfer of savings from the developed world to the developing world; however, not even a small trickle has transpired. This is one area where a lot of global attention is required, and we need to find solution to this.

Although countries have pledged net zero and there has been talk about negative emissions by 2050. We have used more than 90% of the carbon budget; even if in two or three years, we go to zero carbon, a lot of warming has already been logged in in the atmosphere. This basically means that we are going to see a lot of water scarcity, and we are going to see a lot of coastal cities getting submerged. This is going to happen throughout the world. So, clearly we are not talking about just an environmental problem; we are also talking about a huge social problem which will lead to large-scale migration. Thus, adaptation has to be thought about very carefully and very deeply. Till now, a lot of talks have happened in terms of adaptation but in reality very less capital has been earmarked. So in my view, a lot of thinking needs to go into adaptation once again globally. It is extremely important to have a smooth transition to ensure that it is just and acceptable to all countries.

Although we talk about the necessity to go to net zero, the way we transition is also important. If suddenly the mining of the minerals that is used in renewable energy is stopped or if it happens abruptly, then the cost of these inputs will go up; this will lead to increasing the cost renewable energy. Hence, it is extremely important to do a smooth transition; a lot of thinking needs to go into this globally.

In India, we have seen that the renewable energy, like in the other parts of the world, are highly capital intensive. If someone is establishing a plant, then he needs a return which comes after 10 to 25 years. For this, some kind of a surety is needed that the power will be sold; in our country where all the power is actually distributed by the government, i.e. state government agencies, we need a firm contract whereby this power can be sold at a firm cost

for 15 to 25 years. Unfortunately, in our country, although power purchase agreements are being signed, there have been a lot of contracts that have been renegeed.

The fund requirement in India itself as per our estimate is about USD 1.6 trillion by 2030. Looking at our banking system and the kind of funds that is required, it is clear that the government cannot do it alone. It requires a public-private partnership now. Today, what is happening is that the private sector is putting up the capacities and the off takers are government agencies; hence, it is very important for us to strengthen these public institutions because they do not have the money to pay developers; this is creating a huge problem.

Today, in India and in lot of other parts of the world, a lot of developments are happening in renewable energy because the technology has improved by leaps and bounds; unfortunately, the manufacturing ecosystem is there in just a few countries. Hence, we are importing most of our panels, most of our inverters and most of the other equipment that are required in renewable energy. When it comes to electric vehicles, we are importing all the batteries. We need to have this manufacturing system within India; only then will our emissions be scalable.

In the name of green financing and in the name of green investment, a lot of green washing is happening whereby people are claiming that they are doing green investment but actually, they are not doing it. It is important that we work on some kind of a taxonomy and that taxonomy is used uniformly so that we are very clear what is green.

Today, considering renewable energy and light electrical vehicles, we are pretty much there, in terms of technology, but that is not going to be enough to solve the problem of heavy duty transport. So, it is very important to invest in green hydrogen, which is the next generation technology, as it will not only help us to solve the green energy problem but it will also help us to create some kind of a security because today when it comes to batteries, we are fully dependent upon imports. This just means that the fossil fuel imports will be replaced by battery imports.

We should work on new technologies like cargo carbon capture and storage given the way emissions are going up today. So, if this is the situation, emissions will not come to zero if we are realistic about it. Clearly, we will need to prepare for carbon capture and sequestration so that we can reduce the carbon from the atmosphere. It will be important for us and the other countries to prepare for it. The market price is actually quite distorted and this needs to be corrected, especially when we know that we have consumed more than 90% of our carbon budget.

Beyond 2030, all the countries will have to work very aggressively towards green hydrogen and towards carbon capture and storage so that we are able to keep the earth within our climate change limits.

Being aggressive on net zero can actually be a huge opportunity because now, one of the ways to grow the economy would be through investments in climate related technologies. This is because if you see the technology in the last 10 years, especially in solar, and also in energy efficiency, clearly it has improved by multiple times. Now, the advantage of being aggressive would be that you will be able to crowd in lot of capital that India needs and secondly, technology will ensure that this way of progress is much better in terms of economies

Chandra Bhushan, Chief Executive Officer, International Forum for Environment, Sustainability & Technology

First of all, every country picks and chooses what they want to push in international negotiations; this is not unique to the west. We do it as well; net zero is something we have signed on in the Paris Agreement. If India today thinks that net zero is a new construct, then we are wrong. Article 4.1 of the Paris Agreement says net zero in as many words. Mr Bhushan remarked that this discussion right now on beyond net zero without responding to what has been signed in the Paris Agreement is unreasonable. We have also signed CBDR, equity and sustainable consumption under the Paris Agreement. Hence, this perception that some countries are picking and choosing certain policies to implement, and we are not is not correct. We too are picking and choosing net zero. As a country we should respond positively because we have great strength to respond. By negating or by saying net zero is not going to work, or there are many problems in net zero, we are making our position even weaker.

Net zero has not been fleshed out properly and there is a scope for India, actually, to define net zero, depending on what are the realities of net zero. For example, under the Paris Agreement, in terms of net zero, that there are four or five components that need clarity, which developed countries are not bringing up for discussion. For example,



net zero has to be based on self-differentiation. Again, Article 4.1 states that net zero has to be flexible, because technology is changing. Again, as part of the Paris Agreement, net zero has to be built on NDCs; it has to be built on finance and technology. Instead of saying that this is an artificial construct that this is not going to work, we must realize that there are sufficient options for us to define net zero in a way that is beneficial to us and beneficial for the world, and hold developed countries accountable. One of the advantages of net zero is that you can hold countries accountable; not just India but also developed countries. This is a number that everyone has to achieve. There is nothing called as beyond net zero; we have not responded to net zero and as a country, it is important that we respond in affirmation and positively to net zero.

In many sectors that we are looking at now, whether it is energy sector, transport sector, or building sector, it does not make any sense for India to go back to old technologies. They are expensive, and markets understand it. The government may implement a policy that supports coal, but the private sector is not going to invest in coal. This is obvious because there is a long-term risk on standard assets linked to coal. For that matter, the private sector is not going to invest on internal combustion engine as well. Net zero can be net positive for us, both socially and economically. Therefore, economically speaking, it makes sense for us to embrace net zero.

The time has come for all of us to define equity in the way it should be defined in 2020, not in the way it was defined in 1990. There is no carbon budget. There is not going to be excess carbon budget for us in the future. If 1.5 °C is the goal that we want to keep as a country, then there is no carbon budget. No one is going to vacate the budget for us. Whatever countries do today, even if developed countries reach net zero by 2030 and China by 2050 or 2040, the carbon budget is over. We have to work together, so that there is no discussion on carbon budget and therefore, we will need a very different framing of equity than what we are framing right now. The 1990 framing of equity is not a valid framework. Today and going ahead, India needs resources, finance, technology, and capacity.

Just transition is nothing else but a new development agenda in the coal mining part of the country. We will have to build a new economy, new cities, and new businesses in the coal mining part of this country; moreover, it is a new development agenda for all of us. We will require internal resources as well as external help in achieving this agenda so it makes immense sense for us to define equity in a way that leads to a cooperative framework rather than the heated argument that is happening at UNFCCC.

Lastly, India should submit its NDC now. There is a huge gap between our old NDC, and what we are already doing right now. In fact, if we add up what we are doing right now within the country, we can easily double our NDC,



whether in terms of our EV policy, in terms of renewable energy, forestry, adaptation, or building. Hence, it makes sense for us to submit our NDC, and go to COP26, as a leader who is going to set the stage, rather than someone who is responding and is at the back foot all the time.

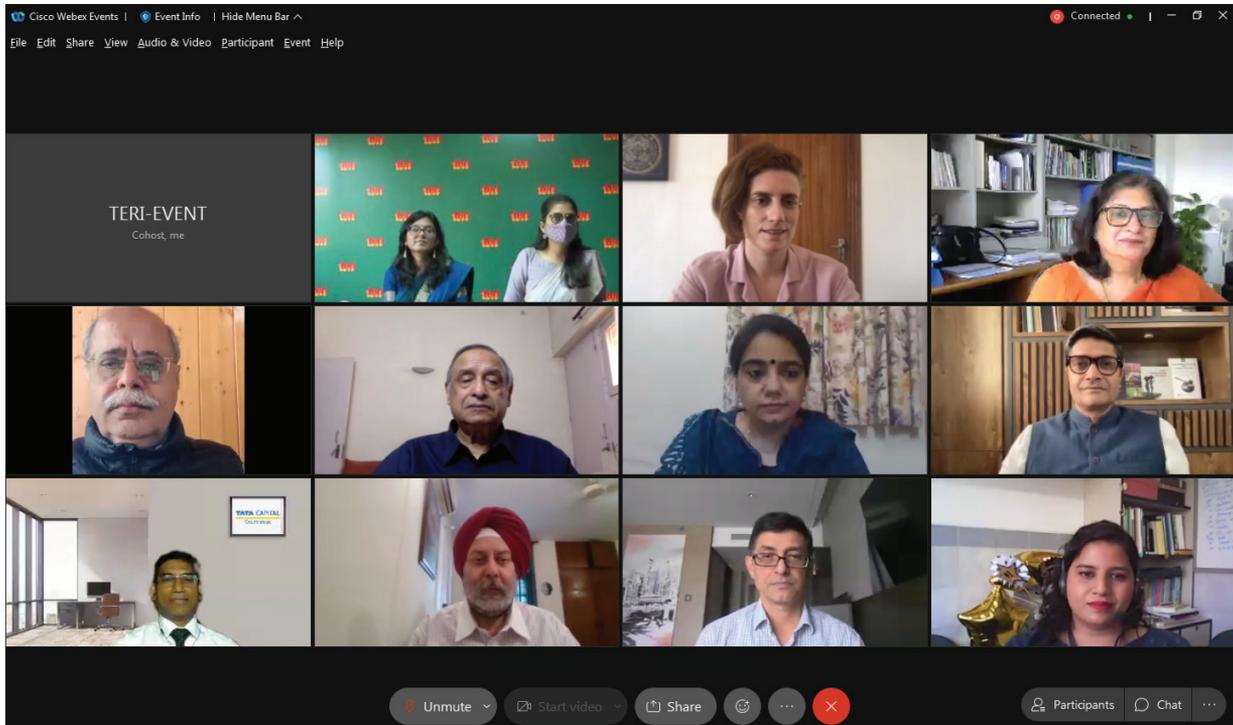
Why do we believe that developed countries will get advanced technology first? Why is it one of the debates on technology that developing countries need technology? This perception that technology is emerging in developed countries and will be adopted in developed countries first is actually missing the point. Right now, in a world of collective learning, technologies are also emerging in the developing part of the world, including India. Thus, this construct that developed countries will use the technology first, and then will provide it to developing countries, is a construct of 1990s. It is not a construct which is valid today.

How do we define equity and fairness as far as the stocktaking is concerned is going to be very important. One of Mr. Bhushan's recommendations is that the Government of India should set up a committee or a team and invest in research before the stocktake starts so that we are prepared in terms of taking the stocktaking process very seriously.

Summary and Vote of Thanks

Manjeev Puri, Distinguished Fellow, TERI

Mr. Manjeev Singh Puri thanked the speakers, organizers and the audience for being a part of the discussion. He reiterated the importance to have policy space. For a large developing country like India, policy space will result in a level playing field for international finance. We are intrinsically part of the multilateral system; moreover, our internal dynamics are such that we become bound to these things. Development cannot be a case of merely burning coal. We need to be smarter. We need to do all the action.





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