



# WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2023

MAINSTREAMING SUSTAINABLE DEVELOPMENT AND CLIMATE RESILIENCE FOR COLLECTIVE ACTION

February 22-24, 2023  
New Delhi



## Nature-based Solutions for Addressing Climate Vulnerability and Ensuring Food Security

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### PLENARY SESSION SUMMARY

Venue: Stein Auditorium

Date: 23 February 2023

Time: 6:00 pm – 7:30 pm (IST)

#### **Suggested Citation**

World Sustainable Development Summit (2023), Nature-based Solutions for Addressing Climate Vulnerability and Ensuring Food Security, Plenary Session Summary (Rapporteurs: Mary Chingthianhoih and Varun Grover), New Delhi: The Energy and Resources Institute.

## Actionable Messages

**Message 1:** For the green growth pathway, nature-based solutions are the key to addressing many environmental issues including climate change and food security. Nature-based solutions are increasingly being recognized by governments, donors, and academia as an effective approach to adaptation and providing considerable co-benefits. Nature-based solutions also need to include tenure and culture as there are people involved.

**Message 2:** Nature is the first line of defence against climate-related disasters and other impacts of climate change. Emissions must be reduced while ensuring adaptability to climate change and the production of enough food. For instance, Norway is committed to doubling its climate finance and at least tripling the support to adaptation by 2026.

**Message 3:** Nature-based solutions are tools that make it possible to combine the preservation of biodiversity, fight against climate change, and ensure human development. France provides 6 billion euros a year to developing countries as climate finance and one-third of this goes to adaptation.

**Message 4:** Nature-based solutions can provide a third of all cost-effective climate mitigation required by 2030. These initiatives have been overlooked, undervalued, and underfunded. The UK Government has contributed 3 billion pounds towards solutions that protect and restore the natural world.

**Message 5:** Nature-based solutions should be introduced in ways that protect the interests of small-scale farmers, indigenous people, and local communities. Solutions should contribute to reducing farmers' vulnerability, increasing their risk-taking capacity, and providing stable income.

**Message 6:** There is a new technology, new knowledge that supports constructivism, process and decision-making through socialization and collective intelligence. Paradigm and practice shifts apply to CGIAR (formerly, Consultative Group on International Agricultural Research) as well, and CGIAR is ready to address the future and current needs.

**Message 7:** The economics of nature-based solutions needs to be converted into finance and financing models. This is a key issue that has to be solved through the roots of blended finance, bundled innovations, and figuring out the right kind of financial intermediation.

**Message 8:** Diversification has always been one of the fundamental ways through which farmers deal with risks. Therefore, for risk management and addressing vulnerability, diversification becomes an important component, especially in climate finance and adaptation.

**Message 9:** The National Institute for Environmental Studies (NIES), Japan maintains an Asia Pacific Adaptation information platform. The platform provides data and tools to support countries in the Asia Pacific region and can be used to develop national adaptation plans. NIES has also developed a large-scale integrated computer simulation model of the Asia Pacific region, which can be used to evaluate various mitigation and adaptation options quantitatively and help in planning and decision-making.

**Message 10:** To counter the accelerating rates of biodiversity loss and a host of other processes, three things must be done: incentivizing environmental responsibility, reducing and removing perverse subsidies, particularly in the agricultural sector, and promoting nature-based solutions.

**Message 11:** The Kunming-Montreal Global Biodiversity Framework has the target of conserving 30% of land and sea area by 2030. There is an urgent need to bring greater clarity and rigor to the concept and practice of nature-based solutions. Nature-based solutions are an underlining point to be integrated into the Green Development Pact that is being discussed at India's G20 presidency.

**Message 12:** The future record of the Anthropocene needs to be of recovery and not damage.

## Narrative

The plenary session titled, “Nature-based Solutions for Addressing Climate Vulnerability and Ensuring Food Security” was held as part of the annual flagship event of The Energy and Resources Institute (TERI), World Sustainable Development Summit (WSDS). The session aimed at understanding the interactions and complexities of tackling climate vulnerability and ensuring food security through nature-based solutions (NbS). The International Union for Conservation of Nature (IUCN) defines NbS as actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges (e.g., climate change, food and water security or natural disasters) effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. Estimates by Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services suggest that nature-based solutions can provide 37% of the mitigation needed until 2030 to achieve the targets of the Paris Agreement. According to the Intergovernmental Panel on Climate Change (IPCC), the role of NbS in promoting the adaptation of natural ecosystems and human societies to climate change is being increasingly emphasized. IPCC’s findings infer that the overall direction of climate change impacts on food systems is negative with high confidence for general impacts, temperature, precipitation, and phenology & seasons. According to the Food and Agriculture Organization (FAO), the war in Ukraine has led to risks for global agricultural markets; especially for the least developed and low-income food-deficit country groups that rely on Ukrainian food supplies to meet their consumption needs. Climate change is expected to further increase climate vulnerability and aggravate food insecurity.

The session was moderated by **Dr Kiran Kumar Sharma, Senior Director, TERI**. Discussions ranged from what climate change has transformed into, its day-to-day impacts in our lives, to changing and redefining priorities of countries, be it the developed ones like Norway, UK or developing ones like India, Sri Lanka. Climate change not only requires businesses and corporates to change, but is forcing all types of organizations, even research and academics to realign their goals and objectives, to focus on the impacts of climate change and solutions to this. The panellists also shared an interesting perspective on how humans have damaged this planet, the impact of our activities, and how all these activities have led us to the state of Anthropocene.

The session started with the ministerial address by **H.E. Mr. Naseer Ahmed, Minister, Ministry of Environment, Sri Lanka** who declared that the world is at a crucial juncture with regards to its economy and environment as a consequence of humans disassociating with nature through time. With the shift in meteorological phenomena, there is an evident impact on the food security and services that, Mr. Ahmed pointed out, humans are unable to adapt to. Thus, he demanded global leaders to “revisit strategies used in the current development pathway as there is no way to continue business as usual”. He identified three major domains, namely management, conservation, and enhancement of resources, which will yield holistic results if we adapt to nature-based solutions as a development approach. He stated that Sri Lanka is fully geared towards fulfilling the targets set in 6 mitigation sectors and 9 adaptation sectors by 2030. Further, emphasized that under the leadership of his excellency, Mr. Ranil Wickremesinghe, Sri Lanka is also developing a road map to becoming carbon neutral by 2050. To conclude, Mr. Ahmed highlighted the advancing significance of NbS as an adaptive strategy to achieve SDGs (Sustainable development goals) at global, national, and local levels. He concluded by stating that Sri Lanka’s philosophical heritage is enriched by the teaching of Buddha that has always encouraged them to balance ecological concerns with human needs and how humans must be in sync with nature, rather than work against it.

Following Mr. Ahmed’s ministerial address, **Ms Anne Beathe Tvinnereim, Minister of International Development, Government of Norway** in her video message, emphasized the importance of collective action and international cooperation in executing NbS that addresses nature-social issues, such as adaptation to climate change, disaster risk reduction, and fight against hunger. She highlighted that the nature-based solutions must be introduced in a way to protect the interests of small-scale farmers, indigenous people, and local communities as inclusive processes are key to enhance adaptive capacity and build resilience. Thus, she declared that Norway has adopted the principle of local-led adaptation in their new strategy for food security where the main goal is to improve food self-sufficiency through climate-robust food production by small-holders and the development of local value chains and markets. As established in the Paris Agreement, Ms. Tvinnereim urged global leaders to fight climate change in a manner that does not threaten food production. Thus, she urged for small-scale farmers and aquatic food producers to have access to knowledge about climate adaptation, genetic resources, and technology to continue food production despite changing

climatic conditions. She concluded that the success of nations in these spheres will determine our future. She further stated that Norway is determined to do its part by committing to double their climate finance and at least triple their support to adaptation by 2026.

The next address was also a video address by **The Rt Hon Lord Goldsmith, Minister of State (Energy, Climate and Environment), Foreign, Commonwealth & Development Office**, who listed out some statistics that displayed the grave effects of extreme climate over food production and market economy and further explained how it is an immediate and existential threat for the communities on the frontline, especially the small islands and developing states. While acknowledging the milestones of Montreal Protocol, he stated that when Egypt (COP27) encouraged nature-based solutions as part of their adaptation and mitigation actions, it was a step towards accepting the inseparable link between climate and biodiversity crises. Fundamentally, it was a recognition that there is no credible pathway to net zero that does not involve massive efforts to protect and restore the natural world that we all depend upon. Though it has been estimated that the nature-based solutions can provide a third of all cost-effective climate mitigation required by 2030, Mr. Goldsmith disappointedly conveyed that these initiatives have been overlooked, undervalued, and underfunded. For this reason, he states that “the U.K. government has contributed 3 billion pounds of their own international climate finance towards solutions that protect and restore the natural world,” further highlighting the collaboration between India and the UK on issues of food security and climate resilience, and expressed his willingness to continue doing so in the future. To conclude, Mr. Goldsmith stated, “The climate and environmental crisis are fundamental drivers of food insecurity and unsustainable land use is a fundamental driver of the climate and environmental crisis. And we will only overcome these interlinked challenges and achieve sustainable development with the courage, determination, and honesty from governments, businesses, investors and individuals.”

Following the ministerial addresses, the discussion steered towards the global leadership address, which was pioneered by **Prof. Lindiwe Sibanda, Chair, Consultative Group on International Agricultural Research (CGIAR) System Board**. She began by appreciating India’s efforts, through the Green Development Pact, in urging the world to focus on strong actions for the next decade to empower green development all over the world. As we move from the 20<sup>th</sup> to 21<sup>st</sup> century, Prof. Sibanda drew our attention towards the subsequent progress of challenges which require a paradigm shift if we seriously want to ensure global sustainability. She stated that “if agriculture is a major threat to the environment and climate, then it is also one of the main levers to design and implement nature-based solutions.” Thus, she emphasized that transformation of global food systems is integral to our fight against climate change. As she implored for new practices to protect biodiversity and ensure food security, she talked about shifting the paradigm by resetting the multiple functions of agriculture which Prof. Sibanda stated “the CGIAR is ready to address.” With the advancement in technology, Prof. Sibanda affirmed that there is new knowledge that supports constructivism, process, and decision-making through socialization and collective intelligence from bottom up. There are new ways to interface with decision-makers through adopted institutional and partnership arrangements and foresight with farmers at the centre. She affirmed that the “paradigm and practice shift applies on CGIAR as well. CGIAR is ready to address the future and current needs.” CGIAR has embarked on a new journey that brings all CGIAR centres together to generate a new portfolio of research initiative that contribute to 5 impact areas including climate adaptation and mitigation, environmental health, and biodiversity. She further stated that the new portfolio provides integrated solutions for much complex challenges as we move through time. Thus, she concluded by stating, “We are ready to do our part. We will engage at all levels. This panel presents an enormous amount of influence, let’s embrace that power. Let’s put our heads together and design and implement nature-positive solutions.”

The next speaker on the panel was **H.E. Christophe Guilhou, Secretary in the French MEA, Department of Sustainable Development**, who joined the session virtually. He began by conceptualizing the true essence of nature-based solutions and its capacity to combine together the preservation of biodiversity, fight against climate change, and human development. He highlighted that the approach promotes co-benefits and provides a pathway to avoid the trade-off between climate, biodiversity, and sustainable development actions. Thus, it is important to have a clear understanding of what nature-based solutions encompass on a global level to refrain from it being misused. Mr. Guilhou elaborated on the multiple co-benefits of NbS as they are key enablers in improving the resilience of societies against climate change and can aid in mitigation of the consequences of disasters when implemented in disaster-prone areas, such as protection and restoration of mangroves, can provide natural defence against tsunamis and sea-level rise. Ergo,

he encouraged that the development of NbS should be promoted as a response to climate change to build a more resilient and sustainable future for all. In regards to food security, Mr. Guilhou declared that the promotion of NbS is core to their (France Government) international strategy for food security, nutrition, and sustainable agriculture. Additionally, he stated that France applauds India for their sustainable initiatives and for taking the leadership in disaster-resilient infrastructure, further stressing the topic of resilience in the G20 Sherpa. While praising the sustainable collaborations between India and France, Mr. Guilhou stated that “you can count on France’s engagement... and support to the implementation of NbS on ground level.” In addition to the promotion of NbS as part of the climate finance commitment, he emphasized that “France is providing a fair share by delivering 6 billion euros per year for climate action in developing countries including a third for adaptation.” In conclusion, Mr. Guilhou enumerated the initiatives taken by the French Government with reference to NbS for food security and nutrition, whilst mentioning France’s execution in embedding ecology in their national legislative frameworks and support in international forums and collaborations.

The first leadership address was delivered by **Prof. Anand Patwardhan, Professor, Center for Global Sustainability University of Maryland**. In his address, he emphasized the critical juncture where we were at, from the perspective of global international commitments, i.e. sustainable development goals (SDGs) which were announced in 2015 and will be realized by 2030. We know where we stand and an acceleration is surely required in our actions moving forward. He stated some of the reasons for our vulnerability and food insecurity to be degradation of ecosystems and loss of natural capital. He further expressed that nature itself is the solution. Nature protects only if it is protected. Thus, our starting point has to be protection. Next is to then go beyond protection and restore what we have lost and then to keep enhancing for our continual well-being. This what we have to accomplish. He then went ahead and described how to accomplish this. For which, the way we have been dealing with problems and figuring out solutions are in silos. Many of these problems have the same root drivers and in reality, one root driver can lead to multiple adverse outcomes. Thus, the interlinkages we have are not only across environmental problems but equally across social and economic sides as well. The solutions we apply too have multiple interlinkages and we need to exploit these interlinkages. He shared a few examples of integrated solutions like, food-energy-water nexus, food-health-livelihood nexus, and more. He then briefly highlighted the findings a report led by him, ‘Global Commitment on Adaptation’ which calls for three revolutions, in understanding, planning, and finance. The report also demonstrated the triple dividends from investing in resilience and adaptation. These triple dividends are particularly pronounced for nature-based solutions. Thus, the economics of NbS is attractive but often, we end up with the challenge of not being able to convert these into finance and financing models. The last critical issue is of understanding and knowledge. In the end, he expressed that the term NbS, unfortunately conveys, the impression of simple single technological pixels and presupposes the concept of nature and society as separate from each other. But we have to overcome this and believe that what we have learnt culturally, seeing nature and society as integral parts of each other and not as two distinct entities.

The next address was given by **Dr Masahide Kimoto, President, National Institute for Environmental Studies**. In his video message, he informed about the work being done by his institute. They carry out integrated research on various aspects from the local to global level. One of their research indicated that the world would face serious climate impact on global crop production earlier than as previously expected. He also warned that the next 10 years are decisive for the issue of climate change. They are attempting to feed scientific knowledge into societal decision-making towards carbonization and adaptation. They also maintain an Asia Pacific Adaptation information platform. The platform provides data and tools to support countries in the Asia Pacific region and can be used to develop their national adaptation plans. These services can also be availed by business sectors as they provide them with examples of efforts to develop climate-compatible products. The platform also showcases NbS, which has helped communities cope with various societal challenges around the world. NbS are being increasingly recognized as multi-beneficial and cost-effective solutions to reduce greenhouse gases and towards adaptation to climate change. They have developed a large-scale integrated computer simulation model of the Asia Pacific region which can be used to evaluate various mitigation and adaptation options quantitatively and help in planning and decision-making. He also shared some traditional and modern good practices of NbS that are practised in Japan. The Japanese people have enjoyed benefits of the natural resources and have made efforts to preserve them. Traditionally, Satoyama (meaning woodland close to living area) and Satoumi (coastal area next to living quarters) have been practised in Japan. Similarly,

the modern examples for NbS are, in Shiba, prefecture biochar made of sand-wood used as soil conditioner, in Shizuoka, prefecture exploration of seaweeds is thriving. He stated that for tackling climate crisis and ensuring food security, there is no single solution that will resolve everything. Hence, communication and collaboration amongst researchers and stakeholders in various sectors will be crucial.

**Dr Vinod Mathur, Vice Chair, IPBES Bureau** started his address by quoting from the IPBES report, “Humanity’s dependence on natural resources has grown dramatically and this growing dependence has its consequences. At the same time, capacity of nature to provide these resources is being severely diminished and compromised due to accelerating rates of biodiversity loss and a host of other process.” To counter this, he emphasized on doing three things, incentivizing environmental responsibility, reducing and removing perverse subsidies particularly in the agricultural sector, and promoting NbS. He added that nature-based solutions and nature-friendly solutions, both are indeed the most cost-effective ways of meeting the sustainable development goals and are essential elements for jointly achieving the objectives of several international conventions. The significance of NbS is being increasingly understood in addressing climate vulnerability and ensuring food security at global, national, and regional levels. He then drew attention towards another aspect which has been a big discussion point, the missing space required for conservation and species. To address this, there has been a new development that has taken place at the recent Kunming Montreal COP15. There has been a formation of a new international 30x30 High Ambition Coalition for Nature and People with more than 110 countries as part of it including India. This has translated into a globally accepted target of conserving 30% of land and sea area by 2030. He then mentioned that the IUCN and United Nations Convention on Biological Diversity (UNCBD) are pushing forward countries to expand their conservation areas, beyond the nationally designated protected areas and to adopt other effective area-based conservation measures (OECMs). India is among the first few countries to have made a classification for OECMs. He also expressed the need to bring greater clarity and rigor in the concept and practice of NbS. NbS is an underlining point to be integrated in the Green Development Pact that is being discussed at India’s G20 presidency. In conclusion, he added that NbS must also include culture as there are people involved.

The next address was delivered by **Dr Purvi Mehta, Deputy Director, Global Growth and Opportunities, Bill & Melinda Gates Foundation**. She was happy to see that the Summit this time focused on the solutions. She highlighted that discussions have been able to reflect upon the interconnectivity and interdependence of various sectors, like food security, climate change, sustainability, rural development, health, and support. In her address, she then focused on climate vulnerability and food security. Looking at these two issues jointly between a timeline from 1961 to 2016, she informed that the global agricultural productivity has doubled during this time. But this productivity would have been even 18% higher if it would not have been for the climate-related factors, various abiotic and biotic stresses. On vulnerability, by 2030, 70% of most vulnerable people to climate change will be living in developing countries and their only source of livelihood will be agriculture. Thus, climate change is not just an ecological issue but also an economic equity issue. Small-holders are most vulnerable to the effects of climate change. She then emphasized that whatever kind of solution it may be, it should contribute towards reducing farmers’ vulnerability, increase their risk-taking capacity, and provide them a stable income. These solutions will have to be a combination of multiple technologies, be innovative, and have collective action. She also mentioned some examples already available with us like heat-tolerant maize varieties, importance of thermostability of animal vaccines, etc. On the financing aspect, blended finance and bundled innovations will be important aspects. She also shared some positive developments, like considerable global investments in the agriculture sector in the past three years and out of these around 80% has been towards climate change. In 2022, multilateral development agencies or development banks have alone brought 83 billion dollars into the sector. In conclusion, she shared how farmers actually deal with risks, which is through diversification. More than 70% of the money goes only to five commodities. Diversification has always been one of the fundamental ways through which farmers deal with risks. Therefore, as we look at risk management and addressing vulnerability, diversification becomes an important component, especially in climate finance and adaptation.

The science leadership address was delivered jointly by **Prof. Jan Zalasiewicz, Chair, Anthropocene Working Group, International Commission on Stratigraphy** and **Prof. Mark Williams, Member, Anthropocene Working Group, International Commission on Stratigraphy**, both of whom participated virtually. In his

address, **Prof. Zalasiewicz** expressed his disappointment that the world has changed a lot. Contribution by humans is immense in bringing these changes. The biggest measurable, steepest change has been in the levels of atmospheric carbon dioxide. The amount of industrial carbon dioxide in the atmosphere is about a trillion tonnes and is intensifying. Like carbon dioxide, so has our energy consumption expanded. Earth is now absorbing more heat than it is radiating, and most of this is going into the oceans. Physical change, geographical change, new materials, these are all changing the trajectory and will play a role in shaping the patterns of future as well. We have traversed from Holocene to Anthropocene. Continuing from the same high point as left by Prof. Zalasiewicz, the next part of the address was delivered by **Prof. Williams**. He began his address by emphasizing on the fact that “8 billion humans live on earth, which is enormous and their consumption pattern is exorbitant. He further highlighted that out of these 8 billion, more than 50% live in urban areas, consume more than 70% of energy, and produce 70% of the entire pollution. Going further, he presented more factual information that human encroachment is at a planetary scale. Earth’s surface has been reconfigured. The biosphere has been halved. Half of habitable land is used for farming, three quarters of this is for animals and dairy, a third of other land is used to feed them. Even our feeding habits carry a big footprint. We consume 63 billion chicken every year, which is humungous. What we have done has also modified the biomass of single chicken over the past 70 years. As of today, the chicken biomass alone represents 70% of the total bird biomass. We have translocated species over the planet. All this leaves less space for biodiversity and risks mass extinction. The growth of cities and human impact on earth both are now accelerating. He concluded with the hope that the future record of Anthropocene could be one of recovery and not damage.

At the end of such an engrossing and high-level discussion, **Dr Kiran Kumar Sharma, Senior Director, TERI** concluded the session’s proceedings by summarizing the important points highlighted by the speakers. The most important takeaway for Dr Sharma was what Dr Mathur said, “Nature itself is a solution. Solutions have to come from within the nature itself.” We are moving ahead and are no longer only finding problems but are also finding solutions. The next stride after these commitments are to have clear actions with a collective resolve. Climate change and science will force us to change and adapt.



“	<p>The world is at a crucial juncture. The global economy is showing all signs of recession. Extreme climate events have started adding fuel to fire, aggravating problems faced by mankind more than ever before. We have disassociated ourselves from nature. The unprecedented destruction of the environment camouflaged under the name of development is paying the price. We all are responsible parties, and more importantly, we all are victims of this.</p> <p style="text-align: right;"><b>H.E. Mr Naseer Ahamed</b> <b>Minister, Ministry of Environment, Sri Lanka</b></p>
“	<p>Sustainable management of agricultural soils and farming methods that improve soil health and structure also make it possible to increase production and reduce the risk of and damage caused by flooding and drought. Such actions are often low cost and low risk and can have beneficial social effects. It can also help to maintain our ecosystems and serve as examples that can be upscaled.</p> <p style="text-align: right;"><b>Ms Anne Beathe Tvinnereim</b> <b>Minister of International Development, Government of Norway</b></p>
“	<p>The climate and environmental crisis are fundamental drivers of food insecurity and unsustainable land use is a fundamental driver of the climate and environmental crisis. And we will only overcome these interlinked challenges and achieve sustainable development with the courage, determination, and honesty of governments, businesses, investors, and individuals.</p> <p style="text-align: right;"><b>The Rt Hon Lord Goldsmith</b> <b>Minister of State (Energy, Climate and Environment), Foreign, Commonwealth &amp; Development Office</b></p>
“	<p>We are ready to do our part. We will engage at all levels. This panel presents an enormous amount of influence, let us embrace that power. Let us put our heads together and design and implement nature-positive solutions.</p> <p style="text-align: right;"><b>Prof. Lindiwe Sibanda</b> <b>Chair, CGIAR System Board</b></p>
“	<p>Nature-based solutions must make our food systems more sustainable and resilient. It is at the core of our international strategy along with nutrition and sustainable agriculture.</p> <p style="text-align: right;"><b>H.E. Christophe Guilhou</b> <b>Secretary in the French MEA, Department of Sustainable Development</b></p>
“	<p>Beyond protection, we have to restore what we have lost and then enhance and strengthen for our continual well-being. In many cultures, including ours, we have a rather different perspective; we do not see nature and society as being distinct but rather we are an integral part of nature as nature is of us.</p> <p style="text-align: right;"><b>Prof. Anand Patwardhan</b> <b>Professor, Center for Global Sustainability, University of Maryland</b></p>
“	<p>For the sake of tackling the climate crisis and ensuring food security, I believe there is no single solution that resolves everything. But I am sure that further communication and collaboration amongst researchers and stakeholders in various sectors will be crucial.</p> <p style="text-align: right;"><b>Dr Masahide Kimoto, President</b> <b>National Institute for Environmental Studies</b></p>
“	<p>Nature-based solutions and nature-friendly solutions, both are indeed the most cost-effective ways of meeting the sustainable development goals. Nature-based solutions need to be integrated into the Green Development Pact that we are talking about in India's G20 presidency.</p> <p style="text-align: right;"><b>Dr Vinod Mathur</b> <b>Vice Chair, IPBES Bureau</b></p>

“	<p>Climate is not just an ecological issue; it is also an economic issue and climate is also an equity issue. The smaller the farmer, the much higher his and most importantly her vulnerability towards the risk of climate.</p> <p style="text-align: right;"><b>Dr Purvi Mehta</b> <b>Deputy Director- Global Growth and Opportunities Bill &amp; Melinda Gates Foundation</b></p>
“	<p>The amount of industrial carbon dioxide in the atmosphere is about a trillion tonnes and it is only intensifying. Earth is now absorbing more heat than it is radiating and most of it is going to the ocean.</p> <p style="text-align: right;"><b>Prof. Jan Zalasiewicz</b> <b>Chair, Anthropocene Working Group International Commission on Stratigraphy</b></p>
“	<p>At a planetary scale, in the past 10,000 years, we have halved the biosphere of earth, which is now accelerating. Earth's surface has been reconfigured, half of the habitable land is used for farming, three-quarters of this is for animals and dairy, and a third of other land is used to feed them. All this leaves less space for biodiversity and risks mass extinction.</p> <p style="text-align: right;"><b>Prof. Mark Williams</b> <b>Member, Anthropocene Working Group International Commission on Stratigraphy</b></p>
“	<p>CGIAR is reorganizing itself. Sri Lanka's resolve to implement NbS by 2050 is underway. In Bihar, 80% of new investments are going to climate change for agriculture, which is a collective resolve. Solutions have to come from within nature itself. There are tools and technologies available. Positive actions are already happening.</p> <p style="text-align: right;"><b>Dr Kiran Kumar Sharma</b> <b>Senior Director, TERI</b></p>