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**TOWARDS A RESILIENT PLANET:
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE**

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Sub-National Leadership for Inclusive Green Growth

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Inaugural Session

About the Session

The ministerial session saw sub-national leaders and bureaucrats discuss regulatory and market policy instruments that have enabled green growth at the state and local levels. The leaders deliberated on some of the best practices and innovation that each state has employed to mainstream green growth in the policy framework. The deliberations also focused on the challenges that each state faces in transitioning to a green economy.

Speakers

Moderators

- Dr Vibha Dhawan, Director General, TERI
- Mr Ajay Shankar, Distinguished Fellow, TERI

Ministerial Addresses

- Mr Aaditya Uddhav Thackeray, Hon'ble Cabinet Minister of Environment, Government of Maharashtra
- Dr Palanivel Thiagarajan, Hon'ble Finance Minister, Tamil Nadu
- Mr James K Sangma, Hon'ble Cabinet Minister for Forests and Environment, Government of Meghalaya

Special Addresses

- Mr Dipak Kumar Singh, Principal Secretary, Environment, Forest, and Climate Change Department, Government of Bihar
- Mr Atul Bagai, Country Director – India, United Nations Environment Programme
- Mr Shantanu Gotmare, Commissioner & Secretary, Government of Assam

Disclaimer

The text of the addresses is based on auto-generated transcript from YouTube. Minor edits were made on grammar and spelling. The exact wording of the discussion can be accessed from YouTube video: <https://youtu.be/mzbXGFnijWM>.

Actionable Messages

Message 1: A report should be prepared which measures a country's or a state's ease of living, based on environmental indicators. This is similar to the Ease of Doing Business reports which measures countries against indicators related to business regulations and their enforcement.

Message 2: It is crucial to set up a council comprising of environment and forests ministers and other allied departments from all states, advising and learning from each other, along with assistance to and from the central government. In this way, policies can be made at the national level and implemented at the state level.

Message 3: It is increasingly clear that measuring the growth of a country using GDP is getting outdated, since it does not cover the big picture. There is a need to measure growth in terms of not just per capita GDP, but also by measuring the quality of life. Goals should be set for what will be a good quality of life, with adequate resources with a healthy environment, and safety around them.

Message 4: The diversity between states is so vast, in terms of the level of sustainable development and the needs of the states to adapt to impacts of climate change, that there is a need to move at a pace that is comfortable to each state, and in as many sectors as comfortable, rather than a 'One Nation, One X' kind of policy.

Message 5: The existing economic and development paradigm needs to be replaced by a concept called environment state, which advocates for an environment-first economic and social model for the Indo-Himalayan region. It means that we need to innovate and be the first in the world to integrate nature in all aspects of development and growth. Sustainability can only be achieved by aligning our growth strategy with nature.

Message 6: A step further in terms of decentralization of activities and responsibilities is by giving more support to developing a district level roadmap to green economy. District level implementation can also incorporate voices from the indigenous communities who are often the most vulnerable to the impacts of climate change.

Message 7: While it is encouraged to foster a regulatory environment which promotes green growth, any policies that are adopted in this direction should not be pushed in a hurry, without adequate research and development on their environmental costs, because there may be some immediate gain, with negative impacts in the long term.

Message 8: Sustainable development has to be based on the three pillars of reduce, reuse, and recycle, which advocates for sustainable consumption and production practices. The current growth paradigm needs to be critically examined because, as a strategy, it shortens the life of consumer goods so as to increase the frequency of replacement.

Message 9: States need to create a regulatory environment which promotes the use of alternative materials in various sectors of economy, especially in the hard-to-abate sector. These alternative materials could include different types of waste materials and industrial by-products, which may be used in road construction, instead of standard materials. This practice will result in a reduced need for the exploitation of natural resources and as well as the lower quantity of waste accumulated in landfills.

Message 10: It is clear that businesses are increasingly aware of the benefits of shifting to sustainable practices, but yet, there is still some reluctance to invest in this transition due to the high risks. States should set up a combined trust to provide an additional incentive and minimize risks for industries to develop technologies and implement policies which will help mainstream sustainability.

Making Words Count @WSDS 2022

“ Green growth actually requires rethinking our growth strategies and policies instruments with respect to environment sustainability and resource availability to all sectors of society including the vulnerable and marginal groups.

Dr Vibha Dhawan
Director General, The Energy and Resources Institute

“ Imagine the impact on the world we can have if all our states and union territories and all citizens of India come together and start moving towards resilience, adaptation, and mitigation,

Mr Aaditya Uddhav Thackeray
Hon'ble Cabinet Minister of Environment, Government of Maharashtra

“ I firmly believe that the only way to succeed from here in achieving any of these goals is in the sub-national and the sub-state level; this needs to be implemented in every village, in every village union, in every district, in every state, and it requires the kind of localization, customization and acculturation that can only happen through communities that are integrated and lived with each other

Dr Palanivel Thiagarajan,
Hon'ble Finance Minister, Tamil Nadu

“ Whether we like it or not the environment is still lingering on the ideological and regulatory fringes of our polity but I want to pole vault it to the forefront of political economy. Sub-national frameworks, innovations and unorthodox alliances can create a decentralization of global and national climate agendas, which is critical for us to restore our nature and preserve the fast-depleting natural resources.

Mr James K Sangma,
Hon'ble Cabinet Minister for Power, Government of Meghalaya

“ One certainly big gap is that the NDC is, for example, just taking one international target, and are at the central level or at the pan-India level, but the gap is that how do state governments, industry, civil society or what percentage of their work is going to contribute to the national target.

Mr Atul Bagai,
Country Director – India, United Nations Environment Programme

“ The first contradiction which arises is from the aggressive consumerism which is propagated by the current neoliberal development philosophy because this philosophy seeks to boost economic growth through higher consumption. As a strategy, it shortens the life of consumer goods so as to increase the frequency of replacement and it also dissuades reduce and reuse.

Mr Dipak Kumar Singh
Principal Secretary, Environment, Forest, and Climate Change Department, Government of Bihar

“ Just like we have the international carbon targets, can we have sub-national voluntary carbon targets? It can start with few big states or it can start with the smaller states whichever way it is, but I believe the movement has to start somewhere.

Mr Shantanu Gotmare,
Commissioner & Secretary, Government of Assam

“ Inclusive green growth and keeping global warming within 1.5 degrees, making the trade-offs between what would be green and what is not green, and what appears cheaper in the short run are issues which are best addressed at the state level and within the state government system, this prism through which we need to see things, needs to come central stage and become mainstream.

Mr Ajay Shankar
Distinguished Fellow, The Energy and Resources Institute

Narrative

Moderator's Remarks

Dr Vibha Dhawan, Director General, The Energy and Resources Institute

I welcome you all and fellow participants at this very important session on sub-national leadership for inclusive green growth. We were just discussing before we joined the panel, that India is a unique country. We are still growing, we have to develop and we have the scope to show to the world what green development means because most countries in the west they already have their infrastructure in place and therefore changing infrastructure is tougher than building a new one which is based on the principle of green growth. Green growth actually requires rethinking our growth strategies and policies instruments with respect to environment sustainability and resource availability to all sectors of society including the vulnerable and marginal groups. Policy instruments for green growth can be broadly divided into four categories that is: mainstreaming green growth in economic policy; greening market signals; regulations; and green innovations. Sub-national governments which include states, union territories, autonomous regions, provinces, cities, municipalities, and units, they are in the forefront of implementing green growth strategies and, in some cases, are leading catalyzing national efforts. They have a crucial role to play, both in structuring and implementing policy instruments, vis-a-vis inclusive green growth at grassroot levels.

It is important that the green growth is affordable and it does not require massive financial burden, and it benefits all at the grassroots level as well. We are really privileged to have such an esteemed line up of sub national ministerial and policy leaders in this session of WSDS 2022 who bring a wealth of their own respective experience on the table and I am really looking forward to the discussion. I now hand it over to Mr Ajay Shankar, who is a Distinguished Fellow at TERI, with wide ranging experience in policymaking, both at national and international level. I am sure he will be sharing his valuable insights into the subject.

Moderator's Remarks

Mr Ajay Shankar, Distinguished Fellow, The Energy and Resources Institute

It is a privilege for me to be moderating a session where there are such distinguished participants. One fact is staring us in the face and across our states in India and across the world that extreme weather events are a reality. We are also discovering that the costs of coping with these events and the costs of adaptation would be far higher than the costs of mitigation and keeping global warming within 1.5 degrees. Now India is so large that each of the states represented here are very large and some of them are larger than many large countries in the world. So inclusive green growth and keeping global warming within 1.5 degrees, making the trade-offs between what would be green and what is not green, and what appears cheaper in the short run are issues which are best addressed at the state level and within the state government system, this prism through which we need to see things, needs to come central stage and become mainstream. India is an inflection point where it is beginning to happen, and whatever one state does others are very quick and discovering the benefits of that initial move and copying.

I will just give one example for the distinguished minister from Tamil Nadu. I come from UP, and in the late 70s, we discovered the wonders that Tamil Nadu was achieving with the midday meal program and many of us got convinced that the rest of India needs to follow suit. On green growth, many of the people participating today are already becoming pioneers and would set the stage for what other states would begin to discuss and act upon.

Ministerial Address

Mr Aaditya Uddhav Thackeray, Hon'ble Cabinet Minister of Environment, Government of Maharashtra

It is actually very crucial that we discuss the role of sub national governments. As a colleague states, I can very proudly say that one of the states from India, Maharashtra was also recognized and awarded at the COP26 for its role and if I may say that we realize that we are not alone. If we have to work on this, we have to work together because all of us make India as one country, and largely if you see the role of sub national governments especially in a country like India which has a cooperative federal structure it becomes more and more important as we go ahead in terms of time in terms of implementation and in terms of how we move ahead with our environmental programs. Obviously, as a state, we have been also learning from our colleague ministers, from our colleague states across India, be it in terms of the single-use disposable plastic ban, be it in terms of the EV policy. But, there is a healthy competition in all of us. Now we also have a healthy competition, in terms of how many industries do we attract to our country, how many industries come to our individual states and what is the amount of jobs that we create. That is a very beautiful competition in terms of ease of doing business, FDI growth, investment, and that is what the numbers that we put out are.

What I would also like to suggest to my colleague ministers and through, TERI as a platform and through UNEP is if we can also put out a report of ease of living through environment and the environmental steps, like we put out for

investment in terms of industry. If we can put out a report every single year in terms of the environmental progress, the target set, and what we can do in terms of achieving those targets in terms of climate action as mitigation, adaptation and resilience.

As someone who has been in politics for almost a decade now, I remember when I was around 21/22, I used to go to Marathwada, I used to go to Vidar and I used to go to northern Maharashtra, and we used to work on fodder camps, we used to work on farm fields, take tankers of water, because all of these areas were in terrible drought. We did not have a single droplet of water coming from the skies as rain. Looking at times in the past decade, 2016 was a crucial year where we shifted from droughts in the same very areas to having floods, flash floods, mini cloud bursts in the same areas. Now the year 2020 was when we were hit by COVID, we had to give almost INR 14,000 crores to INR 20,000 crores as both COVID and non-COVID compensation in terms of financial relief packages in our state. Now, if you do not count it as COVID, INR 14500 crores is the amount that we have given as compensation for climate change events. we faced three storms on the western coast of India, namely Sindhudurg Ratnagiri Raigarh, Mumbai, Palgar. So this coast of India, the western coast of India was always considered to be safe. In fact Mumbai also had this one area called the Bomba by the Portuguese which meant 'the good bay' where you did not have storms or cyclones or rough weather patches, you did not have patchy weather out there. Now we have choppy waters. Why we are facing all of this is a question we need to ask ourselves. Every time we have a natural event like hailstorm, unseasonal rainfall, extended rainfall, drought, extended winter – what we ask as public elected representatives to the government is compensation, and compensation is needed, no one is denying that. But compensation is only a fraction of what is really lost. What we lose out is energy, time, human resource, talent, productivity, efficiency, and of course the larger contribution to GDP because of weather related events. Now are these weather related events anomalies? I do not think so. There is a certain pattern to this, and this is what climate change is. Now we have got to realize that climate change has hit us and it has hit us very, very hard.

As we speak about India and climate action on the global level in terms of global action, India can contribute the most to climate action, first, because of its necessity and second, because of its capacity. Why the necessity? In terms of global climate action, when I was at COP26, I was hearing a lot about the global north and the global south and why we need to move towards the race to zero, why we need to accelerate our movement towards the races. I see these as two potential opportunities and threads. India's threats lie in the fact that most of the country still is reeling under poverty, most of our country is still agrarian, and most of the country is still on the cusp of development. I think this is where the real threat lies because climate change has resulted in landslides, in floods, in changing geographies in our own country. I am seeing a lot of women and children moving from one place to another in terms of hunger, poverty, jobs, unemployment or just the fact that their village or hamlet has come under a landslide. This is not just going to create economic issues for us and increase the amount of expenditure for the government but it is also going to create social issues for us as we have moves from one village to another, we have one community to another, the social blending of these communities and the social blending of these villages and the load of one village on to another: all of this is going to create a lot of social unrest in our country. I think that is one of the threats that I see.

But the opportunity for us is the fact that 1.38 billion people, imagine the impact we can have on the world if more than one billion people come together for climate action. Imagine the impact on the world we can have if all our states and union territories and all citizens of India come together and start moving towards resilience, adaptation and mitigation. I think that is one, but we have always been a land of nature worshipers and largely for the community which is the Vedic dharma and you also have different religions and communities but we have always worshipped nature, thought it to be very, very sacred. The moment we started making idols out of this and we brought it into our own homes and spiritual places, we started polluting what we used to actually worship. If we can go back to that, and probably if not worship, just start protecting, I think that would be important.

Now why sub-national governments are really important - this is what I want to really stress on. If we look at the structure of India, most of our subjects that are either in the concurrent or in the state list in the Constitution of India come under the ambit of implementation at the hands of the state government. Most of the policies right from health care to agriculture to everything to even midday meals are implemented by rural or urban local bodies. Now most of these rural and urban local bodies come under the ambit again of the local self-help governments but you also have the state governments. Now if we can actually create a broader council like we have at Maharashtra's level, we have the Maharashtra Council of Climate Change headed by the Chief Minister, co-headed by the Deputy Chief Minister, who also happens to be the finance minister. We have different departments - urban department, energy department, rural department, transport because I have come to believe firmly that environment and climate change is no longer only the ambit of the environment department. It includes all of us. It includes energy - how can we move towards clean and green energy, industry - how can we move towards cleaner industry outputs, urban development, rural development. If we can have such councils across the country, that would be of greater help. Two, as we have the

GST council for the country, where we have all the finance ministers of different states advising the union minister of finance - if we can have a council like GST, similarly for environment where we have all the environment and forest ministers of the country advising or taking advice and learning from each other with the union government assisting us actively, I think that is where we can set targets, policies at a national level and implement them at a state level. Implementation would be done by the state level and very, very rapidly and swiftly. Finally, just one more thing before I conclude because I do not want to imprint on the other people's time is if you look at us we are exactly like the EU - we have states which are big and small economically, population wise, ability wise. I think that is where, just like you have the global north and global south across the world, within our own country we have the global north and global south, in terms of, ability, priority, and technology - what we call as APT. The time is apt for certain states and the time is not apt for certain other states. But for states like Maharashtra, Tamil Nadu or Delhi or many other states who are having the ability, priority and technology to implement climate action as now, I think we can start moving ahead. Because that is how we will take India moving towards a race to zero much faster than the Prime Minister's goal of 2070. For us who can help the Prime Minister achieve the goal much faster than 2070, I believe we should do so because we do not have the luxury of time in terms of climate action.

Thank you! Jai Hind! Jai Maharashtra!

Ministerial Address

Dr Palanivel Thiagarajan, Hon'ble Finance Minister, Tamil Nadu

Thank you Mr Shankar for the invitation and the opportunity. Thank you Dr. Dhawan. My regards to my fellow ministers, honorable ministers and to the distinguished public servants in the panel. I think I echo a lot of what my colleague Mr Thackeray has said. In fact, as the finance minister, as a member of the GST council and as the descendant of a family and a movement and a party that has been for federalism, I could not agree more that actually a lot of the implementation needs to and can only happen at the local bodies, up to the districts and up to the state. While we certainly need national policies on things like EVs or cross-border trade-related to certain incentives for environmentally preferred products or services or assets, the bulk of the work needs to be done at the state district and local body levels. The additional point being that the diversity is so vast between states, between the development of states, between the needs of states that really not only is it the question of being able to learn from each other but it is a question of being able to move at the pace we need to rather than as in many fields be held back by a 'One Nation One X' kind of policy.

I will just pick up on the point that Minister Thackeray meant. I had already made a comment earlier that if India is going to get to net zero by 2070, then a state like Tamil Nadu, again needs to get there no later than 2050 for it to be a realistic outcome for the rest of India because we are so far ahead of the average in per capita income, per capita consumption, in education levels, and growth and so forth. So just to give you some of the things we are working on - as you may already know we are one of the highest percentages of green energy states in the country today our ambition is to keep expanding on that. We are blessed with both good wind energy and good solar potential which, of course, the downside is that they are both highly volatile, both seasonally and during the day, so we have to look for backup sources.

One of the things we are focused on a lot now is to come up with using reverse hydro for storage during the times when we have excess wind and solar. Because according to the government of India's estimation, we have already used 100 percent of our hydro potential. In fact, we are producing more two thousand megawatts which is more than the potential the union government has identified. But we can certainly use it as storage. The offshore wind plus wave energy options also seems exciting - we have been talking to a lot of global pioneers around that. We think we will be one of the early adopters given the the length of our coastline. During the budget we presented last year after our government came to power, we talked about environment in three or four different ways - we talked about designating and achieving blue flag status for a certain number of beaches, increasing wetland areas and spending for that. In the cabinet discussions and in the chief minister's discussion we have talked about coming up with an ecologically friendly and viable mining policy with the use of technology and regeneration for certain types of minerals or sand.

We have, in some ways, a unique situation. I mean everybody is unique but we are unique in one particular aspect, which is that not only are we one of the three or four large high- GDP, high- per capita GDP states, we have a relatively much lower GINI coefficient. We have much less inequality than the other large rich states of Karnataka, Gujarat and Maharashtra. What that does for us is it increases the per capita consumption quite a bit. So, one of our biggest problems really is handling waste because we have such high per capita consumption and because it is so easy these days to get pre-packaged things from 1 rupee 5 rupees onwards on every kind of product, the volume of waste we have to handle per capita, especially because we are also the most urbanized state. We are almost 50 percent urban which is much higher than the Indian average. So, we have these unique problems - of lack of proper infrastructure,

both for supplying adequate resources like drinking water, but also for taking out waste like sewage and garbage. So, we have had to be very innovative and then look forward for sewage treatment plants and mining waste for kind of fuel generation. I am glad to say that in the last year we have looked at multiple options both of recovery from landfills as well as reducing the landfill deposit rate. We are also trying our best to implement green building codes for the large cities, where we are able to easily enforce these codes. It is much harder to do in a widespread rural area but because we have a lot of large cities, it is a bit easier to enforce a code through the cooperation, and then a green industry model with green growth.

One of the things we realize is that we need to take a holistic approach as has been mentioned again by my colleague who spoke earlier. I will just give you the classic example of that. Because of volatility in the weather caused by climate change this year was another year when we had massive rains in fact by quantum more than the rates, we received in the 2015 December period which led to the massive flooding and all these things. Though the infrastructure had only progressed a little bit we were able to manage a lot better because of active planning, active management, and active kind of decision delegation down to local levels and so forth. But even there, we ran into a unique situation where for example in my home district of Madurai, the official record showed less than average rainfall – marginally less than average rainfall for the month of November, but in fact multiple times we had flood alerts in the district, because the rivers where the rainfall happened flow through Madurai to the sea. So, this need for a comprehensive approach is also very important.

I would just echo also my colleague's statement about the need for cooperation across states for measuring ourselves not just on per capita GDP growth but also the quality of life – this is something very close to the Dravidian Movement that I am a descendant of. Back in 2016 at the centenary of the movement, I said maybe we need to set goals for what is a life with dignity; what is it that we provide to our citizens as a life with dignity with adequate resources with a healthy environment, with safety around them and so forth. We are quite far away from that even in Tamil Nadu and definitely at the Indian average. But I would go one step further and I would say that we need such a council of states – the GST council is a poor example for various reasons – but we need a council of states as was envisioned in the Constitution and has not been in practice for the last few years because political parties come and go and sometimes party A is in power and sometimes party B is running the government.

But what we need is an apolitical council of states to discuss many things including environmental issues, and policies and learnings from each other and test cases and case studies and examples and so forth. So broadly as a federalist, as an ardent supporter of delegation and evolution, as somebody who comes from what we call the self-respect movement who sees self-determination and self-governance, local self-governance as the natural extension of self-respect, then all of these things resonate with me and I echo my colleagues comments and I firmly believe that the only way to succeed from here in achieving any of these goals is the sub-national and the sub-state level, this needs to be implemented in every village, in every village union, in every district, in every state, and it requires the kind of localization, customization and acculturation that can only happen through communities that are integrated and lived with each other. It cannot happen thrust down from somebody onto somebody else.

Thank you.

Ministerial Address

Mr James K Sangma, Hon'ble Cabinet Minister for Forests and Environment, Government of Meghalaya

I am really deeply honoured to be sharing my thoughts here amongst such distinguished guests today and what I have just heard my esteemed colleagues speak about it is really something that I also, along with the Honourable Minister from Tamil Nadu, would like to echo the same thoughts that, yes, it is the need of the hour to have a concerted effort, all the states come together and put aside their differences and work collectively.

I represent a very small state, it is a tribal state called Meghalaya, which is one of the unique biotic regimes in the world. Along with Arunachal Pradesh, we formulate one of the biggest carbon sinks for India which is crucial for our country to honour the pledges made at the Paris Accord and for realizing its global environment commitments. In fact, the entire northeast block represents a unique ecological hotspot that performs various essential and critical ecosystem services for the nation. We, as a state, we are a forest economy with about 76 percent of our land under forest cover and we are significantly different from the rest of the nation geographically. Our natural and environmental capital is the most significant wealth that should actually be dictating our development and growth doctrine of the future and this should not be done by conventional economic models. Because of our fragile natural capital, we are also at the front lines of climate change a reality that is unspooling in our land right now. Officially we have entered an uncharted territory and we, as humans are right now finding ourselves directly in the assault line of Mother Nature. Because of

our unique and ecological status, states like Meghalaya we cannot afford to have a nature negative industrial growth and we all need to re-attune, reconfigure our economic and social mindset to green our economies.

About eight months ago, in my personal post-COVID reckoning, when I saw the current economic doctrines collapse and amidst the clamor of not business as usual and building a better world, I sat down with some global and local experts to create a climate risk and adaptation atlas. I realized then that whether we like it or not the environment is still lingering on the ideological and regulatory fringes of our polity but I want to pole vault it to the forefront of political economy. In fact, make it a significant political and economic frontier. During this time, we also realized that there is this seething gap in the climate change realities of different geographies. Climate change and environment risk reality is extremely hyper localized and the case of violence, deprivation and degradation that is associated with it is of a different kind in different geographies.

As David Wallace Wells, one of my favorite authors, as he puts it, “climate change is not a discrete clue at the scene of the crime, not one hurricane, one flash flood at a time, it is a global conspiracy hiding in our decreasing crop yields, hunger starvation events and mounting malnutrition patterns, migrations, economic systems, increasing public health risks, and domestic violence, and civic unrest.” These are all what we as states have to deal with in the aftermath of the unraveling reality of climate change. Add to it the cost of freak natural disasters which Mr Thackeray was mentioning about, that are now becoming something of a quotidian reality. India lost USD 87 billion approximately last year and the annual bill of 2021 is still to come in. All of these issues that I just stated, make a compelling case for sub-national dynamics and frameworks, and more significantly, under unorthodox alliances for geographies which Mr Aditya Thackeray also was mentioning in line. This is for us to bolster and augment our fight against climate change.

Yes, there is a very clearly defined global and national climate agenda but the global and national has to meet the local here. In fact, I want to go further and put my submission on this forum that it is states like us that can act as eco laboratories and become world-class case studies to further inform the national climate agenda with our local and innovative climate governance and practices. We can be part of India’s voice and help cement the environment and climate leadership status in the world. In essence, sub-national diplomacy can actually drive the climate action and green growth agenda of the country, I really truly believe that.

I would like to just spell out a few of the things that in the last eight months of our lives, where we have gone back to the drawing board and evolved a sub-national framework for our forest economies, like us who have to deal with the moral imperative of preserving their environment and also at the same time subscribing to the seductive economics of infinite growth. The environment state – this is an idea which I envisioned and that advocates an environment-first economic and social model for the Indo-Himalayan region, which is, in my view, a new economic and development paradigm.

So, what does an environment state mean? So, what basically it means that we need to innovate and be and be the first in the world to integrate nature in all aspects of development and growth activities and the north-eastern region can be a unique green laboratory in the world. In fact, Meghalaya aspires to be a leader to create a green block or forest economy coalition committed to finding solutions to fast depleting natural assets. We are experimenting boldly, I must say, with our sub-national innovations that could be replicable or replicated by forest economies like us in the world. We are creating a unique biodiversity heat map to assess and inventorize our biodiversity capital. We are using a nature-based solution in the form of a unique combination of algae that has showed us stellar results in cleaning up our acid mine drainage affected river. We are evolving a major bank concept and creating a mini carbon market. We are also looking at sister partnerships to trade our carbon stock in our forest with the emission-high states that are there in the rest of the country, and businesses that are moving towards the ESG framework. We are also preparing a unique climate emergency framework, creating bio patents for our living root bridges, evolving the forest first experiences in our national parks, training our youth to be forest therapists and building a climate change museum. Apart from that, we are also creating a unique livelihood framework to look at green jobs that are closely linked with conservation, preservation and restoration of nature.

So why not there be a return of investment on preserving our nature. We have seen in our state where we have our pineapples which will be made into vegan leather. So, through this, we are looking at the potential of how we can monetize our assets, and we are looking at the potential of also algal farming which why I was mentioning about how we use it to clean our rivers, also about farming those same algae, and also redefining the ecotourism frameworks for the state. Through all this, can Meghalaya leave the region to become an active climate action zone or a green Silicon Valley and become a coveted global case study for India? I think so, yes. The market for climate solutions I am told is a few trillion dollars and this unique economic model plus political consensus what I believe can attract global technologies industries and businesses to flock to the northeast region. So, this is what the annual calendar of our

climate governance experimentation and innovation in our eco laboratory looks like for Meghalaya. We want the Indo-Himalayan region to commit to this economic and social paradigm of environment, state and form a coalition to not just fight climate change but bring the environment at the economic, social and political forefront and prototype the core idea of nature's well-being. These, I think, sub-national frameworks, innovations and unorthodox alliances can create a decentralization of global and national climate agendas, which is critical for us to restore our nature and preserve the fast-depleting natural resources.

Thank you.

Special Address

Mr Atul Bagai, Country Director – India, United Nations Environment Programme

Thank you, sir. It has been very exciting half an hour listening to three state governments about their plans and it certainly highlights the fact that the sub-national efforts are needed so strongly to actually achieve the targets that are being committed at the international level. I will not get into the theoretic of green economy or its impact and what it can do, but I will just try to cite three examples and I see three rock stars who are sitting here with whom we are working to give very practical examples of why action needs to be taken now at the sub-national level.

One certainly big gap is that the Nationally Determined Contributions (NDC) is, for example just taking one international target, are at the central level or at the pan-India level, but the gap is that how do state governments, industry, civil society or what percentage of their work is going to contribute to the national target. I think that kind of a study needs to be done and that kind of an assessment needs to be done very quickly. But coming down to the action at the state government level, meaning it is so heartening to listen to the young rock star from Maharashtra, the minister there and Maharashtra being an industrial state with rich and diverse culture is certainly taking a lead on, as the minister said of a possible 2040 net zero target achievement they certainly have received many international awards for the kind of work they are doing, and the state has also joined the UN race to zero initiative, and joined the C-40 cities initiative also to address climate change. We were very happy to be signing a MoU with Maharashtra just two weeks back to assist Maharashtra in moving ahead on the agenda of reducing its environmental and carbon footprints and I think, this shows one example of how a very industrial state which is also the financial capital can take the initiative to move forward. I think these kinds of actions are showcase as good practices and good models which the other states can replicate.

I would not hesitate to mention and I see Deepak, the other rock star sitting here to say that, the state of Bihar really took the lead two years back when the Chief Minister announced a carbon neutral strategy by 2040 and they approached UNEP to assist them with developing that strategy. I think not many states were thinking at that time also because at the national level also, there was a lot of discussion going on at that time of whether India should commit to a carbon neutral target by a certain date or we should not look at it right now. But Bihar was the state and Deepak was instrumental in taking it forward of developing a climate resilient and low carbon development pathway by 2040. I agree with all the three that for the national target of 2070 has to be met, some of the leading states need to commit their achievement of targets by 2040 or 2050 because it will then assist the other states who are lagging behind to understand from their action and their achievements of what are the best lessons to be taken forward. I would also like to mention here that Bihar and Orissa are already taking a lead in green budgeting and that that certainly is a very commendable step and I think very soon all the states and UTs of India would need to really look at green budgeting in a big way.

My third example is of what can happen at a district level and we are very encouraged by the step that Angul district in Orissa has taken to develop a district level roadmap on inclusive green economy. This is probably one of the first districts to be taking that step and I really applaud the District Magistrate there for taking this step forward and we now have at least 20 partners who are coming together to assist Angul district on this very innovative venture and Angul being one of the more industrial states, the mining state, the vulnerable tribal society – it has all the areas which need addressing at a district level and we are very happy that such kind of sub-national activities have started and I think this will show the path on moving forward to meet the admissions.

Thank you.

Special Address

Mr Dipak Kumar Singh, Principal Secretary, Environment, Forest, and Climate Change Department, Government of Bihar

The topic of discussion is very apt because I believe that any global sustainable development strategy for being successful has to percolate not only up to the lowest levels of governance, as the Hon'ble Minister from Tamil Nadu

also mentioned but also up to the common man. Hence it is imperative that the strategy which we build which we think about has to be broken into action points which are intelligible and actionable for every level of government as well as for each and every individual citizen, which can be practiced at their individual level. Because the green growth which we talk about is not only a government policy issue it is not only a government level strategy issue but it is actually an issue of realigning the way of life of each and every person of the common citizen.

Now as Mr Atul Bagai also mentioned that we are at the forefront of adopting a green growth strategy. In fact our current Hon'ble Chief Minister Nitish Kumar is very much concerned for the environment and he has been at the forefront. We had prepared and we are following an agricultural roadmap since the year 2008, and since 2012 when the second Krishi roadmap or the agriculture roadmap was prepared, then specifically there was one action which was called Hariyali Mission or the greening mission which was aimed at increasing the green cover. It was started in 2012, because Bihar as a state, after the bifurcation of the state of Jharkhand, had very less natural forest – we just have around seven percent of forest area, which is under natural forest. So, we had to adopt a different strategy where we can take the plantation outside the forest area to the farmers in the in the form of agroforestry, and to the common areas, linear plantation like on the river bunds, on the canal embankments and on the roadside so that we started since 2012, which has now started giving its results.

The second major step was a campaign called *Jal Jeevan Hariyali*, that is, water, life and greenery which was started since 2019, and the name was specifically given by the Hon'ble Chief minister and he said that, he has kept left in between because without water and greenery, any form of life, not only human life but any form of life is not possible that is why he named the campaign as water, life and greenery campaign, that is *Jal Jeevan Hariyali* campaign. Mr Bagai already mentioned green budget we have started since the year 2021 and the same year, 2021 we signed a MoU with UNEP for developing a low carbon pathway. That time we did not use the word net zero. In fact, we wanted to achieve that by 2040 but we did not use that word because as there was certain apprehension and certain reservations at the level of the central government of for using that word. So, we did not actually use the word net zero but that was our target and we have planned it for 2040 and we are in the process of developing that strategy.

Now there are several challenges which I feel is there in achieving an inclusive and sustainable development. The first thing which I feel is that sustainability when we call about sustainable development it has to be primarily based on the three pillars of reduce, reuse, and recycle. Now the first contradiction which arises is from the aggressive consumerism which is propagated by the current neoliberal development philosophy because this philosophy seeks to boost economic growth through higher consumption. As a strategy, it shortens the life of consumer goods so as to increase the frequency of replacement and it also dissuades reduce and reuse. We can see from our own homes only that the common gadgets which we used for a very long time how their life has been shortened and hardly they are repaired or they can be reused.

Recycling, the third pillar, in any case, it is not a universal solution nor it is always cost effective. So the currently prevalent development philosophy, I feel, in itself, carries an inherent contradiction to the sustainable use of resources. Second point is that the inclusivity. Now, inclusivity also seems difficult to achieve in the current development strategy because as we see it is continuously increasing the hiatus between the rich and the poor; between those holding financial, intellectual capital and technology on the one hand, and a large mass which is just dependent on selling their physical labour.

During the time of COVID, when we talked about economic depression and lot of people lost their jobs, lost their livelihoods but even during that time, the total cumulative wealth of the top 1%, 2% or even 10% of the population increased. So, the current development strategy has some inherent fallacies which we have to understand and analyse. Thirdly, the technological revolution which we call by various names industry 4.0, AI era, and virtual reality - they have created an impression of invincibility and super dominance of humans over nature and this has also accelerated the exploitation of nature and natural resources. We have to appreciate that with all the technological developments, the nature and natural resources cannot be recreated. I was very happy to listen to the hon'ble minister from Meghalaya when we talked about that. In fact, I feel very pathetic when some of the serene forests of India are destroyed for so-called development. What we are actually doing is under the garb of action for mitigation, the unbridled exploitation of natural resources that we are doing, that has to be stopped because sustainability can be achieved only by aligning our growth strategy with the nature and in this, I completely agree with the Hon'ble Minister from Meghalaya which he talked about. It cannot happen by first destroying the nature and then adopting a mitigation strategy. The approach should be to mainstream the environmental concerns in the policy so that there is minimum or negligible harm to nature.

Finally, I will just add one more thing that the new alternatives which we are now practicing or which we are now being told to adopt for the green growth, in that also there should be a word of caution it should not be pushed in a

hurry without adequate research and development on their environmental cost itself, because there may be some immediate gain but we have to see the long-term impact. When plastic was introduced, it was also called as something else like a miracle because it solved many problems, but now we are facing difficulty of how that plastic has created the difficulty in the long run. Similarly, whatever we are introducing now whether it is EV, whether it is solar, we have to see the long term – the equipment which we are using, how they will be recycled and how they will be disposed. That thing has to be thought also and that thing must also be given an adequate research and development. I also feel that whenever we talk about green growth, then a myth is there that the green is always costlier than the business as usual or it is going to be costlier than the business as usual, or that it will be disruptive. I think this should be assessed impartially based on evidence and we should not just go by the assumption that whenever it is we are going green it is going to be costlier than what we are doing now.

Thank you very much!

Special Address

Mr Shantanu Gotmare, Commissioner & Secretary, Government of Assam

Thank you so much sir. Honorable ministers from the states of Maharashtra, Tamil Nadu and Meghalaya, the other esteemed invitees here as well as the other panellists. It is a privilege to be present in this ministerial plenary on the green growth. Because I have worked in the sector, the way I understand green growth is that there are two aspects to it. One is, of course, the aspect of the climate change which is the growth with sustainability, but it also means that the benefits of the growth have to be widespread which means there have to be the inclusivity as well. If we look at that, in that sense then there are various approaches, that at the sub-national level, even the states can take. There are certain things which, even from the national level, has to flow. One of the concrete examples, in the regulatory aspect, till now we do not have the proper inclusion of the use of alternative materials in the construction sector. Many of the PWDs in the states, they are still using the old technologies and there is not enough space which is available for using the alternative materials, and one of the things because of which this is happening is because there is no standardization and there are no scales. So, if the states can formulate the strategies for inclusion of the alternative material, for example, the construction waste or even whenever we are doing for example the ram filling of a particular flyover. If instead of the virgin earth if the recycled materials could be used, such alternative approaches could go well in doing things.

The second thing is about the innovation. For example, I come from Maharashtra originally, and we had worked with MSRDC there, in my previous organization, to actually look at the intersections, to have the large solar panels on the MSRDC intersections, and we could find out that even without having more land to be acquired, nearly 200 plus megawatt potential could be designed even within the MSRDC's existing pathways. So, which means that if we can marry the existing infrastructure with the innovative things then there is one more approach wherein you can generate the revenue from the existing infrastructure.

The third thing is about finance and in which I agree with hon'ble ministers from Maharashtra as well as Tamil Nadu that there has to be a tweak at the two levels. Firstly, even within the GST, there is no component which goes for, let us say, the green industries or which goes for the greening of different sectors. So probably one is the either a council of states approach or a combined trust by the states to have some additional incentive for going green, even in the Finance Commission or in the GST. The second would be the green financing norms by the RBI, by which the states borrow from the RBI, if there could be some concessional loans that could be made available to the states for either the multiple states which are at the higher level of industrialization for either greening the existing industrial estates or even for incentivizing green industries, for somebody who is already industrialized and somebody who is low industrialized such as my cadre, which is Assam and Meghalaya, to actually maintain their greenery, so that pools into the nationwide thing, then it could be much more beneficial because we have a financial incentive also to go with it.

The last one in terms of regulatory, finance, and technology, the last one is the mass awareness about the way the things are consumed, the demand for the things which are sustainable. To that extent, there are many experiments which are being done around the world which could be replicated. For example, the reusable containers which are getting introduced in Japan, the container itself you can put it back to the shop and only the stuff which is inside that you can take it and consume it. So today, for example, if I take a 500 ml shampoo bottle, there is no way that I can return the shampoo bottle and utilize only the shampoo. So, something of that sort wherein reusable containers could be brought in. Such things which are innovation which are sort of the mass awareness for the items of mass consumption that is something which will also go in a big way in terms of pushing the states or pushing the markets towards going green.

I believe that the green industries or the climate resilient industries are becoming now more and more mainstream. One classic example is that many Indian states are now pushing for Tesla to come and set up their factories in their own states but the in-house example or the within the country example is that two biggest industrial houses of this country have now set up very ambitious goals to come into the production of the green industries - the solar, the wind and others. So, these are the things which tell us that even the market, even the big industrial houses now are looking at these sustainable things as something which is viable commercially as well.

One of the beautiful thoughts I think that Bagai sir from UNEP gave is that can we have sub national voluntary carbon targets just like we have the international carbon targets can we have the sub national voluntary carbon targets so that within that space the states themselves and it can start with few big states, it can start with the smaller states whichever way it is but I believe the movement has to start where in the states themselves start saying that this is what i would like to have, because in the end green growth is a pathway and it is a pathway which it may start today, but over a period of time, over the generations it would lead to sustainability, it would lead to the low destruction of this earth – there is definitely going to be some destruction we cannot prevent it – but at least net if it becomes something which is zero and then it gets reverted – that is something which would be really something to look forward to.

That all from my side sir and I thank you once again TERI for giving this opportunity to participate in this session.

Summary by Moderators

The key takeaway is a forum for the states to interact through a council whether it is for environment alone or sustainability or whatever.

The other key takeaway is of course India's diversity and the enormous space for states to be creative in their own ways and others to learn from them, from each other.

The biggest takeaway is the heightened level of mission, we could really look at the net zero by 2047 is the thought that occurred to me, so I reiterate that.

And also, to look at other issues which have been thrown up, so for instance waste management is really going to be a major challenge, so how do we handle that and stay ahead of the curve? How do we get industry to be straight ahead in the curve and how do we get green growth as a central prism for budgeting and making the hard choices that every state government has to make as it tries to cope with the enormous challenges that India and has each state has.