

अलग-अलग योजनाएं बनाई जाती हैं और इनके लिए पर्याप्त धनराशि की व्यवस्था भी की गई है। जहाँ तक माननीय सदस्य द्वारा स्पेसिफिक राशि पूछे जाने का प्रश्न है, तो मैं उसके तथ्य संज्ञान में लेकर आप तक पहुंचा दूंगा।

**श्रीमती कान्ता कर्दम :** उपसभापति जी, मैं माननीय मंत्री जी से पूछना चाहती हूँ कि क्या सरकार का देश में वन क्षेत्र के विस्तार के लिए कोई नये प्रयास करने का प्रस्ताव है?

MR. DEPUTY CHAIRMAN: The House stands adjourned till 2.00 pm.

*[Answers to Starred and Un-starred Questions (Both in English and Hindi) are available as Part - I to this Debate, published electronically on the Rajya Sabha website under the link <https://rajasabha.nic.in/Debates/OfficialDebatesDateWise>]*

*The House then adjourned for lunch at one of the clock.*

*The House reassembled after lunch at two of the clock,*

MR. DEPUTY CHAIRMAN *in the Chair.*

### SHORT DURATION DISCUSSION

#### **Serious effects of global warming and the need for remedial steps to tackle it**

MR. DEPUTY CHAIRMAN: Shri Tiruchi Siva, Shri Pramod Tiwari and Shri Sandosh Kumar P, to raise a Discussion on the serious effects of global warming and the need for remedial steps to tackle it.

SHRI TIRUCHI SIVA (Tamil Nadu): Mr. Deputy Chairman, Sir, I thank you personally for having given me an opportunity to initiate a very important discussion. I also thank the Government for having taken up the Short Duration Discussion which we have been asking for long. We have chosen the subject of global warming and climate change which is threatening the entire world, at large. The learned Minister is here. He is making very serious and sincere effort; I appreciate him. I just don't want to make this debate as another debate like COP conferences and other conferences across the globe, which have resulted in nothing. I want this debate, at least, to come to some concrete results to address the prevailing issue of climate change. So, I think, it would be a very healthy discussion because we all have a concern about the

future and the present too. What is looming over our head is very alarming and threatening. I feel that it is not the responsibility of only the Union Government; it is also of the State Governments; it is also of the private sector; it is also of the civil society, yourself, myself and everyone in the country.

Global warming is the contributory factor for climate change. Climate change is the change in temperature, humidity, air, wind and precipitation factors. Global warming is a phenomenon which is very natural in nature. The earth by itself produces some Green House Gases like carbon dioxide, nitrous oxide and methane. It is a process of the earth. When animals and plants decay, they emit gases and the plants absorb them. So, it is a natural process. The emission of these Green Houses Gases is very necessary to trap the sunlight. If it were not so, the earth would become an ice planet; it would get frozen. These Green House Gases trapped the sunlight and protected the earth so far. As long as men didn't intervene, nature was protecting itself and the lives also. When men started emitting Green House Gases, which was exorbitant, it increased the temperature on the earth which also led to rise in sea level and other things. Everyone knows it; I don't want to give any data or the statistics or the reasons or the causes. Yes, of course, we should see the cause, the effect and the responsibility. We alone are not the cause; the whole world is the cause for it. But the effect upon us is more. India will be the seventh country to be affected because of this climate change. Everyone has to take remedial measures. COP-27, as was expected again, after many such meetings, resulted in nothing. At last, it came out with the intention to create a corpus fund of around 100 billion US dollars for the developing countries to face the climate change. I do not know how far it will help. Our Environment Minister has evolved some strategy. He is working on it. I am from the State of Tamil Nadu and I should say that we have our own responsibility. The target of the Union Government is that by 2070, there will be zero carbon emission. Am I right? It is around 50 years from now. But I am scared for 2040. What was the situation in 2000 and what it is in 2020? We can see the variations. The threat has increased. The alarm bell is ringing like anything. I don't think that we can wait for 50 years. So, I think the measures have to be very urgent and very immediate.

The Tamil Nadu Government has evolved some policies. Our Chief Minister, Mr. Stalin, has announced that we would achieve zero carbon emission even before 2070. By 2030, fifty per cent of our electricity generation will be from the renewable energy sources. For that, he has not just stopped with an announcement. We have started solar projects with an investment of Rs.70,000 crores. So, it should not just be with words. We have got some other schemes also. I am very happy to mention these steps, and other States can also follow that, and, I hope, the Union Minister will

appreciate these. We have got Tamil Nadu Climate Change Mission, Green Tamil Nadu Mission, Tamil Nadu Wetlands Mission. In addition, we have also established a Special Purpose Vehicle, called Tamil Nadu Green Climate Company. Tamil Nadu has got a coastline of 1,076 kilometres and we have started afforestation and we are growing mangroves. So, we don't just stop at expressing our concern, or, pointing fingers at others, as is done in the international conferences. Everyone points fingers at the developed countries and says that these countries are responsible for climate change. That does not solve the problem. Everyone has got the responsibility.

We are going to leave our generations to live. We may leave them with education. We may leave them with property. We may leave them with many other things, but will they have water to drink, will they have air to breathe, or, even food to eat? This is a very big question. I imagine that. Maybe it is not hallucination. It is, of course, waiting to happen. It is real. The sea level, which is rising, will take in many of the coastlines. And, scientists say that in 2040, the blue will mean only the sea and not the sky, and you will have to get into a boat, and reach to some point because you will have no place to live. We see today that the rivers are becoming dead. Forests are disappearing. Peasants are displacing and the sky is small. All this is alarming. What can we do? I say for the Governments. I say for the individuals, including Agrawalji. He said, when I was flying...*(Interruptions)*... We have to see the reasons. The sun scorches Rajasthan, Uttar Pradesh and New Delhi, and there are frequent floods in Southern India, that too in Tamil Nadu, and the recent one was the cyclone. It is, of course, very certain that frequent cyclones will be there. There will be more droughts. Fertile lands will turn into dry lands. So, where will we go for food? There is one question, for which two answers are there. What will be the future of the world after 20 years? The first reply is that the world will be ruled by Artificial Intelligence. Robots will be doing everything. Man will be comfortable with only luxuries. Sentiments and relationships would have all gone. That is different. India will become a supernatural power and economic power. Everything will be there. The other part is: how many species will be extinct? What will be the life of the living beings? Already, it is said that 200 species get extinct per day, and it is said that after 10 years, 10,000 species will be extinct, not numbers, but 10,000 species will be extinct, and human life will also be included later by and by. So, this one question remains as to what will happen after 20 years. We are living in a utopia that we will be having Artificial Intelligence. We are educated; we are rich; we have money. But, where will we go for food? We cannot eat money. I am bothered about it. After 20 or 25 years, we may not be there but our generations will be there. What are we going to leave for them? Sir, this is very, very serious issue. That is why, I said, everyone

has a responsibility. Let me share yesterday's incident. I took a flight from Chennai to Delhi. In the Business Class, before serving the meal, they spread a towel on the table, and, the material of the cloth was quite thick. I said that I did not want that towel. She asked for the reason. I replied, firstly, because the table was clean and secondly, without being used and soiled, she would put that in the bin for washing, which will definitely consume water and detergent. So, for no reason, I am going to waste water and detergent. Sir, do you know what the passenger sitting next to me did? Although the air hostess appreciated me but that passenger looked at me strangely as if I was not having proper etiquettes or something like that. We live in a false world. What are all these things?

Sir, when we go to a marriage or function, as we all are considered to be important persons, we are offered water in a pet bottle. We drink a little bit from that and leave it there. One can find many bottles lying there in such functions. Water is also wasted. What do I do? I see nothing wrong in sharing this. I am happy to share that. I also tell this to students of schools and colleges whenever I get the opportunity to address them. Sir, I carry my bottle along with me. As a result, I do two things. Firstly, I save water, and, secondly, I do not dump plastic in a particular place. We see whales found dead in the sea with tonnes of plastic in their stomach. Similar is the case with elephants in forests.

Let me tell you about an incident which happened a month ago. Everyone knows that Mettur Dam, which is a very big dam in Tamil Nadu, which caters to the needs of irrigation and drinking water. Just near Mettur Dam, it was thirty seconds news on television; ten tonnes of fish were dead and floating for no reason. Nobody followed it, nobody bothered about it. Sir, I have a request to the Minister. It is not only your responsibility. We understand that. It is not a blame game that you are not doing this or that. We may have some reservations. That is a different issue. Here, I am discussing a very important issue with concern with responsibility. That is why, I said that this debate should have an outcome not in the COP-27 but today in Rajya Sabha, we should come up with a concrete idea and with a concrete scheme. Then only, this debate will be a useful debate.

You have to coordinate with other Ministers. You have to coordinate with the Minister for Agriculture. The fertilizers that are used in agriculture produce more nitrous-oxide, and, therefore, we have to return to the organic farming. You have to coordinate with the Minister of Urban Development. Constructions should not come up on drainages or on watersheds. You have to coordinate with Industries Minister. Methane is 21 times potent than carbondioxide. Sir, in California, recently, there was a leakage in a methane storage. It was nearly five billion cubic feet, which is

equivalent to the emission of six lakh vehicles per day. They took three months to control that. Today morning, the Minister for Science and Technology was replying that a nuclear project in Tamil Nadu. ...*(Interruptions)*... Kudankulam and Kalpakkam. When someone raised the apprehension and asked about the plans for the nuclear waste. He said that they had not experienced any leakage so far. What is this, Sir? You do not have to find a solution after having met with an accident? You have to be well prepared to stop that accident?

Sir, we talk about producing more renewable energy or solar power and all that. Tamil Nadu is potent with wind power. The quantity of power generated through nuclear power in India is equivalent to the wind power generated in Tamil Nadu. You have to think about all these things. So many States are there. Rajasthan is there, Gujarat is there. Solar power is concentrated there. In spite of that, our Government is attempting to increase nuclear power by three times in the coming years. You may generate power because we are going to substitute electrical vehicles in place of fossil fuel vehicles. But when the nuclear project has come in, the big question before us, rather the apprehension before us, a genuine apprehension, is what you are going to do with the nuclear waste. We cannot think about what can happen to the world with toxic things from the nuclear waste. We still think of what happened in Bhopal. It is not a nuclear one. But we still remember the Bhopal tragedy. What happened in Chernobyl in Russia? So, diversified activities must be sensible and practically possible. We should not harm the human generation in future. Just fulfilling the present needs is not the issue. We should have foresightedness. We should look into the future. What would happen in future? Sir, India is the third ...*(Interruptions)*...

**श्री उपसभापति :** यहाँ बहुत गम्भीर चर्चा चल रही है। कृपया ध्यान रखें कि किसी का मोबाइल नहीं बजे। ...*(व्यवधान)*... प्लीज़। ...*(व्यवधान)*...

**SHRI TIRUCHI SIVA:** Sir, the emission of greenhouse gases ...*(Interruptions)*...

**MR. DEPUTY CHAIRMAN:** Siva ji, please speak. ...*(Interruptions)*...

**SHRI TIRUCHI SIVA:** The emission of greenhouse gases by 10 countries amounts to two-thirds of the whole world's emission. Surprising! The UN has got hundreds of countries. We say there are two hundred countries; some are unknown here and there. But 10 countries contribute to two-thirds of the total emission, and we stand at third place. China is at number one. It emits 10.6 gigatonnes. Two years ago, it was

9.8 gigatonnes and now it is 10.6. United States emits 4.7 gigatonnes. India was 2.3 tonnes and now it is 2.8 gigatonnes. So, Sir, I think it is high time we have to think about it. Ten countries are going to raise question about the lives of the whole human community in the world. Obama said that there is no other threat going to be for the future generation except climate change, and his successor said that it was only a hoax. That is not within our purview. But they have contributed more. They are not able to be stopped. We are also doing it. That is why I initially said that it is not only the responsibility of the Union Government; it is also our responsibility, the responsibility of every individual, civil society, even organizations in the private sector. I think the Civil Aviation Ministry could issue a circular that onboard and everywhere, pet bottles should be avoided. This sort of wasting towels and other formalities should be stopped. It is a very small thing but it can contribute a lot. We need water. Now itself, we are suffering. I think the Minister is very serious. He has evolved many things, but I have something to bring to his knowledge. We have concerns about the Environment Ministry's recent EIA notification. The Environment Protection Act, the Water Act, the Forest Conservation Act, the Bio Diversity Act, all these will result in degradation of forests. We need forests. Only the protection and extending the forests will save the nation, save the world, save the humans. That is what I said at the outset itself. Whatever gas emission is emitted was absorbed by the plants but now forests are not there. Forests are disappearing. Glaciers are melting. Ice sheets are going off. Sir, the Minister is well-informed and he would accept that there were 10 things that were absorbing the heat waves. Out of them, 4 have already been exhausted. And when the rest are also exhausted, I don't want to say what will happen. ...*(Interruptions)*... Again, I say, Sir, we are all here with responsibility, every one of us. We should think about our future generation. What are we going to leave for them? Not just education. Not just properties. ...*(Interruptions)*... Please. This is what we are. When we say responsibility, the responsibility lies not just with the Members of Parliament. When we ourselves lack it, what would the common man do who is not literate or who is not aware of what lies before us?

Sir, while participating in this discussion, I am really trembling. Because I think above myself; I think about others. I talk like that. My State is known for social justice. Also, my Government, headed by our Leader, is striving for environmental justice. That is why our coastline, the stretch of 1,067 km, is being afforested. I think when he comes to know about it, he would appreciate that. These are very, very important and minute things which I would like to highlight. I now leave it for the rest of the Members to share their views.



Sir, very importantly, we need stronger guidelines from the Ministry, because we are afraid many States would suffer more droughts and frequent hurricanes and cyclones would befall in the coming days and sea would encroach into the city where we are living. These are not just statistics. This is not just imagination or hallucination. It is about the lives of our future. Every single thing worth living has disappeared into thin air and all we can do is this. As I said, a big part of climate action lies in protecting and expanding forest coverage. I just don't want to conclude my speech with a pessimistic note. My concern is the serious effects that it would bring on us. I would like to give a few suggestions. I told you what I do at marriage halls, what I do on flight and wherever I go. On the way, if I see a tap leaking, I would go and stop that. I will stop my car. Either I will go or ask the person accompanying me to stop that because I know how precious water is. Earlier water was available at the depth of 40 feet. Now it has gone down to 800 feet. More crops in a single farm. We have to concentrate on such things. I requested the Minister that he has to coordinate with all the Ministers. He has a very big responsibility. He is not just the Cabinet Minister holding one portfolio. It involves the future lives of the human beings, future of the nation and the world.

Apart from going and participating in global summits, we have to do something. We need to expand forest coverage. Regulations need to be tightened and enforced to ensure forest protection while acquiring land for public projects. To drive climate action, we need to consider climate catastrophes as largely man made.

Sir, I leave it to the wisdom of my colleagues and I expect the Minister to give a concrete reply. I think I have initiated a very, very important discussion today in this august House. As I said, Sir, let it not conclude like the other recent summit -- COP-27. Today, let us come up with a concrete solution. Thank you very much, Sir.

MR. DEPUTY CHAIRMAN: Thank you, Tiruchi Siva ji, for speaking from the core of your heart. You have initiated very nicely. It is a very serious subject related with the future of human kind and planet.

**सुश्री कविता पाटीदार (मध्य प्रदेश) :** माननीय उपसभापति महोदय, चर्चा में भाग लेने का यह मेरा पहला अवसर है, तो शायद यह मेरी मेडन स्पीच होगी। ग्लोबल वार्मिंग एक महत्वपूर्ण विषय है। यह चर्चा ग्लोबल वार्मिंग और जलवायु परिवर्तन के कारण बढ़ते जोखिमों और उसके आर्थिक परिदृश्य पर तो प्रकाश डालेगी ही, साथ ही जोखिम को कम करने के लिए उपलब्ध नीतिगत विकल्पों से भी पर्दा जरूर खोलेगी। हम आज देख रहे हैं कि पृथ्वी के ध्रुवों पर हजारों सालों से जमी बर्फ पिघल रही है। दुनिया भर के जंगल आग से भस्म हो रहे हैं। समुद्र का बढ़ता जल स्तर आने वाले सालों में कई शहरों को निगल सकता है। कहीं सूखा है, तो कहीं आए दिन बाढ़ और तूफान

आ रहे हैं। हालात बहुत खराब हैं। यह हो सकता है कि आज आप और हम सीधे तौर पर जलवायु परिवर्तन का असर महसूस नहीं कर पा रहे हों, लेकिन हम लोग जिस तरफ जा रहे हैं, हम जल्द ही गंभीर चपेट में आ सकते हैं। यह समस्या इतनी गंभीर है कि प्रकृति के अस्तित्व पर सवाल उठने लगे हैं। इसमें कोई शक नहीं है कि जिस तरह से ग्लोबल वार्मिंग के कारण जलवायु में बदलाव आ रहा है, उससे न केवल लोगों के जीवन और गुणवत्ता को खतरा है, बल्कि उनकी आय पर भी इन बदलावों का भारी असर पड़ेगा। लेकिन यह नौबत आई क्यों? अगर हम देखें, तो यह समस्या उस वक्त पैदा हुई, जब हमारी इंसानी गतिविधियों के कारण पूरे वातावरण में सीओ<sub>2</sub>, यानी कार्बन डाईऑक्साइड और मिथेन जैसी ग्रीनहाउस गैसेज की मात्रा ज्यादा बढ़ गई और इन मात्राओं ने सूर्य की गर्मी को ज्यादा सोखा, जिसके कारण धरती का तापमान बढ़ा और हम सबके सामने जलवायु परिवर्तन, ग्लोबल वार्मिंग जैसी समस्या आई। इन गतिविधियों का मुख्य कारण जीवाश्म ईंधनों का इस्तेमाल है। कोयला, पेट्रोल, डीजल और हमने जमीन से जो गैसेज ली हैं, उनका इस्तेमाल करना इसका प्रमुख कारक हो सकता है। इसकी शुरुआत औद्योगिक क्रांति से हुई है, क्योंकि तब से लेकर आज तक इस वातावरण में कार्बन डाईऑक्साइड की मात्रा 30 फीसदी बढ़ी है। हम यह भी कह सकते हैं कि आज वातावरण में जितनी कार्बन डाईऑक्साइड है, वह पहले कभी नहीं थी। इसका एक सबसे खतरनाक कारण यह भी है कि हमने वनों की अंधाधुंध कटाई करना शुरू कर दिया है। हमने कोविड-19 की इस महामारी को भी देखा है, जिसमें हमने ऑक्सीजन की महत्ता को भी जाना। पेड़, जो ऑक्सीजन देते हैं और कार्बन डाईऑक्साइड लेते हैं, हमने उनकी महत्ता को भी पहचाना है। हमारा इतिहास भी गवाह है कि जब लक्ष्मण जी को तीर लगा था, तब हनुमान जी ने जड़ी-बूटी से भरपूर पहाड़ को लाकर उनकी जान को बचाया था। यह जड़ी-बूटी, यह वनस्पति, अगर हम इनकी महत्ता को स्वीकार करेंगे, तो यह समाधान के रूप में भी होगी और अगर हम इस महत्ता को नकारेंगे, तो हमारे सामने ऐसी समस्याएं जरूर आएंगी। कई रिसर्च बताती हैं कि आज धरती का तापमान 1.2 डिग्री सेल्सियस है और आने वाले दिनों में यह 1.5 डिग्री सेल्सियस तक भी जा सकता है। अगर हालात ऐसे ही रहे और ये बदलाव दो डिग्री सेल्सियस तक पहुंच गए, तो हम महामारी के कगार पर, बदबादी के कगार पर खड़े होंगे। इसके कारण तो बहुत से हैं, मगर हमें इसके समाधानों पर जाना होगा।

महोदय, प्रकृति का सम्मान और नैचुरल रिसोर्सेज का संरक्षण, यह हमारी परंपरा और वर्तमान प्रयासों का हिस्सा रहा है। धरती इंसान की जरूरतों की भरपाई तो आसानी से कर सकती है, मगर उसके लालच की नहीं।

*"यह धरती कहती हम सबसे तू लालच से अधिकार न कर,  
तू दोहन कर पर शोषण नहीं तू प्रकृति का प्रतिकार न कर।"*

महोदय, हमें इसकी महत्ता को समझना होगा। हम सदियों से नेचर के साथ समन्वय में जीते चले आए हैं, लेकिन पिछले कई दशकों से हुए स्वार्थपूर्ण व्यवहार की वजह से प्रकृति का जो अस्वाभाविक रूप से स्वरूप सामने आया है, वह चिंता का विषय है। यह बात मानव कल्याण के लिए अत्यंत संवेदनशील दायित्व का हिस्सा तो है ही, यह हम सभी की सामूहिक जिम्मेदारी भी है, इसलिए जलवायु परिवर्तन और ग्लोबल वार्मिंग जैसी इन समस्याओं का मुकाबला करने की कुंजी



के रूप में माननीय प्रधान मंत्री जी की अवधारणा है - लाइफस्टाइल फॉर एनवायरनमेंट, यानी पर्यावरण के लिए जीवन शैली। लाइफ का दृष्टिकोण एक ऐसी जीवनशैली को अपनाना है, जो हमारी धरती के अनुरूप हो, इसे नुकसान न पहुंचाए।

*"जीवन पद्धति में बदलाव करना ही होगा,  
अब हमें ऊँची उष्णता को शीतलता से भरना ही होगा।"*

महोदय, माननीय प्रधान मंत्री जी ने ग्लासगो में आयोजित जलवायु परिवर्तन पर संयुक्त राष्ट्र फ्रेमवर्क सम्मेलन में 'पंचामृत' का मंत्र दिया और इस 'पंचामृत' के मंत्र के अनुसार, जो पहली बात कही, वह यह थी कि भारत अपनी गैर-जीवाश्म ऊर्जा क्षमता को 2030 तक 500 मेगावॉट तक लाएगा। दूसरी बात, वर्ष 2030 तक भारत अपनी ऊर्जा आवश्यकता का 50 फीसदी रिन्युएबल एनर्जी से पूरा करेगा। तीसरी बात, भारत अब से वर्ष 2030 तक अपने शुद्ध अनुमानित कार्बन उत्सर्जन में एक बिलियन टन की कटौती करेगा। चौथा, वर्ष 2030 तक भारत अपनी अर्थव्यवस्था की कार्बन इंटेंसिटी को 45 प्रतिशत से भी कम करेगा। पाँचवाँ, वर्ष 2070 तक भारत नेट जीरो का लक्ष्य हासिल करेगा। निश्चय ही इस 'पंचामृत' के द्वारा माननीय प्रधान मंत्री जी ने इस समस्या का समाधान पूरी दुनिया के सामने रखा है। भारत इस वैश्विक चुनौती को लेकर पूरी तरह सजग है और जलवायु परिवर्तन, ग्लोबल वार्मिंग को लेकर सरकार की ओर से उठाए जा रहे कदमों की पूरे विश्व में सराहना हो रही है। इसे देखकर आज दुनिया के सारे विकासशील देश ब्रिटेन के पूर्व प्रधान मंत्री, जॉन्सन की बात दोहरा रहे हैं और वह सत्य भी है कि 'वन सन, वन वर्ल्ड, वन ग्रिड और वन नरेन्द्र मोदी।'।

आज माननीय प्रधान मंत्री, मोदी जी के नेतृत्व में भारत ने दुनिया में पर्यावरण के क्षेत्र में समाधानकारक देश के रूप में अपनी भूमिका निभाई है और हमारे निर्णयों ने यह साबित कर दिया है कि हम पर्यावरण के लिए सबसे ईमानदार देश हैं। अगर हम देखें तो इन निर्णयों में इलेक्ट्रॉनिक वाहनों को सब्सिडी, पेट्रोलियम में भारत का सीधे स्टेज IV से स्टेज VI पर आना, हरित क्रांति, जैविक खेती, जल संरक्षण, वर्मी कम्पोस्ट, हमारी कुछ योजनाएँ, जैसे उज्ज्वला योजना, स्वच्छता अभियान, चरणबद्ध वृक्षारोपण आदि शामिल हैं। जब वृक्षारोपण की बात आती है, तो चूंकि मैं मध्य प्रदेश की निवासी हूँ, इसलिए मैं मध्य प्रदेश के मुख्य मंत्री, माननीय शिवराज सिंह चौहान जी का यहाँ जिक्र करना चाहूँगी, जो प्रतिदिन एक पौधा लगाकर इस दुनिया को वृहद् वृक्षारोपण और पर्यावरण को बचाने का संदेश दे रहे हैं। वैश्विक मंथन के बीच इन सभी निर्णयों ने यह साबित कर दिया कि जलवायु की इस चुनौती से निपटने में भारत के नेतृत्व में ही सफलता प्राप्त हो सकती है। हम सब तो कहते ही हैं कि 'मोदी है तो मुमकिन है', लेकिन आज हम सबको मिलकर इस समस्या का समाधान करना होगा। ग्लोबल वार्मिंग को रोकने के लिए जितने भी प्रकार के प्रदूषण हैं, उनको दूर करने के लिए हमें सामूहिक प्रयास करने की आवश्यकता है। हमारी धरती एक साझा विरासत है और इस ग्लोबल वार्मिंग से कोई एक देश या एक शहर प्रभावित नहीं होगा, बल्कि उसका खामियाजा सारी मानव जाति को उठाना होगा। ऐसे में हमें यह तय करना होगा कि हम अपने लिए कैसा भविष्य चुनते हैं।

महोदय, अब वक्त आ गया है, जब किसी को जलवायु परिवर्तन की चुनौतियों से निपटने के लिए सामूहिक, व्यापक और समग्र रूप से लड़ने के लिए कहा जाए, तो हम सबको अपना कदम आगे बढ़ाकर इस जिम्मेदारी को उठाना होगा। इन सब पर महज बातें नहीं, इन सब पर अब काम करना होगा। हम सब मिलकर समाधान पर साझेदारी से काम करेंगे, इसी आशा के साथ मैं अपनी बात को विराम देती हूँ। आपका बहुत-बहुत धन्यवाद।

DR. AMEE YAJNIK (Gujarat): Sir, the topic is a very important one, touches everyone across the globe and, today we are taking up this topic at a time when we have made promises to the world about how we are going to curb the effects of global warming. The topic is: 'Serious effects of global warming and the need for remedial steps to tackle it.' Climate change has been varying across time scales for centuries. It has started from individual to a collective effort about the activity of the human beings. We talk about global warming and we talk about climate change. At national level or international level or in academic circles, they are used interchangeably. So, they can be used either global warming or climate change. But to understand what is global warming, it is a very basic thing, but I would still make a point that whatever comes from the sun by way of sunlight and touches the earth, 30 per cent of it goes back because it is sent back by clouds, by particles, by ground surfaces, whatever, and 70 per cent is retained by oceans, land and air. But, Sir, the 30 per cent that goes up in the space, not only does it come back a little slowly, but it stays there and it becomes in a concentrated form and that is causing global warming to the earth. This global warming was taken very seriously and we had United Nations Framework Convention on Climate Change which sets rules. Then, thereafter, we had the Montreal Protocol and the Kyoto Protocol where all countries are parties. That is why, we have Conference of the Parties at various fora. We had it in Paris, that is, COP-26 and we had it in Egypt, that is, COP-27 where all the countries, the Conference of the Parties come and make their statements. The issue as to why this is grave, as a student of Science because the atmosphere cannot be claimed by any one country, the emissions which have been emitted, may be, from the United States or from Japan or from Singapore or from India, they travel anywhere. Whatever goes in the air doesn't have a specific space and that is why, here we are negotiating all the climate change clauses at Conference of the Parties as to what a particular country should do and what a particular country should contribute in order to curb the effects of climate change or global warming. That is the crux of the whole thing. Due to global warming, India has faced several, several serious issues and problems. Larger ones are- one is the agriculture sector; 50 per cent of our people are working in agriculture. Second is the industrial sector. Third is the cattle that is associated with

agriculture sector. The belching by the cows, the methane that is produced by way of decaying corpses of animals and thirdly, mainly, vehicular pollution. All these pollutions are emitting certain kinds of methane, nitrous oxide and, especially, Chlorofluorocarbons. Chlorofluorocarbons are by the industrial sector and the refrigeration sector. These two sectors give out the most of these chlorofluorocarbons which are known as greenhouse gases. These greenhouse gases have a greenhouse gas effect which is causing global warming. We want to go back to that standard of 1.5 centigrade temperature and, that is why, we are rushing towards meeting our targets. Global warming is an issue that has to be, now, taken very seriously. As my earlier colleagues have pointed out that in daily life also, we can contribute. We can also contribute at policy level. But, the most important is that to curb this, we will have to come very drastic steps. India has committed to these steps internationally on these COP-26 and COP-27 fora. What are these gases? What do they do? When these refrigeration gases are manufactured, these are freon and refron. They also spill over the land. In one of my matters, these gases had gone also to the land surface and gone to the water level. The water contained fluorides. So, the water would look very clear when you look at it but when you drink that water with that fluoride content, it will cause problems to your body. You will age, the vegetation will be destroyed and the cattle will have mottling of teeth, wobbling of limbs and all that. These effects slowly come to the surface and that shows how these gases which are manufactured or the raw material that is stored in open spaces cause this kind of global warming problems. ...*(Interruptions)*...

**श्री उपसभापति :** प्लीज़, आप लोग पीछे बैठकर बात न करें। यहां बहुत गम्भीर चर्चा हो रही है।

**DR. AMEE YAJNIK:** This is here to stay. But, to curb these problems of the industry, there has to be monitoring. These are air pollution matters. It also came to my notice and also came before the hon. court when this matter was taken up that the equipments to measure these pollutants which go in the air are not very effective and we need to be modernizing them. This is one aspect of greenhouse gases causing so many problems. Sir, the cattle and the agriculture are also the main contributors. And the third contributor is this. We need to go for change or transition in energy. Transition in energy means we are talking about going from coal to renewable energy. We are thinking of a new kind of energy which is got from solar power or what we are getting from other renewables because we have to cut down our fossil fuels. Fossil fuel is human mankind indulging into the use of oil and coal. Now this fossil fuel is the main factor or the main argument when it is coming to negotiations internationally

because our country has been using fossil fuels for a very long time. We have committed to curbing down or bringing down our emissions by 2017 to net zero. India is committed at the international level. How can we do it when we are having 70 per cent of our power production based on thermal, on coal? Coal is the main thing where you get emissions and this is not going to be scaled down unless we have cut down on our thermal power stations. So these power stations are one of the main contributors. We do not have a roadway or a roadmap because despite committing that we will cut down on our thermal production based on coal, I think; our country has auctioned more than 100 coal mines. We have brought in private players. On the one hand, we are committing to net zero emissions, but on the other hand, we have committed to the private sector coal mining. So where are we cutting down on our coal? Along with the coal-based thermal power stations, we also need to look as to what happens to the ash that comes out, the ash that is transported. This is another corresponding thing along with the thermal power stations. We have not been able to cut that down.

Second thing is the crop pattern. You have to change the agriculture pattern in the country. Most of the time, when I talk about climate change and climate negotiations, I think about the women who contribute in the agriculture sector. The women adjust to these changes in the patterns as to how to bring their crop out, how to yield, to bring another crop, how to change the pattern, and these women are hardly given any lessons in global warming or climate change. Yet they adjust themselves, they adapt themselves to the changing pattern and that is where, I think, we should get some learning out of these women who manage most of the agriculture sector in the farmlands.

Other thing is the industrial pattern. Here, the third commitment comes from clean energy. The clean energy requires a lot of investment in the industrial sector. Is there a roadmap to see that we bring this investment in the industrial sector in order to see that we give them clean energy and stop giving them the energy that is got from these power stations? Look at the investments, the budget and, today, I am not talking on the finance part or the budget commitments by the Finance Ministry of the country. I am trying to see how we curb the serious effects of global warming. If that budget allocation is not increased for the clean energy to be given to this industrial sector which is increasing today--we talk about Make in India; we want to be a manufacturing hub, we want other countries to shift their production to our country--where is the budget to bring in this kind of a clean energy investment? That budget is declining. Sir, I do not want to give data today. Today, is not the occasion

to bring in all these kind of data, but we are failing there to attract investments in the clean energy sector.

Sir, the fourth point is the renewable energy sector. We are talking about the Sun, we are talking about renewable energy from other water sources, but we are unable to see that we have our own solar panel manufacturing. Sir, 80 per cent of our panels are coming from China. Where do we have our solar panel manufacturing where we can have solar panels on the roofs? India went for a solar rooftop policy. And, I find that that solar rooftop policy has failed somewhere in some places very miserably. The hon. Minister of Environment and Forests is here, and I would like to bring to his notice. Sir, there needs to be a relook into this solar rooftop policy and also see that unless and until we manufacture solar panels domestically, I think, this solar scheme will not be effective. Also, there is a need to look at the wind energy. Sir, when somebody is travelling along the coastline of either Gujarat or the South of India, you find a number of wind energy mills, power windmills. But, somewhere I think there are some electrical power grid issues; this is also another factor which is coming to my mind when I see all the statistical data. Unless and until these things are not improved, the shift to renewable energy, to solar power, despite making laudable ambitions or making certain targeted goals, we will not be able to achieve this net zero target.

Sir, the other important aspect is that when we talk about clean energy, renewable energy, we are also talking about green buildings. Green buildings are a new concept. The green buildings are totally energy efficient buildings. I would request the hon. Environment Minister that though green buildings is a very, very wonderful idea but he must see to it that do we have the select specific skilled architects, designers who would look into this novice concept of green buildings, energy efficient buildings. Do we have that kind of a education department where we can train them to see that we have these green buildings. Sir, it is very easy to speak about all these subjects. They look very good but unless and until we have the wherewithal, we cannot meet those targets. Sir, 2070 is a long time. We may reach there but, if we do not reach there, where we have failed is the question. So, finally coming to the point that when we talk about negotiations or we talk about COP26, COP27, then, we have another COP28, the industrialised world has emitted emissions for so many centuries now because they industrialised first; we came later on the industrial scene. So, do we pay right now or do we continue with fossil fuels by seeing that we phase them out? We should control the use of this fossil fuel. But, how do we do it is going to be the burning question. Let me talk about this. Sir, India has promised a few important points at COP27 about global warming and in the



negotiations that we will definitely go to net zero; will indulge into clean energy mechanism, we will switch to renewable energy by way of transition, and all these will require a lot of investments. Making promises is very easy but to fulfil them and to look at the budgets which have fallen from almost some half way mark, we would be unable to do that.

Sir, now the last point is that we need a forest cover. We have the National Forest Act. A couple of decades back, the target was to bring it to about 31 per cent. But, we have not even reached the halfway mark. I know the hon. Environment Minister will definitely not agree with me but the data that he has shown also covers tea gardens. When we show the forest cover, we show the trees on the road. That is not the forest cover. The forest cover has to be 31 per cent. You cannot allow deforestation and have construction sites. You cannot have construction and urbanisation at the cost of forest cover. So, Sir, these Acts need to be implemented very strictly. Now, if we put all these together, whether it is renewable energy, whether you take transition to pure energy or you take net zero or you take agriculture crop patterns as rice, paddy fields and other kind of crops, gives out methane, and you take the shift to renewable energy, all these require a holistic approach. You need to bring all these policies together. Unless and until we do not bring a coordinated effort to bring all these agencies together, to have an approach to see that we bring down to net zero, this will not fructify. And, the last and very important point, I have always been harping on, is the waste management. Sir, today we all are flying, all the time, by air. If anyone is looking at the tickets, they might see what carbon emissions are mentioned on them. The developed world has already gone on that level. The tickets there mention carbon emissions. That is where the world has reached. Here, we are unable to see that the waste management is done efficiently! By travelling on the road, on the one hand, you will see solar roofs everywhere. On the other hand, you will see heaps of garbage dung which are not cleared. They somehow, somewhere, contribute to bringing out these emissions which are not required.

Sir, these two aspects would be a nail, on the whole, on the reasons I have given. These reasons are needed to be taken together in order to see that we curb the global warming that is affecting all of us. It is the duty of all the countries. But, we have a little more duty because we have committed to certain things and we need to work towards them. Thank you, Sir.

MR. DEPUTY CHAIRMAN: Thank you Dr. Amee Yajnik. Now, Message from Lok Sabha, Secretary-General.

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