

## **Interactive Session with Dr. Rajendra Pachauri**

**Question:** As you explained the Australian Prime Minister lost his government because of failure to appreciate and take steps to mitigate climate change. It is quite clear that the power that can decide to take all these major steps lies in the hands of politicians. How much of our Indian political class is even aware, at various levels, of the tremendous problems that we are likely to face unless we take steps to mitigate it and what measures are proposed to be taken, because this class does not believe it is ignorant, it thinks it knows more than everybody else. So they are not prepared to learn. They only learn if they are defeated in elections. That is my first question. Second question, the cost of mitigation, I read somewhere, is so enormous and the effect of that will not be so significant. So it is suggested that an alternate strategy could be to adapt to spend more money on how to live in this changed climate environment, rather than trying to prevent the change from taking place. I do not know whether the mathematics are correct, because when I saw that slide which says the cost of intensive mitigation may only reduce GDP by 3 per cent. It does not seem to be a very high cost. So what is the equation in this regard is it more expensive to mitigate or it is more economical and beneficial to adapt various measures. One small little point – I am very concerned. I have four grandchildren - between the ages of one and four. What kind of a life are they going to have? What will be the world like when they reach my age? And shouldn't we use this as an example telling our politicians what is going to happen to their children, how their children are going to starve for food, for water, so that a greater awareness is created in their minds for urgency in action.

**Response from Dr. Rajendra Pachauri :** Let me attempt to answer your first question to begin with. I am not all that pessimistic about politicians not doing anything, because in the last year and half there has been such an explosion of understanding and awareness. Last year on the 24<sup>th</sup> of September the Secretary General of the United Nations organized a high level event during the General Assembly at which he invited about eighty heads of government, heads of state. I spoke at the opening session of that and all of them barring one said that the scientific evidence is very clear, we have to take action. By and large they all understand that, but one reason why they may not be acting is because of the disinformation that is being spread that the costs are going to be enormous, there is going to be loss of jobs. I will give you an example of a modern economy – Germany. You know they have proactively over the last five or six years promoted renewable energy. It has not resulted in a decline in economic output; it has not resulted in a decline in employment, if anything a totally new industry has been generated. There are many more jobs in that industry than elsewhere. But it took a proactive government and a set of policies that brought about that kind of change. I think this is only a self-serving disinformation that some people are spreading. If you ask me, that 3 per cent figure which I mentioned and if you were to take into account all the so-called co-benefits you will probably get a negative cost. In other words you will get greater growth by following these measures. There are so many distortions in our economic system today. We will have to sort those out. I would also say that quite apart from educating politicians, you have actually answered the first question by talking about children and grandchildren. I think we need to empower them with knowledge. Then we do not need to ask the politicians what is going to happen to their children and grandchildren. Those kids themselves will go and tell their grandparents and parents that what they are doing is wrong. I was talking to somebody the other day; he said “his seven year old son has suddenly realized that there is huge scarcity of water on the globe and, therefore, we should not use the shower for more than six minutes. After six minutes when I am in the shower he comes and knocks on the door, doesn't let me bathe any longer.” You know I think that is the hope. I get very upset, generally when I am in town, in Delhi, I go for a swim and I find somebody standing in the shower singing away. Firstly I have to stand his singing and secondly I have to bear the fact that he is taking a

shower for thirty minutes. That is not cleaning yourself; that is entertaining yourself. I think we need to spread awareness and in the case of Australia, taking that as an example, this change took place largely because the people were so concerned about climate change. I think to some extent you see a similar disconnect in North America also today. The people are far more proactive and far more supportive of action that needs to be taken than some of the politicians. That is why you find cities, towns, states – California, last month I was with Arnold Schwarzenegger; he has called a meeting of ten governors, from Mexico as well as the border states on the west coast of the U.S. As a Republican you would expect that he would support Washington's policies. He is going counter to that and now he is going to organize a meeting of governors from the states of China and he has asked me to see if some Chief Ministers will go from here as well. So that, he says, we can start doing things on a state to state basis. So I think change is taking place and I am not at all pessimistic. I have already answered the issue of the cost of mitigation. It is much cheaper to mitigate than to adapt. Because at some stage the impacts of climate change will overwhelm us and I did not specifically tell you about one set of possibilities, scientifically which seems to be getting even clearer and therefore more dangerous, is the possibility of collapse of the west Antarctica ice sheet or the Greenland ice sheet. I was in Greenland a little more than a month ago and this is the largest island on earth after Australia, which is a continent, of course. On it is sitting a huge mountain of ice which is 2.5 to 3 kilometers high and this place that we went to, which is 77° North, is sitting on 2.5 kilometers of ice and there is research station over there. If a part of that collapses or part of the west Antarctica ice sheet collapses, we will have sea level rise of several meters. So, if we are at all a sensible, logical race, we cannot even think of that possibility. A friend of mine, who gives talks like this, will ask an audience how many of you have had a fire break-out in your home. May be two hands will go up. And he would ask how many of you take fire insurance and everybody's hands will go up. He would say why you do that, only two people were affected. I mean, we are rational risk averters. If it is so attractive to do the right thing, why don't we do it than wait till we find out complete havoc across the globe?

**Question:** My question is very specific; one of the anticipated effects of global warming will be shorter and more intense periods of rain. In the case of peninsular India, where run-off is such a big problem, that logically calls for the construction of dams to store water and yet we have serious opposition to the construction of dams as the Narmada project has indicated. How does one solve this policy contradiction?

**Response from Dr. Rajendra Pachauri:** What has happened is that, we have done a pretty bad job of some of these dams, when it came to resettling people and ensuring that there was no loss of forest cover or loss of bio-diversity. As a result I think we now have an emotional response to construction of dams. I think somehow one has to explain to these people, who are opposing the construction of dams that this is actually for their benefit. The disaster that would take place if you do not have these dams would be much worse. I think we will just have to somehow convince people to accept it and it may not be easy, it will be a slow but absolutely necessary process to follow. The storage of water will have to be reengineered very carefully after looking at what the impacts are going to be in the future.

**Question:** You mentioned about ten per cent lesser crop yield with every one degree rise in temperature and you also mentioned about lesser water availability. Would you like to suggest alternate cropping regimes for states like Maharashtra and also alternate agricultural technology for states like Maharashtra. Do you think that the agricultural universities, they have these concerns built into their research?

**Response from Dr. Rajendra Pachauri:** You are absolutely right. I think we have to embark on that path of research with some sense of urgency. I must give credit to the current

Agricultural Minister, Shri Sharad Pawar. I went and spoke to him and I told him about the impacts on agriculture. He said you make a presentation before us. He came to our RETREAT Complex, that is the complex which uses no power from the grid, brought all his senior officials along, and spent about three hours with us. I must say he took immediate action, he told the Director General of ICAR to organize a meeting of all the Directors of research institutes across the country. They came up with a plan of action, I do not know how all that will get implemented. But the basic fact is that they atleast realize what needs to be done. You are entirely correct. We will have to come up with species that are drought resistant, that are heat resistant and we also need to ensure that perhaps in some cases there will have to be change in cropping patterns and certainly agricultural practices. This is the kind of forward thinking that we need to do now, otherwise we would certainly have very serious problems with security of food supply.

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