

## **OPENING SESSION – 24 September 07**

### **Mr. Rajendra Pachauri**

#### **Chairman of the Intergovernmental Panel on Climate Change (IPCC)**

Mr. Secretary General, President of the General Assembly, distinguished leaders of member states, Ladies and Gentlemen,

I speak to you with a great sense of privilege and honor and at the outset I would like to salute the Secretary General for having organized this remarkable gathering of world leaders on an issue that all of us are deeply concerned about.

I'll present before you the key findings of the three Working Groups reports that the IPCC has released. I might also mention that in mid-November this year we will be bringing out the Synthesis report which will complete the Fourth Assessment Report of the IPCC and the Synthesis report will be the most policy-relevant document that we would be presenting as part of this series.

To start with let me say that we, the human race, have substantially altered the Earth's atmosphere. In 2005 the concentration of carbon dioxide exceeded the natural range that has existed over 650,000 years. 11 of the warmest years since instrumental records have been kept occurred during the last 12 years and therefore climate change is accelerating. In the 20th century the increase in average temperature was 0.74 degrees centigrade; sea level increased by 17 cm and the last and a large part of the Northern Hemisphere snow cover vanished. Particularly worrisome is the reduction in the mass balance of the glaciers and this has serious implications for the availability of water; something like 500 million people in South Asia and 250 million people in China are likely to be affected as a result.

We also know that there are major precipitation changes that are taking place. In general in the temperate regions there's an increase in precipitation, rainfall and snow, but in the tropical, sub-tropical and Mediterranean regions there is a decline. But all of this is also accompanied by an increase in the frequency and severity of extreme precipitation events: we have seen several of those in recent years. Overall may I say that water scarcity is going to be affected and will increase in several parts of the globe.

We also know that there are issues of concern that regard the food security because a number of crops that the human race is dependent on are likely to see a decline in yield and productivity.

Some regions are more vulnerable than others. The Arctic region is warming twice as fast as the rest of the globe. Sub-Saharan Africa already under a lot of stress will also be impacted by stress induced by climate change and I might say Africa as a whole will probably see 75 to 250 million people being affected by water stress by the year 2020 and that is round the corner. Small island states, as we have already been reminded by his Excellency the Secretary General, are under threat of sea level rise and would be affected by storm surges and cyclones even before there is the reality of submergence. Asian mega deltas, as we've been told, are extremely vulnerable and this

includes a number of cities in Asia which are very heavy in terms of population density. Several coastal regions are in threat of coastal flooding.

There are some systems that are also vulnerable: coral reefs, tundra, boreal forest and we have assessed in the IPCC that 20 to 30 percent of plant and animal species are in danger of extinction if temperature exceeds 1.5 to 2.5 degrees centigrade.

Projections for this century tell us that at the lower end of feasible trajectories, we have a best estimate of 1.8 degrees centigrade as the increase in temperature by the end of the century and at the upper end of feasible scenarios we get 4 degrees centigrade. The inertia of the system that we have is such that climate change would continue for decades and centuries even if we were to stabilize the concentration of gases that are causing this problem today, which means that adaptation is inevitable.

But let me emphasize that adaptation alone will not do. We need to bring about mitigation actions to start in the short term even when benefits may arrive in a few decades. And there are huge co-benefits from mitigation action in terms of energy security, in terms of local environmental benefits. The cost of adaptation and impacts, I might mention, will keep going up as the global temperature goes up.

As far as mitigation is concerned the costs are going to be much lower than what was anticipated earlier. If we stabilize the concentration of these gases as 445 to 490 parts per million of CO<sub>2</sub> equivalent which will give us an equilibrium increase, limit the equilibrium increase to 2 to 2.4 degrees centigrade, that will cost the world less than 3 per cent of the GDP in the year 2030. This means that the prosperity that we would normally achieve by 2030 may be postponed by a few months the most. And as the honorable Secretary General has told us, we have up to 2015 if we want to stabilize at that level, after which we will have to ensure that emissions go down substantially.

There are several measures that we have assessed in terms of policy actions, incentives for technology developments. A price on carbon is absolutely crucial. Technology by itself will not do unless there is a pricing framework that ensures that low carbon technologies are developed and disseminated on a large scale. Investments in energy infrastructure have to be in a manner that is going to be climate-friendly because these investments will serve society for a long time to come. Lifestyle and behavioral changes are important and in very simple terms that mean the use of walking, cycling, all of which will make human beings healthier and so also the planet.

Ladies and Gentleman, my time is up and I would say: so is also the time up for inaction. I would like to end my presentation with a quote from Mahatma Gandhi, a great leader well ahead of his time. Gandhi said: "A technological society has two choices: first it can wait until catastrophic failures expose systemic deficiencies, distortion and self-deceptions. Secondly, a culture can provide social checks and balances to correct for systemic distortion prior to catastrophic failures". May I submit, it is time for us to move away from self-deception and go on to the second of these two choices. Thank you very much.