

**IPCC Side Event, 16th Conference of the Parties, Cancun**

**Wednesday, December 1, 2010**

**Video Message**

*Thomas Stocker, Co-Chair WGI, IPCC*

**Dear Delegates, Ladies and Gentlemen**

On behalf of Qin Dahe, Co-Chair of Working Group I, I send my best greetings to the delegates of the 16th Conference of the Parties in Cancun.

I would like to take this opportunity to inform you about some important developments in Working Group I "The Physical Science Basis" of the Intergovernmental Panel on Climate Change which may be relevant to your deliberations in the coming 10 days. I apologize that I cannot be with you in person but I hope that this technology, while saving a significant amount of carbon emissions, will be equally able to deliver a strong message to you.

In January 2007 the WGI Contribution to the Fourth Assessment Report of the IPCC concluded that "Warming in the climate system is unequivocal". This finding still stands and has been confirmed by numerous scientific studies that have been published in the peer-reviewed literature since then.

In particular, sea level continues to rise at about 3.3 mm per year, and we can now observe and quantify, almost in real time, how Greenland and Antarctica, the large polar ice sheet on this planet, lose ice each year. The unabated increase of CO<sub>2</sub> in the atmosphere, caused primarily by fossil fuel burning and deforestation, has resulted in an atmospheric concentration of this greenhouse gas of 390 parts per million. This concentration is 30% higher than ever in the past 800,000 years.

These and many more findings from observations, climate process understanding, and model simulations will be assessed by Working Group I on a comprehensive, objective and transparent basis.

We will produce by September 2013 the WGI contribution "The Physical Science Basis" to the Fifth Assessment Report of the IPCC, and carry forward our assessment to the Synthesis Report. In fact this work has begun almost two years ago. In addition to the three targeted Expert Meetings on greenhouse gas metrics, on the detection and attribution of climate change, and on combining large ensembles of climate model simulations, WGI has convened an IPCC Workshop on Sea Level Rise and Ice Sheet Instabilities in June 2010.

It was a very heartening experience that over 1000 of the best scientists worldwide responded to a call by the Intergovernmental Panel on Climate Change in early 2010 to dedicate their time and expertise to the production of the Working Group I contribution. Out of these more than 1000 scientists, the WGI Bureau has selected 258 from 44 countries with whom we now work very closely towards our common goal.

Working Group I has held its First Lead Author Meeting in Kunming (China) from 8 to 11 November. This very first Lead Author Meeting marked the starting point of the production of AR5. Dr. Qin Dahe and I are very happy to report to you

that we look back on an extremely fruitful and intensive meeting during which we have accomplished all our goals. In particular, the 14 chapters have now filled the Outline, which was approved by the Panel in October 2009, with content.

I would like to recall that the WGI contribution will have several new features that are hopefully useful for the stakeholders and policymakers. These are a dedicated chapter on clouds and aerosols, a chapter on the carbon cycle, two chapters on climate change projections dealing with the emerging topics of climate predictability and irreversibility, and a chapter on climate phenomena relevant for regional climate change such as monsoon, El Niño, and many others. Finally, for the first time, WGI will produce an "Atlas on Global and Regional Climate Projections".

An important element of the First Lead Author Meeting was the discussion of cross-cutting issues and how they will be dealt with among the 14 chapters. At this meeting, the authors have decided on the coverage of these issues and have started the definition of boxes which will deal with these topics. In addition, each chapter will contribute a number of Frequently Asked Questions as part of their assessment material. On March 18, 2011 we expect the delivery of the Zero Order Draft of the Working Group I contribution to the IPCC Fifth Assessment Report.

Collaboration between the three Working Groups of IPCC is an important element of the Fifth Assessment cycle. We have already held a number of Expert Meetings on cross-cutting topics. As an example I may mention the production of a new Guidance Note on the Consistent Treatment of Uncertainties which is now implemented and will be used by all three Working Groups.

The largest collaborative effort between Working Groups I and II concerns the Special Report on "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation". This special report is under the leadership of WGII, and WGI contributes a Chapter on "Changes in climate extremes and their impacts on the natural physical environment". The work has now entered the crucial phase of the production of the Summary for Policymakers.

In conclusion, I would like to emphasize that we are committed to continue to work with the scientific rigour, robustness and transparency, towards the Fifth Assessment Report of the IPCC. We will be able to accomplish our ambitious goals with the help of hundreds of the best scientists worldwide who dedicate their time and expertise, on a voluntary basis, to the writing of this assessment. They will be assisted by thousands of colleagues, the scientific community, who will continue to increase our understanding through the production of scientific results and therefore contribute to the assessment in a significant way.

I am confident that with this we will be able to deliver to the policymakers and the public a rigorous and robust assessment, including the uncertainties, of what we know about climate change, and thereby make a contribution to rational and science-based decisions regarding the future of our Earth System.

I wish you all a good spirit, persistence and wisdom for your important deliberations!

Thank you.