

Twelfth Session of Working Group I

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Welcome Address

Thomas Stocker, Co-Chair WGI, IPCC

Her Excellency Ms Lena Ek, Minister for the Environment of Sweden

Dr Rajendra Pachauri, Chair of the IPCC

Dr Renate Christ, Secretary of the IPCC

Fellow Scientists and Colleagues

Distinguished Delegates from 110 Countries

Ladies and Gentlemen!

Since a few months, news about climate change has surfaced again in the media after some considerable time of relative silence. Some of these news reports surprised me because their messages contrast so much with the latest results published in the scientific literature and with the assessment that the IPCC WGI team of scientists has carried out during the past four years.

Ladies and Gentlemen!

We are not here to discuss what we may have heard or read in the news recently about climate change and the role of human activity. We are here to open the 12th Session of IPCC Working Group I and to bring to completion the assessment of the Physical Science Basis of Climate Change that has started five years ago.

In 2008, the Intergovernmental Panel on Climate Change decided to initiate its 5th Assessment Cycle, during which a report is to be prepared. This report shall "*assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change*".

On behalf of my fellow Co-Chair Qin Dahe, and indeed of the entire team of scientists and authors of this report, and the Technical Support Unit of Working Group I, and the IPCC Secretariat, we are excited and proud to finally meet here in Stockholm and to successfully complete the process for which we have all worked so hard for the past five years.

This report is now delivered to you, the policymakers from 110 countries. Since 2010, the author team has produced a succession of draft reports which were thoroughly reviewed by experts and governments. The multiple-stage reviews have collected a staggering number of 54,677 comments which were all considered by the author team.

Ladies and Gentlemen!

I know of no other document that has undergone this scrutiny and that has involved so many critical people who offered their insight and advice. This is what makes this report so unique. It stands out as a reliable and indispensable source of knowledge about climate change.

This knowledge is based on millions of measurements in the atmosphere, in the ocean, on land and ice, and from space. These measurements permit an unprecedented and unbiased view of the state of the climate system. Millions of billions of bites of numerical data form the foundation of a physically consistent projection of a range of possible futures of our climate.

In today's digital world, information can be produced by anyone, distributed by anyone, read by anyone – worldwide. We experience and appreciate seemingly instant information about anything. At such speed, quality is a rare commodity. It is more than ever evident that both convictions and doubts can be produced and widely spread almost on a daily basis.

Ladies and Gentlemen!

This is precisely why we need rigorous and robust assessments such as this one.

Climate change is "*one of the greatest challenges of our time*", as the governments have declared in the Cancun Agreements in 2010. Because this change threatens our primary resources – land and water – in short, because it threatens our only home, we must face this challenge. It requires the best information for the most effective decisions. Who else than scientists could create and provide the robust knowledge about climate change that forms the basis of such decisions?

The members of the Working Group I author team are scientists who know how to collaborate. But they are also competitors, competitors for funding, for good ideas, and for brilliant students. Yet in spite of their competition, each scientist involved in this report was ready to donate his or her time, and scientific expertise, to work towards the common goal of assembling the first contribution to the IPCC's Fifth Assessment Report. Such professional generosity and persistence are rare today, and I want to explicitly acknowledge it at this occasion.

In order to make the complex scientific material more accessible to the users of the report, the 14 chapters, with more than 1 million 140 thousand words and 1250 scientific diagrams, were distilled into a Technical Summary, and then condensed by a factor of 80 relative to the underlying report, into a concise Summary of Policymakers. I can assure you that in this process of distillation we have followed the sage advice that is attributed to Albert Einstein: "Make it as simple as possible, but no simpler".

An essential component of every IPCC assessment since the first report in 1990 is climate change projections. "*The best way to predict the future is to shape it*", said Willy Brandt, the eminent German politician and winner of the Nobel Peace Prize in 1971. But then: What guides us in shaping our future? Which futures are possible given the available options?

The consequences of possible choices on the Earth's climate system are assessed in this report. Science provides a well-tested framework, not to predict, but to estimate the future. This framework rests on three pillars: observations, understanding Earth system processes, and climate model simulations.

Ladies and Gentlemen!

Our assessment shows that we have a choice in shaping our future. Scenarios that assume determined interventions and strong mitigation offer a chance of keeping global mean warming under 1.5°C. On the other hand, scenarios that envisage continued carbon dioxide emissions or postponed reductions of these emissions, indicate that options of limiting global warming to 2°C may become unattainable. The choice to shape the future is ours, and fortunately we are not left to make blind choices, to cast a dice, or to enjoy ignorance. Regular IPCC assessments ensure that the basis for informed decisions remains scientific, robust, and up-to-date.

Ladies and Gentlemen!

This unparalleled effort was only possible owing to three elements that I have learned to appreciate during my four years of service as Co-Chair of Working Group I of the Intergovernmental Panel on Climate Change. First, wisely crafted and formulated procedures of the IPCC, sufficiently precise but not overly prescriptive. Second, an extremely engaged community of scientists. And third, the will to find a consensus, or to be explicit where such a consensus cannot be reached.

Before I close, I wish to express my sincerest thanks to:

- the Government of Sweden and National IPCC Focal Point, Dr Marianne Lilliesköld
- the Government of Switzerland and the University of Bern for the funding and hosting of the Working Group I Technical Support Unit
- the IPCC Secretariat for the overall organisation of AR5
- the Working Group I Bureau and our team of Scientists

On behalf of Working Group I, we are all looking forward to completing the task that you have given us four years ago. It is our collective assignment to produce a Summary for Policymakers that presents the findings in the clearest possible manner, a document with no compromises to scientific accuracy.

Thank you, Ladies and Gentlemen!