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What would you do if your doctor was 95% sure you had a serious illness?

What would you do if your doctor was 95% sure you had a serious illness? And what if it wasn't just one doctor, but hundreds of the world's leading doctors? Would you just ignore them and continue business as usual or would you start looking for a cure? It's just common sense. The same logic applies to climate science. Today, the United Nations Intergovernmental Panel on Climate Change (IPCC) presented its latest report on climate science. The report says it is unequivocal that climate change is occurring and confirms there is at least 95% certainty that human activities are the principal cause.

In reaction to the report, Climate Action Commissioner Connie Hedegaard said: *"The issue is not whether to believe in climate change or not. The issue is whether to follow science or not. The day when all scientists with 100% certainty warn you against climate change, it will be too late. If your doctor was 95% sure you had a serious disease, you would immediately start looking for the cure. Why should we take bigger risks when it's the health of our planet at stake? Europe will continue to lead the fight against climate change. We have ambitious legislation in place. We are reducing our emissions considerably, expanding renewables and saving energy. And we are getting ready for the next step: climate and energy targets for 2030 that the Commission will present before the end of the year. The reality is that others are now following suit. Europe will continue to demand more action from all the emitters."*

Main findings

The IPCC Working Group I report, Climate Change 2013: The Physical Science Basis, assesses the latest scientific knowledge on climate change. The working group finalised its 'Summary for Policymakers' earlier today in Stockholm. The Working Group 1 report is the first of four reports that together will form the IPCC's Fifth Assessment Report.

Overall, today's report confirms and strengthens the key findings of the IPCC's Fourth Assessment Report, published in 2007. It draws on new evidence, more extensive observations, improved climate models, greater understanding of climate processes and a wider range of climate change projections.

Its key findings include:

- Warming of the climate system is unequivocal. Global surface temperature has risen about 0.8°C since 1880. Since the 1950s many of the observed changes are unprecedented over decades to millennia. The concentrations of greenhouse gases have increased, the atmosphere and ocean have warmed, the amounts of snow and ice have diminished, the Arctic summer sea ice is retreating and sea level has risen.

- It is 'extremely likely' (meaning that there is now at least 95% certainty) that human activities caused most of the observed increase in surface temperature over the last 60 years. The concentration of carbon dioxide in the atmosphere has increased by about 40% since 1750 as a result of human activity, almost entirely due to the burning of fossil fuels and deforestation.
- Each of the last three decades has been successively warmer than any preceding decade since instrumental records began in 1850. Warming has slowed over the past 15 years and this appears to be due in roughly equal measure to fluctuations in natural cycles, such as the El Niño/La Niña phenomena in the Pacific Ocean, and a cooling effect from volcanic eruptions and reduced solar activity. However, short-term trends do not in general reflect long-term trends. Temperature variations have been seen at several periods since 1901 but the overall trend remains upwards.
- If greenhouse gas emissions are reduced significantly, the rise in global average surface temperature could be limited to between 0.9°C and 2.3°C above pre-industrial levels, and sea level rise to 30-50 cm relative to 1986-2005, towards the end of this century. However, with no action there is a 62% chance that by 2081-2100 the temperature could be more than 4°C higher than in pre-industrial times while sea level rise is likely to be between 40 and 80 cm relative to 1986-2005.

Background

The IPCC is the leading international body for the assessment of the scientific, technical and socio-economic information relevant to the understanding of climate change. Its assessment reports represent the consensus of thousands of scientists worldwide and are based on peer-reviewed and published scientific and technical literature covering multiple lines of analysis and datasets. For its Fourth Assessment Report, the IPCC shared the 2007 Nobel Peace Prize with former US Vice-President Al Gore.

Research projects funded under the EU's 6th and 7th Framework Programs for Research, as well as under the research programs of Member States, have contributed significantly to the IPCC reports. Climate change is a central element of the new Horizon 2020 research Framework Programme, where 35% of financial resources will be allocated to climate-related activities.

Further information

Video statement by Commissioner Hedegaard on the UN IPCC report on climate science:

<http://ec.europa.eu/avservices/video/player.cfm?ref=1081990>

For more information on the projects contributing to the observations of the climate system: [MEMO/13/826](#)

The Working Group 1 Summary for Policymakers is available here http://www.ipcc.ch/report/ar5/wg1/#.UkUuiXea_To