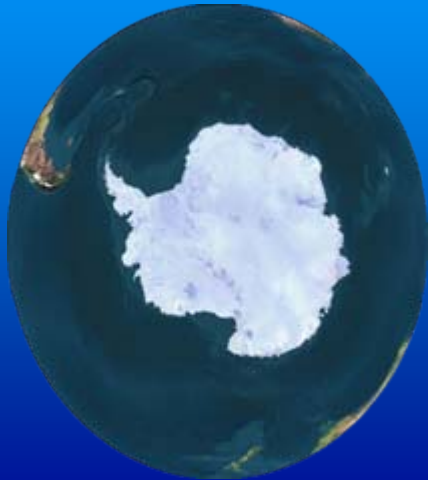


The Importance of the Polar Regions in Global Climate Change

Dr. Mary Albert

Cold Regions Research and Engineering Laboratory
Thayer School of Engineering, Dartmouth College
Hanover, NH



Overview

- Do science results ever get a Peace Prize?
- Are discoveries from the polar regions important for climate science?
- How can you find out how climate change will impact you?
- How can your actions help to mitigate climate change?

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The IPCC is honored with the Nobel Peace Prize



Oslo, 10 December 07 - The Intergovernmental Panel on Climate Change and Albert Arnold (A) Gore Jr. were awarded the **Peace Prize** "for their efforts to build up and disseminate knowledge about man-made climate change, and foundations for the measures that are needed to counter change".

- [Speech of the IPCC Chairman at the Award Ceremony](#)
- [More information](#)

IPCC Fourth Assessment Report (AR4)

"**Climate Change 2007**", has been completed. Learn more on how to obtain the re copyright permission for graphics and figures. [[More...](#)]

The AR4 Synthesis Report

The report has been released on 17 November 2007, Valencia,



- [FULL REPORT](#)
- [Summary for Policymakers](#)
- [Watch the webcast](#) of the press conference with United Nations Secretary General Ban Ki-Moon
- [Mr Pachauri's presentation](#) at the IPCC Press Conference
- [Mr. Ban Ki-Moon speech](#) to IPCC Plenary

Working Group I Report "The Physical Science Basis"



- [FULL REPORT](#)
- Summary for Policymakers & Technical Summary
[Arabic](#) - [Chinese](#) - [English](#) - [French](#) - [Spanish](#) - [Russian](#)
- Hard copies available from [Cambridge University Press](#)

www.ipcc.ch



"The IPCC was established to provide ...

...an objective source of information ...

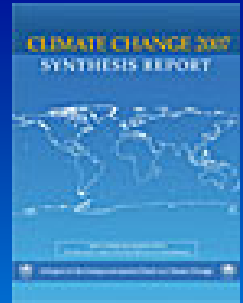
... Its role is to assess on a comprehensive, objective, open and transparent basis the latest scientific, technical and socio-economic literature...

...IPCC reports should be neutral with respect to policy,...

...high scientific and technical standards, and aim to reflect a range of views, expertise and wide geographical coverage."



Climate science and the 2007 Nobel Peace prize



- The **Intergovernmental Panel on Climate Change (IPCC)** and Albert Arnold (Al) Gore Jr. were awarded the **Nobel Peace Prize** "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change".



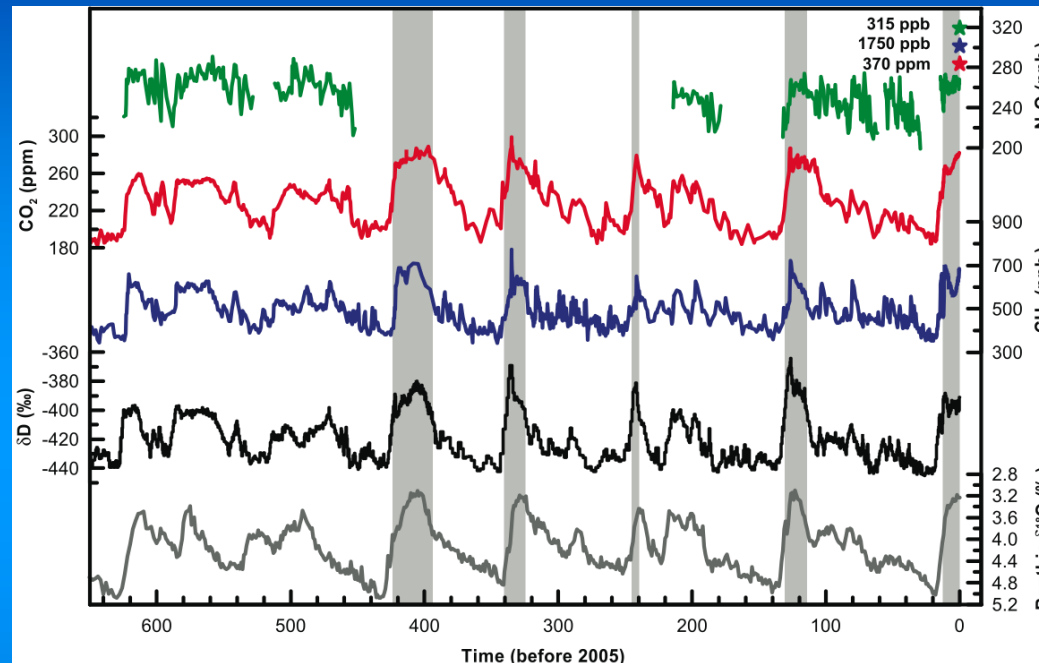
Climate science and the Nobel Peace Prize



The Nobel Peace Prize has been given for advocacy of human rights, mediation of international conflicts, and arms control, -- and now climate science!

-- can you tell us what climate has to do with world peace?

Polar regions archive evidence of Earth's past climate



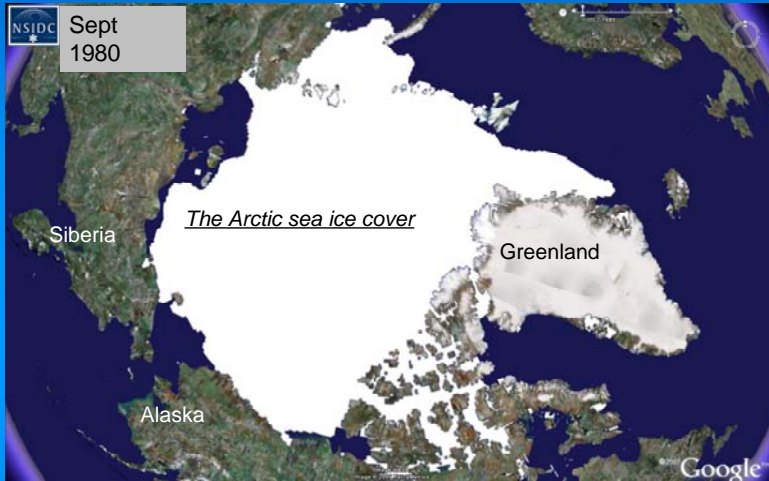
Greenhouse gases are the highest concentrations now than in the past 600,000 years



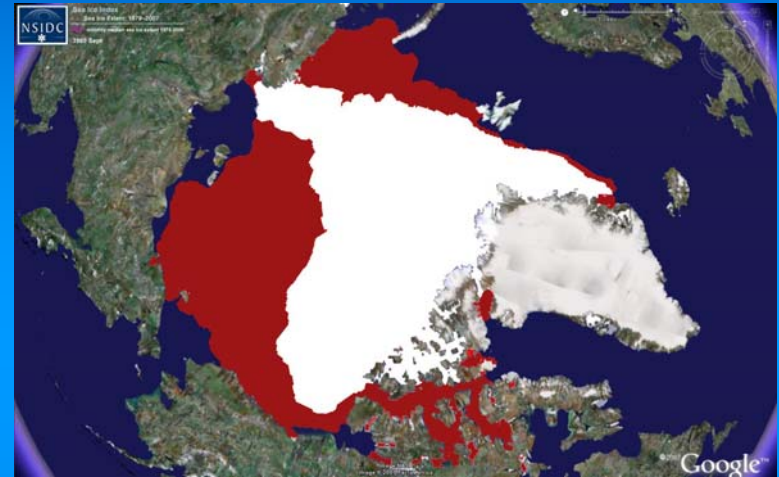
Read more - IPCC Working Group I Report
"The Physical Science Basis"

www.ipcc.ch

Global warming is definitely occurring.



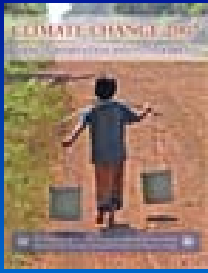
September 1980



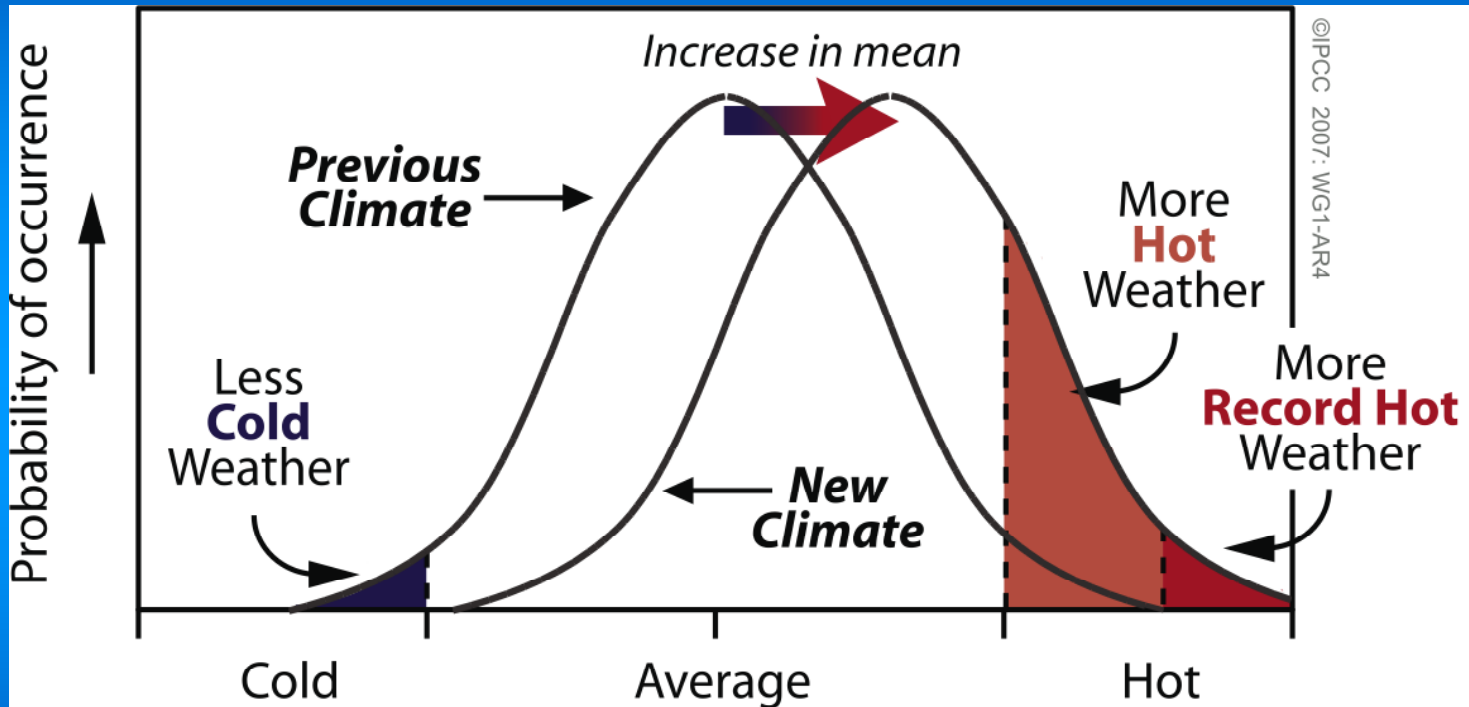
September 2007



Read more - IPCC Working Group I Report
"The Physical Science Basis"



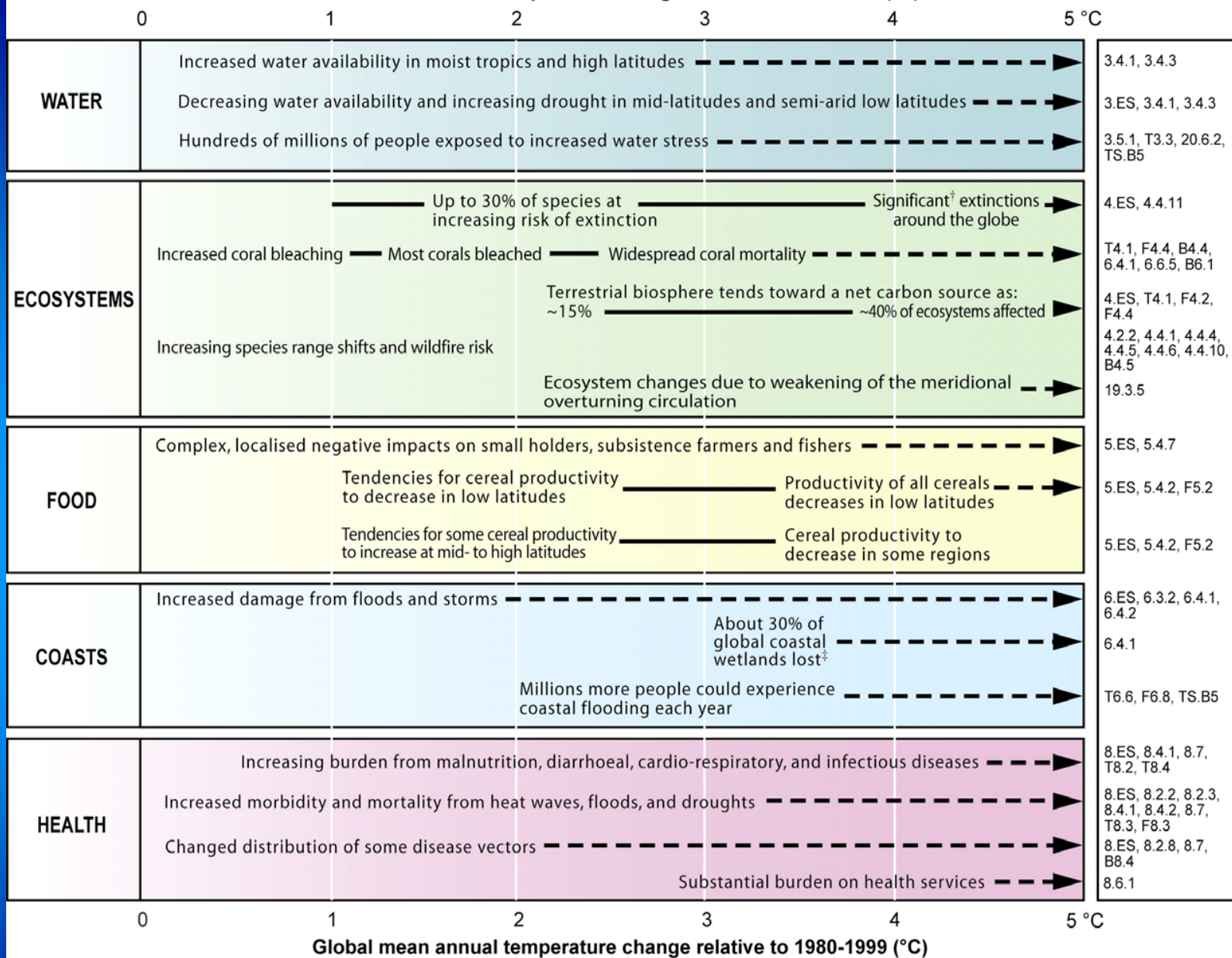
The impacts of climate change will affect you



Read more about it - in the IPCC Working Group II Report
"Impacts, Adaptation, and Vulnerability"

www.ipcc.ch

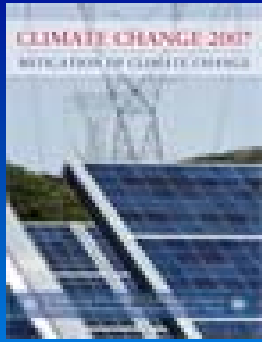
Global mean annual temperature change relative to 1980-1999 (°C)



Global mean annual temperature change relative to 1980-1999 (°C)

[†] Significant is defined here as more than 40%.

[‡] Based on average rate of sea level rise of 4.2 mm/year from 2000 to 2080.



How can you can help mitigate climate change?

- Energy
- Transportation
- Buildings
- Waste management
- Sustainability

Read about these and more - in the IPCC Working Group III Report "Mitigation of Climate Change"

Conclusions

- World peace depends on present & future climate
- Scientific discoveries from the polar regions are key to understanding global climate
- Even if your area is not affected directly, impacts of change elsewhere will affect you
- Show your students how to get information from reliable sources!
 - Intergovernmental Panel on Climate Change www.ipcc.ch
 - National Academy of Sciences www.nationalacademies.org
 - National Science Foundation www.nsf.gov