

# ***Intergovernmental Panel on Climate Change (IPCC): 4<sup>th</sup> Assessment Report***

**ITU-T SG 15 Tutorials on  
Energy-Efficiency**

**13 February 2008**



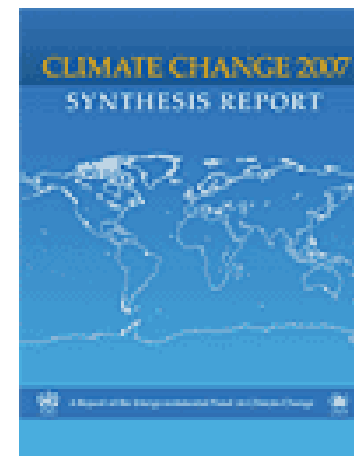
## IPCC and Al Gore: Joint Recipients on the 2007 Nobel Peace Prize



“The IPCC’s strength lies in the processes and procedures that it follows. Most important is its ability of carrying out rigorous scientific assessment, which undergoes the scrutiny of government representatives and therefore is accepted by governments. There is no other body in the world that is able to meet these twin objectives simultaneously,”

# IPCC 4<sup>th</sup> Assessment Reports

- **Synthesis report released Nov 2007 (ahead of UN Climate Change Conference in Bali)**
  - **WP1 report: Physical Science basis**
  - **WP2 report: Impacts, adaptation and vulnerability**
  - **WP3 report: Mitigation of climate change**
- **2'500 scientific reviewers, 800 contributing authors, 450 lead authors from 130+ countries**
- **Previous work**
  - **1988: IPCC established. Secretariat hosted by WMO and & UNEP**
  - **Previous assessment reports in 1990, 1995 and 2001**
  - **UN Framework Convention on Climate Change (UNFCCC) adopted in 1992**



# Evidence for climate change



Global average temperature



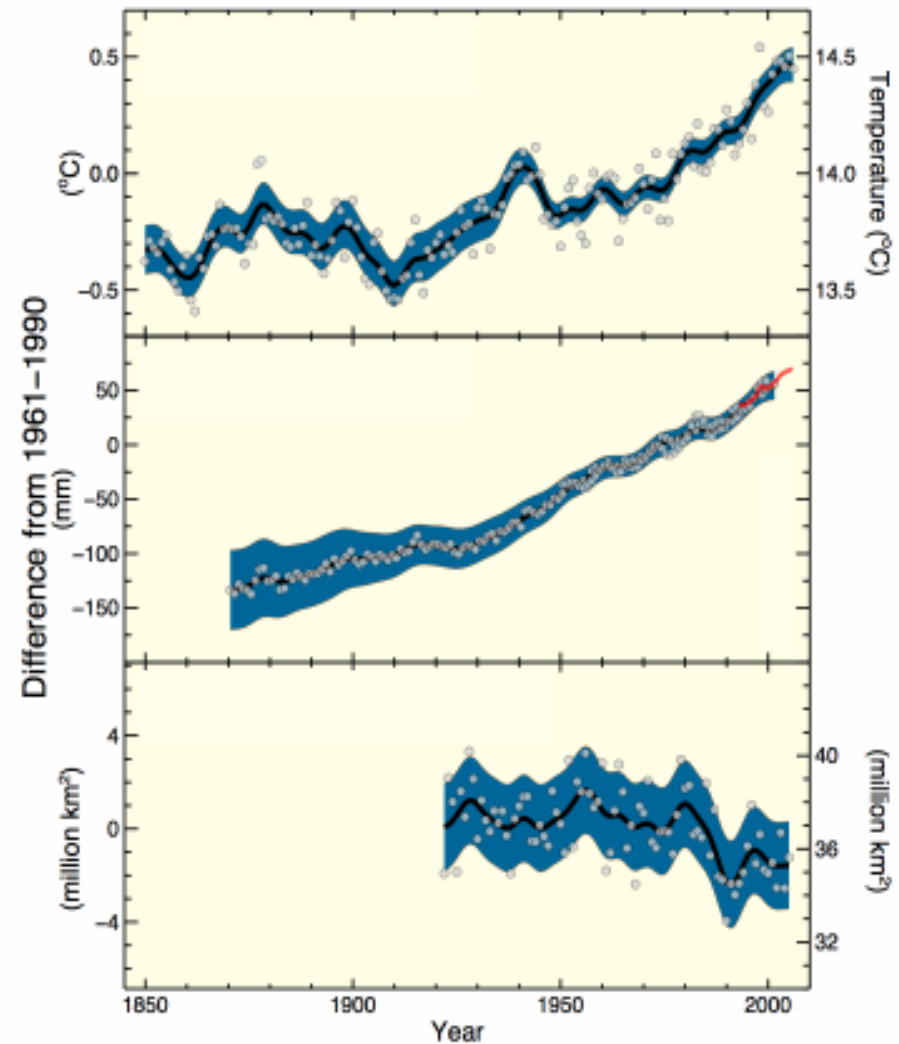
Global average sea level



Northern hemisphere  
snow cover

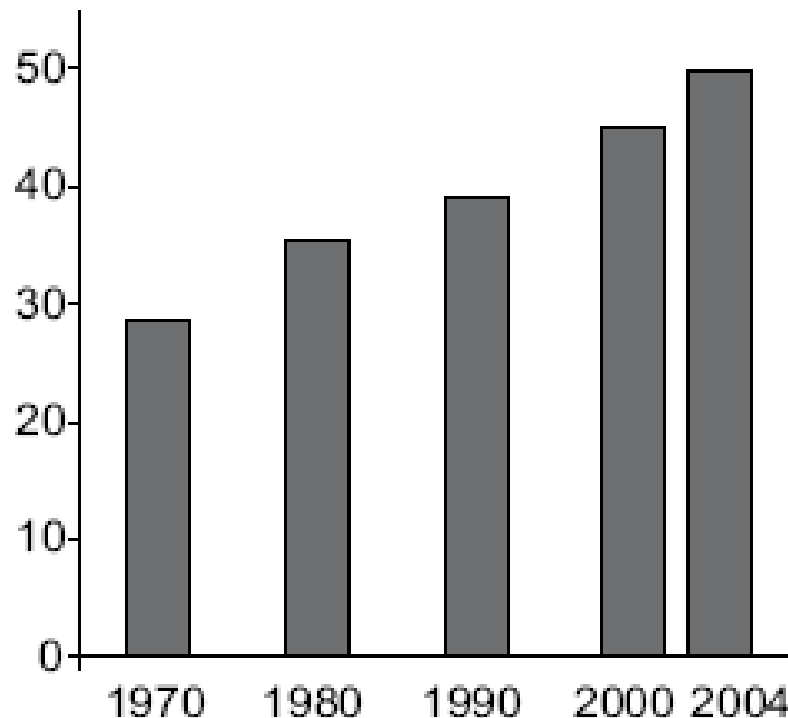


Changes in temperature, sea level and northern hemisphere snow cover



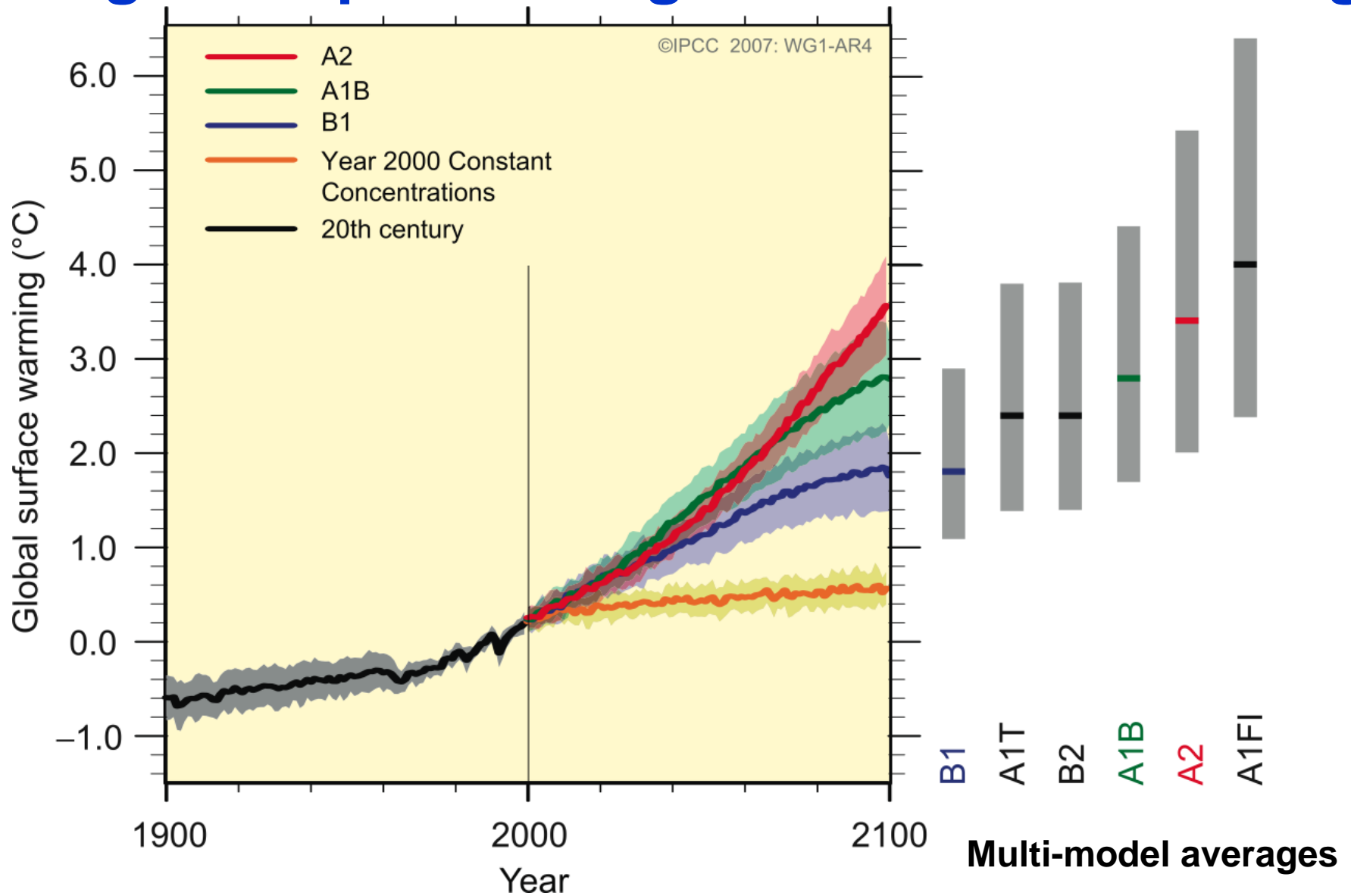
## Rise in the production of greenhouse gases

- **Global atmospheric concentration of gases has increased markedly as a result of human activities**
- **In 2005, the concentration of CO<sub>2</sub> exceeded, by far, the natural level over the last 650'000 years**



**Total Greenhouse Gases (in  
Gigatonnes of Carbon Dioxide  
equivalents – GtCO<sub>2</sub>-eq)**

# Ranges for predicted global surface warming

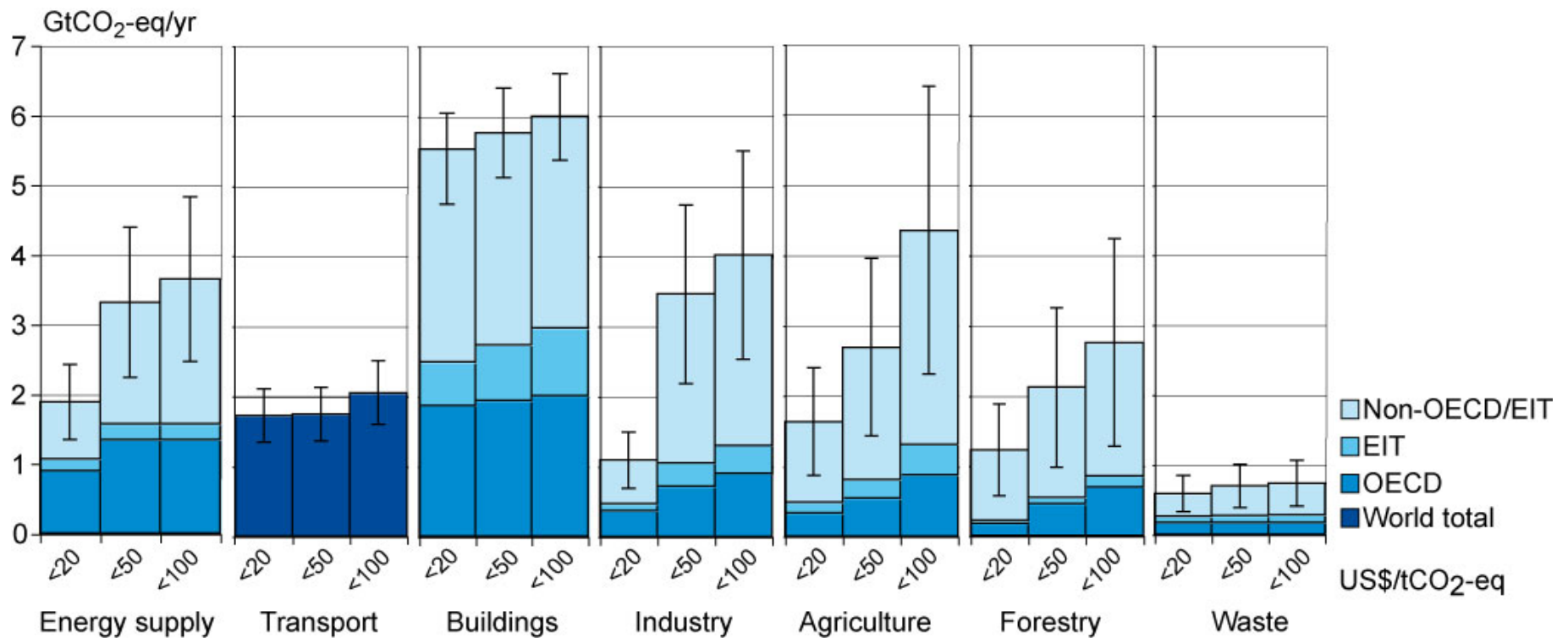


## Countries most at risk from climate change

Drought	Flood	Storm	Coastal (<1m) <sup>a</sup>	Coastal (<5m) <sup>a</sup>	Agriculture
Malawi	Bangladesh	Philippines	All low-lying island states	All low-lying island states	Sudan
Ethiopia	China	Bangladesh	Vietnam	Netherlands	Senegal
Zimbabwe	India	Madagascar	Egypt	Japan	Zimbabwe
India	Cambodia	Vietnam	Tunisia	Bangladesh	Mali
Mozambique	Mozambique	Moldova <sup>b</sup>	Indonesia	Philippines	Zambia
Niger	Lao PDR	Mongolia <sup>b</sup>	Mauritania	Egypt	Morocco
Mauritania	Pakistan	Haiti	China	Brazil	Niger
Eritrea	Sri Lanka	Samoa	Mexico	Venezuela	India
Sudan	Thailand	Tonga	Myanmar	Senegal	Malawi
Chad	Vietnam	China	Bangladesh	Fiji	Algeria
Kenya	Benin	Honduras	Senegal	Vietnam	Ethiopia
Iran	Rwanda	Fiji	Libya	Denmark	Pakistan

Source: World Bank. Note: Countries shaded in yellow are Least Developed Countries.

# Economic mitigation potential by Sector, 2030





# What happens next?

- **Kyoto Protocol, 1997, set limitations and reduction targets for developed countries**
  - **Commitments due in 2008-2012, but likely to be too little, too late, and may not even be met**
- **Bali conference, Dec 3-14 2007**
  - **Reached agreement on set of milestones for agreeing post-Kyoto limitations/reductions by 2009**
  - **IPCC 4<sup>th</sup> assessment report adopted as scientific basis**
  - **Agreement on Reduced Emissions from Deforestation and forest Degradation (REDD)**
  - **BUT, no agreed language on reductions of 25-40% below 1990 levels by 2020 (IPCC proposal)**
- **Next major conference: Poznan, December 2008**

# Thank You

For information, see:

[www.ipcc.ch](http://www.ipcc.ch)

Full IPCC report can be downloaded  
from:

<http://www.ipcc.ch/ipccreports/ar4-syr.htm>