

20 YEARS OF THE IPCC

Working Group I - The Physical Science Basis

Contributions from scientists and governments have increased over time

1990 Report: 365 pages, 170 lead and contributing authors from 25 countries and 200 reviewers 35 countries at final plenary

2007 Report: 987 pages, 152 lead authors and 400 contributing authors from 40 countries and 600 reviewers 113 countries at final plenary

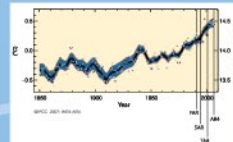


The findings of the four IPCC Assessment Reports show a progression in our understanding of climate change

First Assessment Report - 1990 (FAR)
Second Assessment Report - 1995 (SAR)
Third Assessment Report - 2001 (TAR)
Fourth Assessment Report - 2007 (AR4)

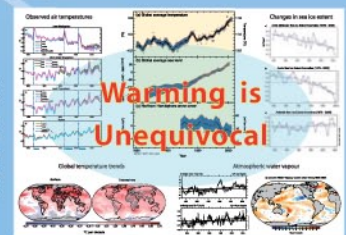
How much climate change has been observed ?

Observations of global average temperature at the time of the 4 Reports show clearly that atmospheric temperatures are on the rise.



Many changes signal a warming world

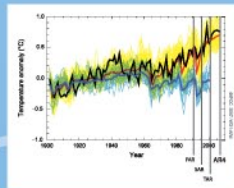
Observations of temperature at the surface, the troposphere and stratosphere, sea level, snow cover and other parameters such as increasing atmospheric water vapour, retreating glaciers, decrease of Arctic sea-ice extent and increase in extreme temperatures lead to the conclusion that **warming is unequivocal**.



How much is due to human activities ?

As time progresses, the anthropogenic signal becomes more clear and leads to greater and greater certainty in attribution of climate change.

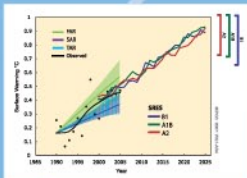
FAR (1990): "unequivocal detection not likely for a decade"
SAR (1995): "balance of evidence suggests discernible human influence"
TAR (2001): "most of the warming of the past 50 years is likely (odds 2 out of 3) due to human activities"
AR4 (2007): "most of the warming is very likely (odds 9 out of 10) due to greenhouse gases"



The diagram shows global mean surface temperature anomalies as observed (black line); and as obtained from model simulations with both natural and anthropogenic forcing (in red with yellow showing uncertainty range); and from model simulations with only natural forcing (in blue).

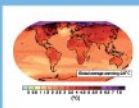
Test of IPCC's near-term projections

IPCC projections in 1990 & in 1995, can now be compared to observations. Near term projections in the AR4 show for various scenarios an increase of ~0.2° C per decade through 2025.



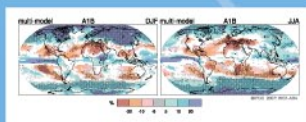
Projections of regional climate change

The understanding of projected patterns of warming and other regional scale features, including wind patterns, precipitation and some aspects of extremes and ice has improved.



2090c: medium emission scenario

More rain for some, less for others



2090c: medium emission scenario; high confidence in stippled areas

Regional changes (+/-) of up to 20% in average rainfall increases very likely in high latitudes, decreases likely in most sub tropical regions

- And also,....
- Increases in heavy rainfall (very likely)
 - Increases in drought (likely)

Presentation of uncertainty in IPCC 2007 WG I Report

Likelihood terminology	Likelihood of the occurrence/outcome
• Virtually certain	>99% probability
• Very likely	>90% probability
• Likely	>66% probability
• Unlikely	<33% probability
• Very unlikely	<10% probability
Confidence terminology	Chance of being correct
• Very high confidence	>9 out of 10
• High confidence	>8 out of 10
• Medium confidence	>5 out of 10
• Low confidence	>2 out of 10
• Very low confidence	<1 out of 10

Acceptation of IPCC results - an unequivocal endorsement of the world's top scientists

Global Response to Climate Change

- We call on world leaders to acknowledge that the threat of climate change is clear and increasing
- We recognize the international scientific consensus of the IPCC

from Joint Science Academies' Statement
(by G8 plus China, India & Brazil, June 2005)

