

Effects of Global Warming



http://en.wikipedia.org/wiki/File:Risks_and_Impacts_of_Global_Warming.png

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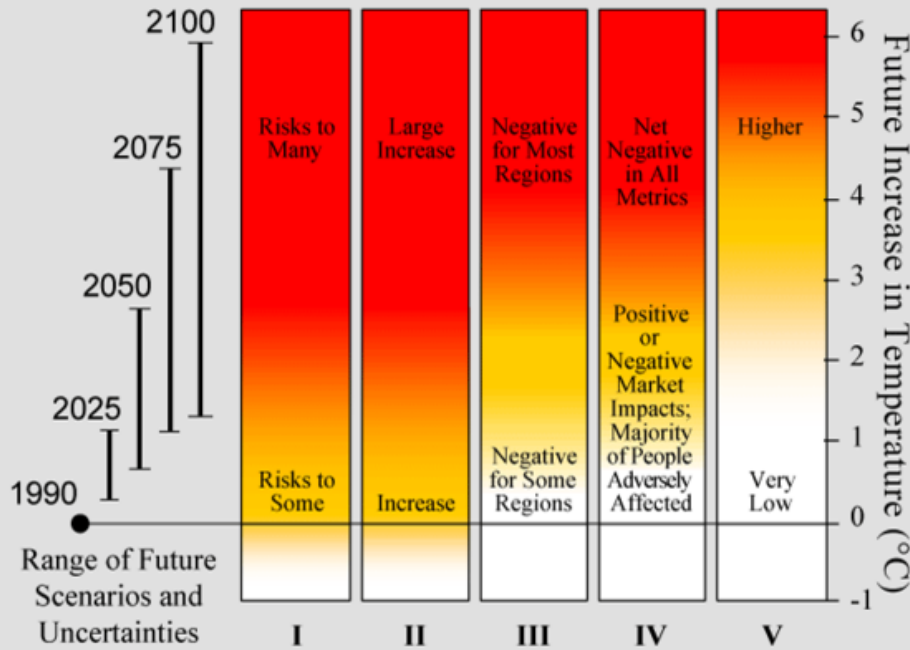
The effects of global warming on the environment and human life are numerous and varied.

The expected long range effects of recent climate change may already be observed:

- rising sea levels,
- glacier retreat, and
- Arctic shrinkage

are cited as direct consequences of human activities

Risks and Impacts of Global Warming



- I** Risks to Unique and Threatened Systems
- II** Frequency and Severity of Extreme Climate Events
- III** Global Distribution and Balance of Impacts
- IV** Total Economic and Ecological Impact
- V** Risk of Irreversible Large-Scale and Abrupt Transitions

Graphical description of risks and impacts from global warming from the Third Assessment Report of the Intergovernmental Panel on Climate Change.

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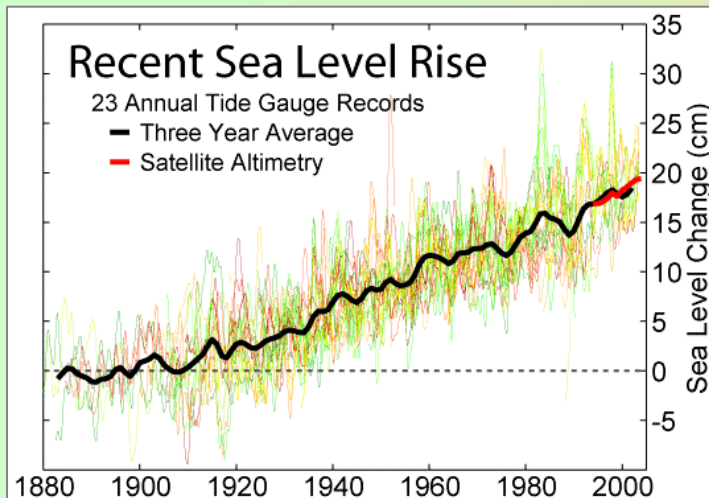


The rise of sea levels

The sea level has risen more than 120 metres since the Last Glacial Maximum about 20,000 years ago.

Under the IPCC Special Report on Emission Scenario (SRES) A1B, by the mid-2090s global sea level will reach 0.22 to 0.44 m above 1990 levels, and is currently rising at about 4 mm per year.

<http://www.worldviewofglobalwarming.org/images/TuvaluTideKids5TH.jpg>



http://upload.wikimedia.org/wikipedia/commons/0/0f/Recent_Sea_Level_Rise.png

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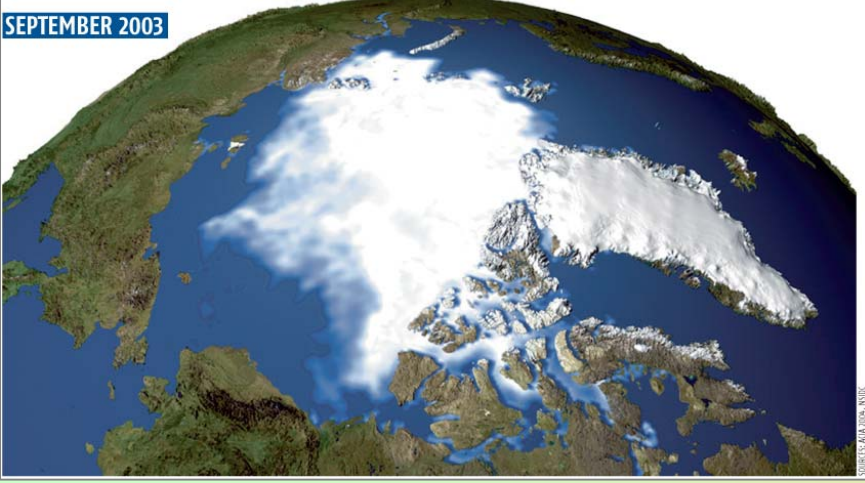
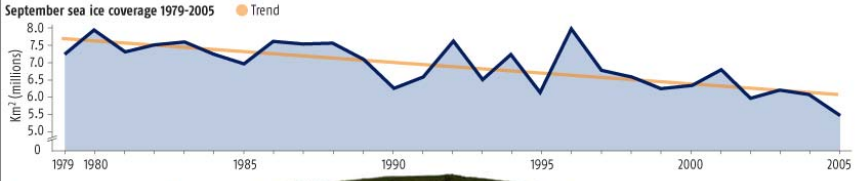
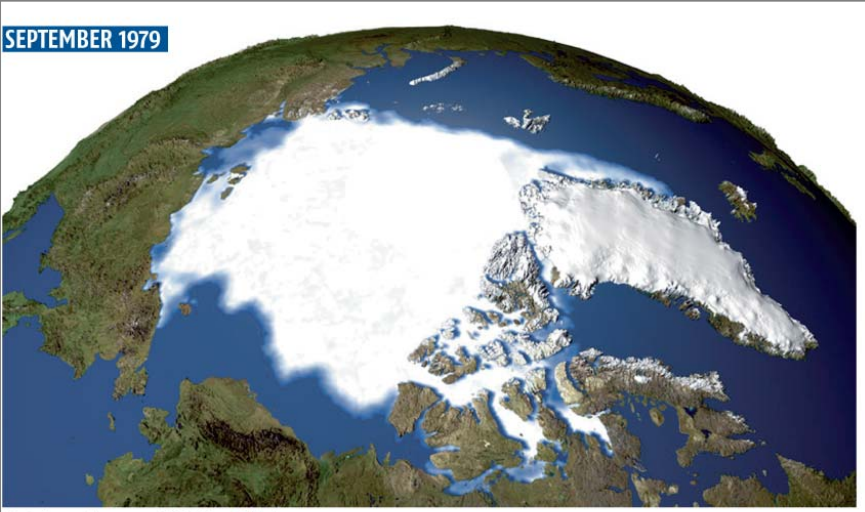
Glacier retreat

Excluding the ice caps and ice sheets of the Arctic and Antarctic, the total surface area of glaciers worldwide has decreased by 50% since the end of the 19th century.

The loss of glaciers not only directly causes landslides, flash floods and glacial lake overflow, but also increases annual variation in water flows in rivers.

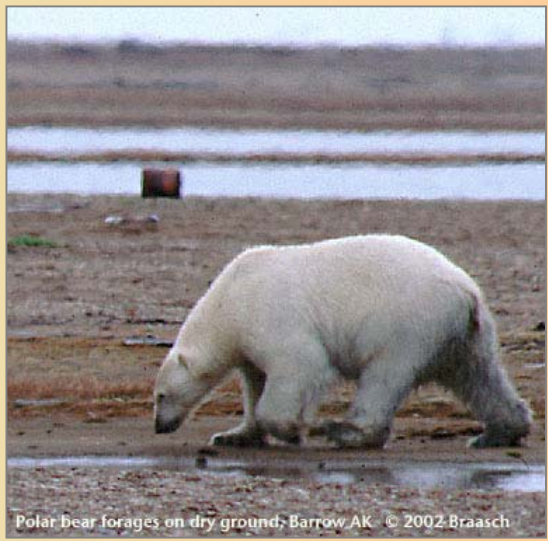


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Arctic shrinking

The Arctic Ocean ice cap is shrinking in summer to the smallest it has ever been in modern measurements, and even winter cold has not been refreezing it as extensively as before.



Polar bear forages on dry ground, Barrow AK © 2002 Braasch

<http://www.newscientist.com/data/images/archive/2520/25203701.jpg>

<http://www.worldviewofglobalwarming.org/images/ARCPolarbear.jpg>

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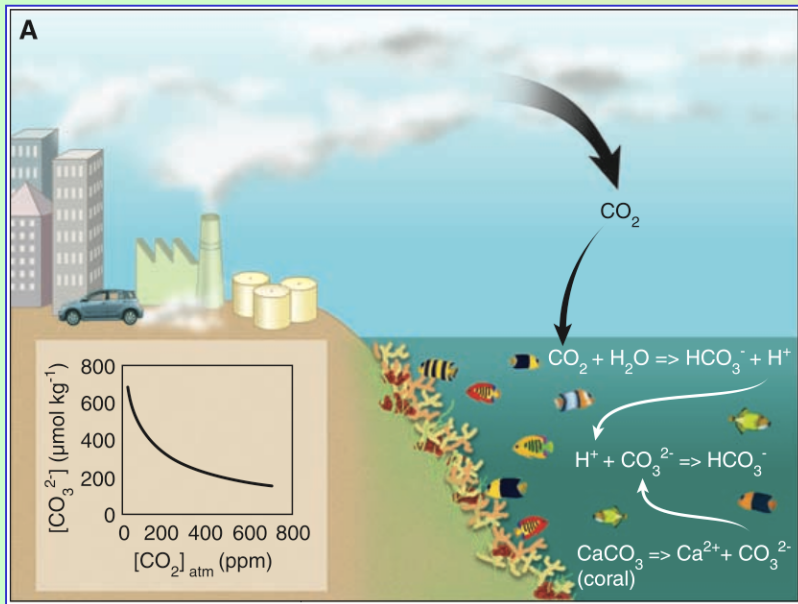


<http://www.planetsave.com/files/2008/02/great-barrier-reef.jpg>

Ocean acidification

In water, CO_2 becomes a weak carbonic acid, and the increase in the greenhouse gas since the industrial revolution has already lowered the average pH (the laboratory measure of acidity) of seawater by 0.1 units, to 8.2. Predicted emissions could lower the pH by a further 0.5 by 2100.

There are concerns that increasing acidification could have a particularly detrimental effect on corals (16% of the world's coral reefs have died from bleaching caused by warm water in 1998) and other marine organisms with calcium carbonate shells



<http://67.220.225.10/~clim2165/cs/wp-content/uploads/2008/11/picture-8.png>