



The Regeneration Project Interfaith Power & Light

Global Warming Facts and Projections

Rising Temperatures

- Eleven of the last 12 years rank among the 12 hottest years on record (since 1850, when sufficient worldwide temperature measurements began).
- Over the last 50 years, cold days, cold nights, and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent.

Increasingly Severe Weather

- The intensity of tropical cyclones (hurricanes) in the North Atlantic has increased over the past 30 years, which correlates with increases in tropical sea surface temperatures.
- Storms with heavy precipitation have increased in frequency over most land areas. Between 1900 and 2005, long-term trends show significantly increased precipitation in eastern parts of North and South America, northern Europe, and northern and central Asia.
- Between 1900 and 2005, the Sahel (the boundary zone between the Sahara desert and more fertile regions of Africa to the south), the Mediterranean, southern Africa, and parts of southern Asia have become drier, adding stress to water resources in these regions.
- Droughts have become longer and more intense, and have affected larger areas since the 1970s, especially in the tropics and subtropics.
- Tropical cyclones (hurricanes and typhoons) are likely to become more intense, with higher peak wind speeds and heavier precipitation associated with warmer tropical seas.
- Increases in the amount of high latitude precipitation are very likely, while decreases are likely in most subtropical land regions (e.g., Egypt).
- Extreme heat, heat waves, and heavy precipitation are very likely to continue becoming more frequent.

Melting and Thawing

- Since 1900 the Northern Hemisphere has lost seven percent of the maximum area covered by seasonally frozen ground.
- Mountain glaciers and snow cover have declined worldwide.
- Satellite data since 1978 show that the extent of Arctic sea ice during the summer has shrunk by more than 20 percent.
- Sea ice is projected to shrink in both the Arctic and Antarctic under all model simulations. Some projections show that by the latter part of the century, late-summer Arctic sea ice will disappear almost entirely.

Rising Sea Levels

- Since 1961, the world's oceans have been absorbing more than 80 percent of the heat added to the climate, causing ocean water to expand and contributing to rising sea levels. Between 1993 and 2003 ocean expansion was the largest contributor to sea level rise.
- Melting glaciers and losses from the Greenland and Antarctic ice sheets have also contributed to recent sea level rise.

Marine Animals

- Ringed seals are entirely dependent on sea-ice for their survival and will be the most vulnerable to reduced sea-ice projections. Polar bears are also dependent on sea ice and their preferred diet is almost exclusively Ringed seal. If there is almost complete loss of summer sea-ice polar bears may not survive as a species.