

## Global warming and sea levels

Global warming may make the sea level become higher. Why? Well, warmer weather makes glaciers melt. A glacier is a large sheet of ice that moves very, very slowly. Some melting glaciers add more water to the ocean. Warmer temperatures also make water expand (get bigger). When water expands in the ocean, it takes up more space and the level of the sea rises.



Sea levels may rise between several inches and as much as 3 feet during the next century. This will effect both natural systems and manmade structures along coastlines. Coastal flooding could cause saltwater to flow into areas where salt is harmful, threatening plants and animals in those areas.

Oceanfront property would be affected by flooding, and beach erosion (when beaches are worn away by the sea) could leave structures even more vulnerable to storm waves. Whether we move back from the water or build barricades in the face of a rising sea, it could cost billions of pounds to adapt to such change. Coastal flooding also may reduce the quality of drinking water in coastal areas.

(Source: <http://www.epa.gov/climatechange/kids/bigdeal.html>)

### Sea Levels



Higher temperatures will make the water of the seas and oceans expand. Ice melting in the Antarctic and Greenland will flow into the sea.

All over the world, sea levels may rise, perhaps by as much as 20 to 40 cm, by the beginning of the next century.



Higher sea levels will threaten the low-lying coastal areas of the world, such as the Netherlands and Bangladesh. Throughout the world, millions of people and areas of land will be at danger from flooding. Many people will have to leave their homes and large areas of farmland will be ruined because of floods. In Britain, East Anglia and the Thames estuary will be at risk from the rising sea.

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Global average sea levels have risen by 10 - 25 cm over the past 100 years. In the next 100 years they could rise by another 50 cm (maybe more).

This is due, not only to melting polar ice and glaciers adding extra water to the seas, but to the sea water expanding as it heats up.

Bangladesh consists mainly of low lying deltas - rising sea levels, together with increased tropical storms will see millions of people having to flee their homes.

In the Pacific Ocean there are many tiny islands that are at risk of being totally covered by the sea. Two islands: Tebua Tarawa and Abanuea, in the Kiribati group of islands, have already been covered by sea water. Tuvalu, a group of nine coral atolls (small islands) has started to evacuate its population to New Zealand.

River delta areas (where the river meets the sea) are richly fertile agricultural (farming) areas and contain many large cities. The impact on populations and economies could be very large indeed.

In other areas coastal erosion (when the land near the sea is destroyed) could increase, and salty sea water could spoil underground aquifers of freshwater that local populations rely on for drinking.

Even if you live safely on a hill, rising sea levels will affect you. So many large populations of people live in areas at risk of permanent flooding that you will either be paying for their protection, or for their resettlement (moving home).

(Source:

<http://www.coolkidsforacoolclimate.com/Causes&Effects/RisingSeaWorld.htm>)