

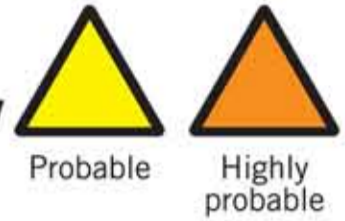
Climate change and water



Climate change has an enormous influence on the water cycle. This process is expected to cause rising temperatures, rising sea level, glacier retreat, increased climate variability, and an increase in water-related catastrophes such as floods and droughts.

Forecasted changes in, and probability of, extreme climate phenomena in the 21st century

Source: Adapted from the IPCC Third Assessment Report (2001).



Higher maximum temperatures: more hot days and heat waves in nearly all land areas



Higher minimum temperatures: fewer cold days, frost days and cold waves in nearly all land areas.



More intense precipitation events



Increased summer drying over most mid-latitude continental interiors.



Increased tropical cyclone peak wind intensity and precipitation intensities.



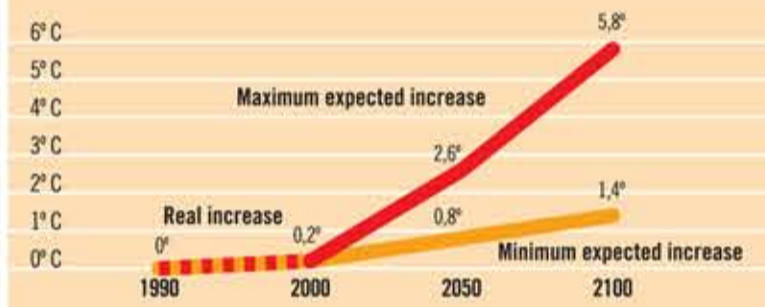
Increased risk of drought and flooding associated with El Niño events in many regions.



Climate change is expected to have a considerable effect on agriculture and food production throughout the world, causing changes, for instance, in the duration of dry periods and in agricultural techniques. It can also affect which plant varieties are cultivated, as well as the quantity of food produced and its price.

Expected maximum and minimum increases in world temperature (°C)

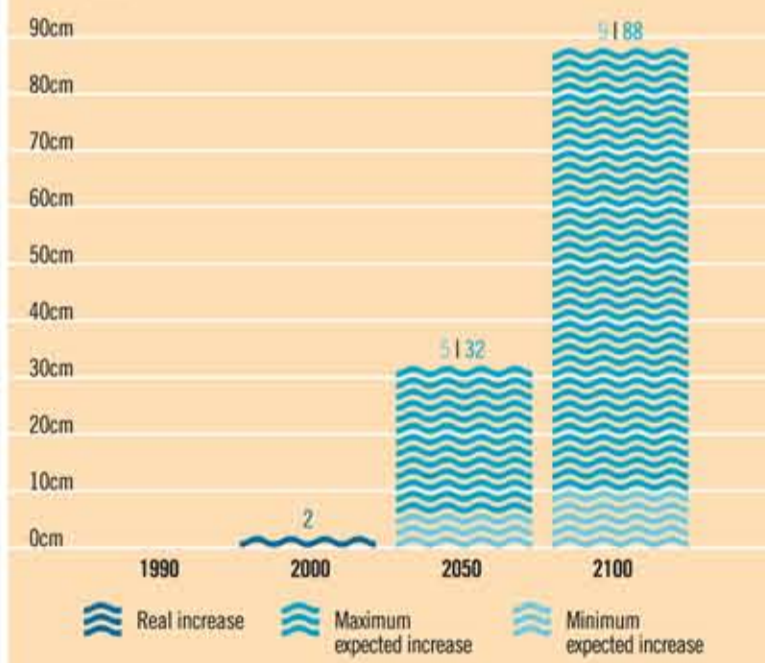
Source: Adapted from the IPCC Third Assessment Report (2001).



Inhabitants of low coastal areas are exposed to the risk of serious social and economic effects arising from the rising sea level, hurricanes and tsunamis, as well as the salinisation of freshwater.

Expected maximum and minimum rises in sea level (cm)

Source: adapted from the IPCC third Assessment Report (2001).



It is estimated that the number of environmental refugees fleeing, for instance, from scarcity of resources or environmental degradation could reach 150 million by the year 2050 as a result of climate change.

The rapid rate of climate change accentuates the urgency with which we must address water-related challenges. In order to mitigate the environmental changes that are already occurring and adapt to them, we must make an effort to better understand the complex natural systems and the impacts derived from human activities.

