Climate change facts and figures

Overall situation

- Climate change is increasing the risk of extreme weather events with more intense hurricanes, cyclones and typhoons, heavier rain and snowfall, more frequent and intense heat waves, and longer droughts. These changes affect disaster risk and food security.
- In the past 100 years, the global average temperature has risen by about 0.74 degrees Celsius.
- The rate of temperature increase accelerated over the course of the 20th century. There have been 15 of the hottest years on record in the last 16 years.
- Projections in temperature rise for the 21st century range from 2 to 4 degrees Celsius, which would have catastrophic consequences. According to an Intergovernmental Panel on Climate Change (IPCC) report, island states such as the Maldives will suffer major storm surges and rising sea level could cause many of the islands to disappear. This poses a tremendous threat to the lives, property and livelihoods of people living there. Millions more people could experience coastal flooding each year. Some kinds of food productivity will decrease in low latitudes and rise in mid to high latitudes. Ecosystems will change. Growing numbers of people in the poorest countries will suffer from malnutrition and from diarrhoeal, cardio-respiratory and infectious diseases. Globally, up to 30 per cent of species will be at increasing risk of extinction.
- It is very likely that the emission of greenhouse gases is the main cause of this temperature rise. Greenhouse gases are increasing due to the burning of fossil fuels including coal, gas and oil, changes in land use and deforestation.
- All over the world, glaciers are melting at a very fast rate. On average, glaciers have thinned by over 10 metres since 1980.
- Changing rainfall patterns and the melting of glaciers will jeopardize water supplies to hundreds of millions of people.
- It is projected that sea level will rise between 20 and 90cm globally by the end of this century.
- In summer 2011, the minimum level of ice cover in the Arctic was less than two thirds of the 1979–2000 average. The last five years have been the five lowest in extents of ice cover in the continuous satellite record, which began in 1979. Scientists expect the melting to continue in coming decades.
- Today the concentration of CO2 is about 390 ppm (parts per million). This is a very sharp increase from the pre-industrial level value of about 280 ppm. It also far exceeds the natural range over the past 650,000 years (180 to 300 ppm). There has been a clear correlation between the highest concentrations of CO2 and the warmest climate.

A pattern of substantially higher numbers of natural disasters and, in particular, climate-related disasters

- 1990–1999: around 200 climate-related disasters per year.
- 1999–2009: 350 climate-related disasters on average per year.
- 2000–2009: 217 million people affected on average by climate-related disasters annually.
- 2000–2009: 789 billion US dollars estimated damage as a result of climate-related disasters.

Over the past decade from 2001-2010 there has been an average of 367 weather related disaster per year. During the same years more than 54.000 people have died in these hazards on a yearly average according to the World Disasters Report 2011.

For detailed statistics on people displaced due to climate-related disasters please visit http://bit.ly/txbLM by the United Nations Office for the Coordination of Humanitarian Affairs and the Internal Displacement Monitoring Centre
[Sources: IFRC and CRED, Oxfam, Care. Figures apply to 2009 unless otherwise stated.]