What are the Effects of Climate Change?

There are a huge number of effects of climate change.

Already, millions of people are dying each year.

The latest reports predict that over 100 million people could die by 2030 because of climate change if the world fails to take action. [Source](http://grist.org/news/explaining-the-100-million-to-die-from-climate-change-claim/)

Each year, an increasingly larger amount of people will be affected with over 90 % of victims living in developing countries.

From [The Climate Reality Project](http://climaterealityproject.org/)

Increase in Natural Disasters

Climate change will not solely cause an increase in the average surface temperatures across the globe, a phenomenon known as [global warming](http://www.climate-change-guide.com/global-warming-definition.html).

In reality, it will cause an increase in both the number and ferocity of

* [droughts](http://www.climate-change-guide.com/drought-definition.html)
* [dust storms](http://www.climate-change-guide.com/dust-storms.html)
* [floods](http://www.climate-change-guide.com/floods-and-climate-change.html)
* [heat waves](http://www.climate-change-guide.com/heat-wave-definition.html)
* [hurricanes](http://www.climate-change-guide.com/hurricane-definition.html)
* [tropical storms](http://www.climate-change-guide.com/tropical-storm-definition.html)
* [tornadoes](http://www.climate-change-guide.com/tornadoes.html)
* and [wildfires](http://www.climate-change-guide.com/wildfire-definition.html)

From [Years of Living Dangerously](https://www.youtube.com/user/Years" \t "_blank)

Ten Hottest Years on Record

Even more alarming, [the ten hottest years on record](http://www.climate-change-guide.com/hottest-years-on-record.html) all occurred since 1998. The hottest of all was 2014.

In that year, hundreds of wildfires swept through Siberia and British Columbia, Canada.

It is clearly not a coincidence that the warmest years on record have brought forth the worst hurricane seasons, wild fires and heat waves ever seen.

Environmental Refugees

The Internal Displacement Monitoring Centre reports that there were **over 42 million environmental refugees** in Asia and the Pacific during 2010 and 2011.  
  
These people were displaced because of rising sea levels, drought, storms, floods, and heat and cold waves.  
  
There are now more environmental refugees than political and war refugees combined.  
  
Unfortunately, experts predict that there will be **over 150 million refugees by 2050**.

Extreme Weather

However, the effects of climate change include a change in weather patterns, precipitation, [sea level rise](http://www.climate-change-guide.com/rising-sea-levels.html), and wildlife.

A combination of changes in precipitation and weather patterns will bring forth droughts in one sector and great [floods](http://www.climate-change-guide.com/floods-and-climate-change.html) in a neighbouring areas.

This has drastic consequences on human life as well as ecosystems. It will even have a large impact on [agriculture.](http://www.climate-change-guide.com/agriculture-and-climate-change.html)

From [National Geographic](http://environment.nationalgeographic.com/environment/global-warming)

Tornadoes

The intensity, frequency, and duration of [tornadoes](http://www.climate-change-guide.com/tornadoes.html) are increasing due to climate change.

In the United States, they cause **billions** of dollars in damages annually.

In passing, it should be noted that all the effects of climate change combined will cause hundreds of billions of dollars in damages in the upcoming decades.

Dust Storms

[Dust storms](http://www.climate-change-guide.com/dust-storms.html), also known as sandstorms, will have tremendous consequences on agriculture.

Moreover, it will spread disease and pollution to hundreds of thousands of people around the world.

Floods

[Floods](http://www.climate-change-guide.com/floods-and-climate-change.html) cause devastating damage and affect millions of people each year. With climate change, they are getting more destructive.

An example would be events that have unfolded in Zhejang province, China in June 2011.

The worst drought in 50 years has been followed by deadly floods. Over half a million people have been evacuated and a great number of crops have been destroyed.

Sadly, over a hundred people were killed in landslides. These extreme weather events are repeating themselves across the world and are getting worst each year.

Incredible floods in Pakistan and Australia have occurred not too long ago. In the 2010 Pakistan floods, there was an estimated 43 billion dollars in damages.

By the end of it, 20 million people were affected. In Australia, several incredible floods have occurred.

Impact on Lakes

Yet another of the effects of climate change is the [shrinking of lakes](http://www.climate-change-guide.com/shrinking-lakes.html).

A decrease in precipitation caused by climate change has caused lakes to decrease in size.

A combination of the effects of climate change and population pressures has caused Lake Chad in Africa to shrink by over 90% since 1963.

As a result, 30 million people living in the region are now competing over scarce water resources.

Even worse, although Lake Chad was once one of the largest lakes in the world, it could disappear in about 20 years.

This has caused millions of people to immigrate to new locations. In many cases, children are forced to travel several kilometers on a daily basis in order to obtain drinking water.

Desertification

Mass [desertification](http://www.climate-change-guide.com/desertification-definition.html) is occurring at an increasing rate and is one of the least known effects of climate change.

Millions of square kilometers of once agricultural land have become barren. Any lakes or rivers in its path have disappeared.

There are over a 100 countries, primarily in Africa, Asia and Latin America that are currently affected by desertification.

Shortages of Food and Water

[Shortages of food and water](http://www.climate-change-guide.com/shortages-of-food-and-water.html) will become commonplace in the future.

As the world population is growing, there is a higher demand for these vital resources.

However, agricultural output in many regions of the world is depleting because of drought, desertification, heat waves, wildfires, and changes in precipitation.

In addition, fresh water supplies are decreasing due to the [melting of glaciers](http://www.climate-change-guide.com/melting-glaciers.html), the[shrinking of lakes](http://www.climate-change-guide.com/shrinking-lakes.html), and water contamination.

Extinction of Species

The mass [extinction of species](http://www.climate-change-guide.com/effects-of-climate-change.html) is one of the most troubling effects of climate change.

We humans have the technology to help us adapt to drastic changes in weather patterns but animals do not stand a chance.

Do not be mistaken, the climate has changed for millions of years. However, in the last few decades it has changed at such a rate that animal life could not adapt to it.

Evolution is a process that requires millions of years and life has a remarkable ability to adapt.

However, when it changes in mere decades as opposed to millions of years, all life on Earth is severely affected.

In fact, some experts predict that**over 1 million species could become extinct by 2050**.

Ocean Acidification

[Ocean acidification](http://www.climate-change-guide.com/ocean-acidification-definition.html) is yet another effect of climate change.

The increasing PH of oceans due to carbon dioxide being absorbed will affect marine life at the bottom of the food chain.

As a result,**the entire food chain is being affected** and eventually, land animals that are dependent on fish will suffer as well.

In the worst case scenario, it is possible that ocean acidification will wipe out almost all ocean life.

Melting Glaciers and Polar Ice Caps

Both the [melting polar ice caps](http://www.climate-change-guide.com/melting-polar-ice-caps.html) and [melting glaciers](http://www.climate-change-guide.com/melting-glaciers.html) pose serious threats to human civilization.

The polar ice caps as well as glaciers around the world play an important role in regulating temperature by not only absorbing heat, but also by reflecting the sun's light (see [albedo](http://www.climate-change-guide.com/albedo-definition.html)).

Moreover, glaciers play an integral role in forming the world's perennial rivers which are responsible for agriculture that much of the world population is dependent on.

Hence, if these glaciers melt, millions of people will have to struggle for water, and[wars over natural resources](http://www.climate-change-guide.com/wars-over-natural-resources.html) may occur in the far future.

Additionally, when ice in Antarctica or glaciers in Greenland melt, they will contribute to rising sea levels.

Rising Sea Levels

[Rising sea levels](http://www.climate-change-guide.com/rising-sea-levels.html) will inundate millions of acres of agricultural land which will just add to the declining food supply caused by desertification.

Furthermore, rising sea levels will inundate some of the largest cities in the world such as New York City, Shanghai and Amsterdam. Needless to say, Venice will be in hot water.

Nearly 100 million people live within 1 meter (nearly 3 feet) from average sea level and thus will potentially lose their homes.

Spread of Disease and Food Poisoning

An increase in temperature will also spread [malaria](http://www.climate-change-guide.com/malaria-and-climate-change.html) and [dengue fever](http://www.climate-change-guide.com/dengue-fever.html) as well as several other diseases.

Malaria alone could spread to millions of people in the near future and will have devastating consequences.

Moreover, it will increase [salmonella](http://www.climate-change-guide.com/salmonella-and-climate-change.html) outbreaks.

As aforementioned, climate change will increase the frequency and intensity of[dust storms](http://www.climate-change-guide.com/dust-storms.html) which will also spread disease.

The spread of disease and food poisoning is among the least known effects of climate change.

A Planetary Emergency

The effects of climate change are extremely important in today's society and will have a large impact on human life across the world.

In the future, [wars over natural resources](http://www.climate-change-guide.com/wars-over-natural-resources.html) could result in millions or even billions of casualties.   
  
Indisputably, climate change is mankind's greatest challenge and we cannot afford to ignore it any longer.