

## Global Warming and the Position of Bangladesh

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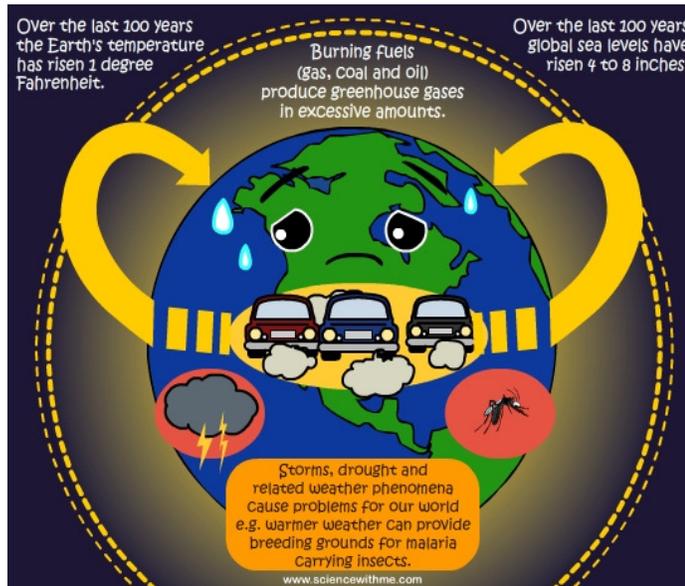
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Internationale Zusammenarbeit (GIZ) GmbH

### Introduction:

Global warming is a problem that our world is facing day in and day out and can be simply traced back to the "greenhouse effect." The earth and its atmosphere have a natural supply of "greenhouse gases" that allows the atmosphere to capture the heat given off by our planet and keep earth's surface warm enough for us to live on. Without these "greenhouse effects or gases", our climate would be a frozen wasteland and uninhabitable for us or the majority of our species to live on.

Many factors come into play when pointing the blame as to why our atmosphere is being depleted and it all seems to make its origin sometime after the start of the Industrial Revolution of the 1700's. The amount of (CO<sub>2</sub>) that was released was in a close balance with what our earth could store at the surface but upon the rise of



Industries in the eighteenth century, we began emitting far larger amounts of greenhouse gasses into our atmosphere and because of the advancements in technology, things such as cars, boats, planes, factories, power plants, you name it, were burning fossil fuels at exponential rates. The problem with such instances is that these

gases have the potential to stay in the atmosphere anywhere from 50 years to even centuries at a time and over the past 300 years especially, our atmosphere has suffered and a blanket of heat is surrounding the earth that is far greater than anything we have ever seen.

### **Top 10 Worst Effects of Global Warming**

Global warming is the long-term, cumulative effect that greenhouse gases, primarily carbon dioxide and methane, have on Earth's temperature when they build up in the atmosphere and trap the sun's heat. It's also a hotly debated topic.

#### **10. Rising Sea Level**

Earth's hotter temperature doesn't necessarily mean the Miami lifestyle is moving to the Arctic, but it does mean rising sea levels. How are hotter temperatures linked to rising waters? Hotter temperatures mean ice -- glaciers, sea ice and polar ice sheets -- is melting, increasing the amount of water in the world's seas and oceans.

#### **09. Shrinking Glaciers**

You don't need special equipment to see that glaciers around the world are shrinking. Tundra once covered with thick permafrost is melting with rising surface temperatures and is now coated with plant life. In the span of a century, glaciers in Montana's Glacier National Park have deteriorated from 150 to just 35.

#### **08. Heat Waves**

The deadly heat wave that swept across Europe in 2003, killing an estimated 35,000 people, could be the harbinger of an intense heat trend that scientists began tracking in the early 1900s. Extreme heat waves are happening two to four times more often now, steadily rising over the last 50 to 100 years, and are projected to be 100 times more likely over the next 40 years.

#### **07. Storms and Floods**

Experts use climate models to project the impact rising global temperatures will have on precipitation. However, no modeling is needed to see that severe storms are happening more frequently: In just 30 years the occurrence of the strongest hurricanes -- categories 4 and 5 -- has nearly doubled.

#### **06. Drought**

While some parts of the world may find themselves deluged by increasing storms and rising waters, other areas may find themselves suffering from drought. As the climate warms, experts estimate drought conditions may increase by at least 66 percent. An increase in drought conditions leads quickly to a shrinking water supply.

and a decrease in quality agricultural conditions. This puts global food production and supply in danger and leaves populations at risk for starvation.

**05. Disease**

The World Health Organization (WHO) reports that outbreaks of new or resurgent diseases are on the rise and in more disparate countries than ever before, including tropical illnesses in once cold climates -- such as mosquitoes infecting Canadians with West Nile virus.

**04. Economic Consequences**

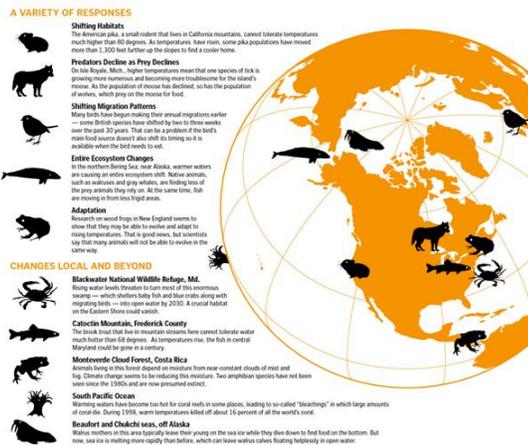
The costs associated with climate change rise along with the temperatures. Severe storms and floods combined with agricultural losses cause billions of dollars in damages, and money is needed to treat and control the spread of disease. Extreme weather can create extreme financial setbacks. For example, during the record-breaking hurricane year of 2005, Louisiana saw a 15 percent drop in income during the months following the storms, while property damage was estimated at \$135 billion.

**03. Conflicts and War**

Declining amounts of quality food, water and land may be leading to an increase in global security threats, conflict and war. National security experts analyzing the current conflict in Sudan's Darfur region suggest that while global warming is not the sole cause of the crisis, its roots may be traced to the impact of climate change, specifically the reduction of available natural resources. The violence in Darfur broke out during a time of drought, after two decades of little-to-no rain along with rising temperatures in the nearby Indian Ocean.

**02. Loss of Biodiversity**

Species loss and endangerment is rising along with global temperatures. As many as 30 percent of plant and animal species alive today risk extinction by 2050 if average temperatures rise more than 2 to 11.5 degrees F (1.1 to 6.4 degrees C) [sources: EPA, Scientific American]. Such extinctions will be due to loss of habitat through desertification, deforestation and ocean warming,



as well as the inability to adapt to climate warming. Wildlife researchers have noted some of the more resilient species migrating to the poles, far north and far south to maintain their needed habitat; the red fox, for example, normally an inhabitant of North America, is now seen living in the Arctic.

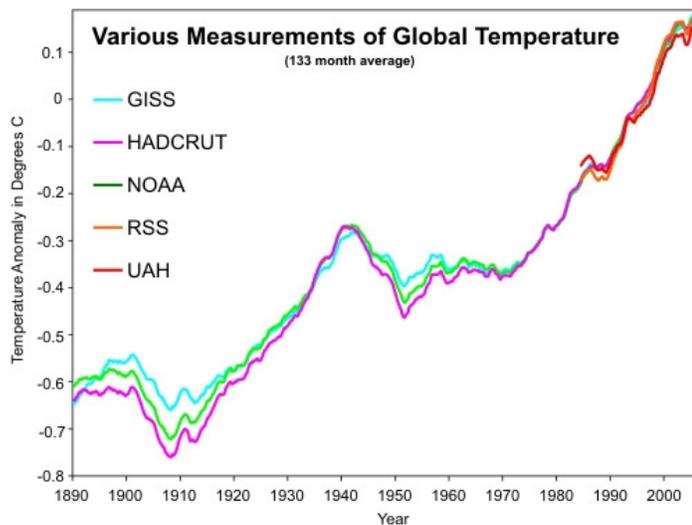
### 01. Destruction of Ecosystems

Changing climatic conditions and dramatic increases in carbon dioxide will put our ecosystems to the test, threatening supplies of fresh water, clean air, fuel and energy resources, food, medicine and other matters we depend upon not just for our lifestyles but for our survival.

#### Global warming vs climate change:

What the science says...

There have long been claims that some unspecified "they" has "changed the name from 'global warming' to 'climate change'". In reality, the two terms mean different things, have both been used for decades, and the only individual to have specifically advocated changing the name in this fashion is a global warming 'skeptic'.

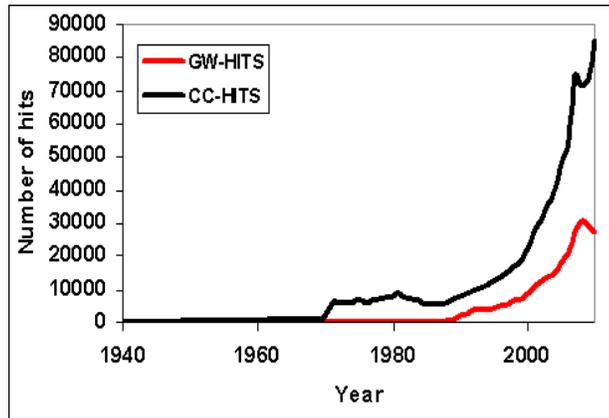


'Climate change', again as the name suggests, refers to the changes in the global climate which result from the increasing average global temperature. For example, changes in precipitation patterns, increased prevalence of droughts, heat waves, and other extreme weather, etc. These projections

of future global precipitation changes from the 2007 IPCC report are an example of climate change.

The IPCC was formed in 1988, and of course the 'CC' is 'climate change', not 'global warming'. There are many, many other examples of the use of the term 'climate change' many decades ago. There is nothing new whatsoever about the usage of the term.

And a Google Scholar search reveals that the term 'climate change' was in use before the term 'global warming', and has always been the more commonly-used term in scientific literature.

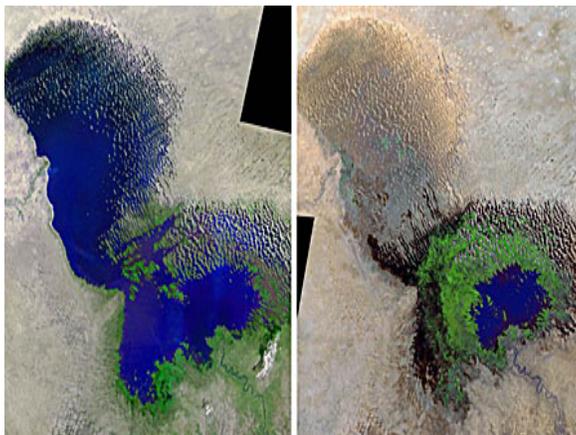


“Climate change” is less frightening than “global warming”. As one focus group participant noted, climate change “sounds like you’re going from Pittsburgh to Fort Lauderdale.” While global warming has catastrophic connotations attached to it, climate change suggests a more controllable and less emotional challenge.

So to sum up, although the terms are used interchangeably because they are causally related, 'global warming' and 'climate change' refer to different physical phenomena. The term 'climate change' has been used frequently in the scientific literature for many decades, and the usage of both terms has increased over the past 40 years. There is simply no factual basis whatsoever to the myth "they changed the name from global warming to climate change".

### How global warming is changing maps

Satellite images published in Times Comprehensive Atlas of the World show the damaging effects of global warming on Lake Chad pictured in 1972 (left) and 1987 (right). The effects of global climate change are altering the face of the planet – and its maps – according to a leading atlas published today.



Cartographers have been forced to redraw coastlines and reclassify types of land since the last edition of the Times Comprehensive Atlas of the World went on sale four years ago.

The main culprits are climate change and ill-conceived irrigation projects, the atlas editors said.

The worst-hit parts of the world include the Aral Sea in central Asia, which has been reduced by three-quarters in the past 40 years, and Lake Chad, which has shrunk by 95 per cent since 1963.

The Dead Sea is 25m (82ft) lower than it was 50 years ago and sections of rivers including the Rio Grande and Colorado in the US, the Tigris in the Middle East and the Yellow River in China are now drying out each summer.

### **Bangladesh:**

Green house effects on Bangladesh are expected to be complex as compared to many other countries. This is because it is a Southern Asia low lying deltaic region that has a substantial coastline and at the same time three major rivers systems commonly known as; Ganges, Brahmaputra, and the Meghna which flow through it in a basically north to south direction and carrying approximately 1.5 to 2.4 billions tones of sediment from the Himalayan Mountains annually. This is happening as it is being hit by monsoon precipitation from clouds coming from the south to the north many times preceded by violent storms and tidal waves. When the enhanced river water flow and monsoon precipitation combine, they usually result in flooding of a large part of the country causing widespread distress and damage.

One of the commonly known geologically young and dynamic deltas is the Bangladesh coast. On top of this, much of the coastal area where certain parts are actually an active delta, that is still being formed lies within an approximate of less than 1M above sea level.

It has been hypothesized that the country is likely to experience an inundation of up to 33% of its geographical area. This is as a result of the rise in sea level that is by 1 to 3m. The inundation has been reached at by taking the contour line of 1 and 3m above sea level of the country and then calculating the habitation, land, and production to get an estimation of the size of damage.

### **Global warming to hit Bangladesh hard**

Washington DC, June 19, 2013- Bangladesh will be among the most affected countries in South Asia by an expected 2°C rise in the world's average temperatures in the next decades, with rising sea levels and more extreme heat and more intense cyclones threatening food production, livelihoods, and infrastructure as well as slowing the reduction on poverty. The report cited Bangladesh as one of more "potential impact hotspots" threatened by "extreme river floods, more intense tropical cyclones, rising sea levels and very high temperatures". Cyclone Sidr exposed 3.45 million households to inundation. A potential 10 year return cyclone in

2050 could expose 9.7 million people to more than 3 meters of inundation affecting agriculture and lives.

Depicting life in a not-too-distant future shaped by already present warming trends, the report warns that even 20 to 30 years from now, shifting rain patterns could leave some areas under water and others without enough water for power generation, irrigation or drinking. South Asia is already experiencing a warming climate.

“Bangladesh faces particularly severe challenges with climate change threatening its impressive progress in overcoming poverty,” said Johannes Zutt, World Bank Country Director for Bangladesh and Nepal. “Bangladesh has demonstrated itself as a leader in moving the climate change agenda forward. The World Bank is providing support to enhance the country’s resilience to climate change impacts through adaptation interventions and better disaster preparedness.”

.A warming climate will contribute to slowing the reduction in poverty. While the lives of everyone in the region will be altered by climate change, the impacts of progressive global warming will fall hardest on the poor. Low crop yields and

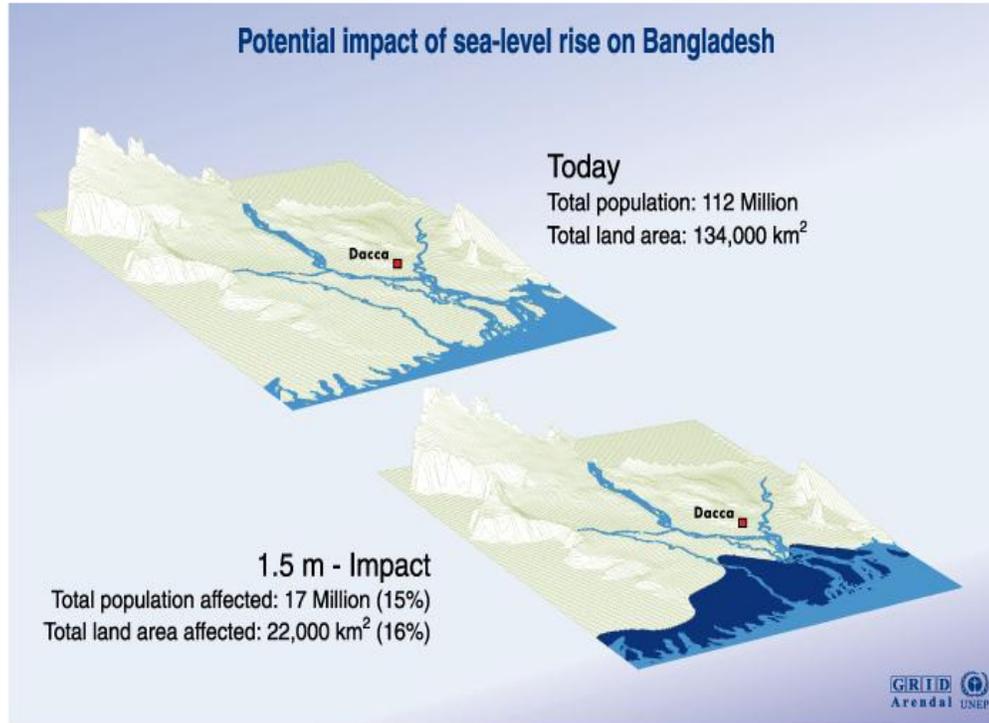


associated income loss from agriculture will continue the trend toward migration from rural to urban centers. In Bangladesh, 40% of productive land is projected to be lost in the southern region of Bangladesh for a 65cm sea level rise by the 2080s. About 20 million people in the coastal

areas of Bangladesh are already affected by salinity in drinking water. Rising sea levels and more intense cyclones and storm surges could intensify the contamination of groundwater and surface water causing more diarrhea outbreaks.

“Bangladesh is at the fore front; we have projects and a large multi-donor fund that works on having early warning systems for floods and embankments when there are floods to protect crops and fields and to prevent destruction of the urban infrastructure. And some farmers are already growing vegetables that are adapted to water. Last but not least, it is very important that the countries in the region have a voice in the global conversation about climate change.”

Many of the worst climate impacts could still be avoided by holding warming below 2°C, but the window for action is narrowing rapidly. Urgent action is needed to build resilience through economic development to risks to agriculture, water resources, coastal infrastructure, and human health.



Source : UNEP/GRID Geneva; University of Dacca; JRO Munich; The World Bank; World Resources Institute, Washington D.C.

Bangladesh, one of the world's poorest nations is also the country most vulnerable to sea-level rise. The population is already severely affected by storm surges. Catastrophic events in the past have caused damage up to 100 km inland. It is hard to imagine to what extent these catastrophes would be with accelerated sea-level rise.

Since this scenario was calculated in 1989, the expected rate of sea level rise has been modified.

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According to UN Environment Programme (UNEP), the global temperature would rise up to 1 degree centigrade in summer and 1.5 degrees in winter by 2050, resulting in sea-level rise by up to half a metre that will engulf 11 percent land in

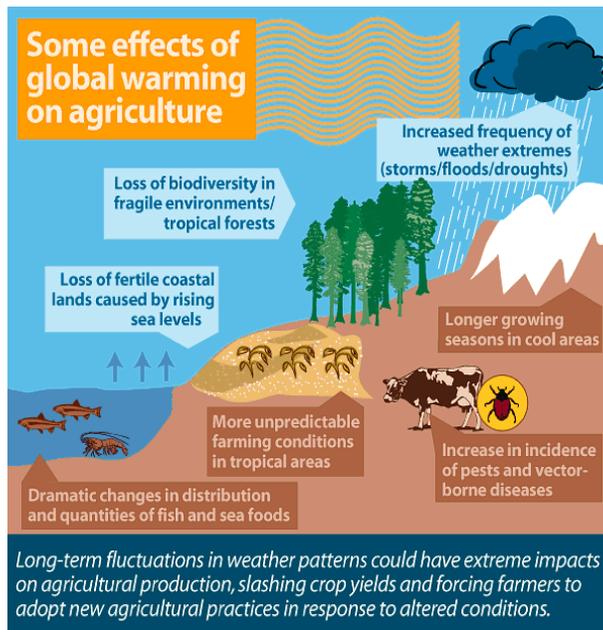
Bangladesh, affecting nearly 60 lakh people along its coastal belt. “Only embankments with deep forestation along the coast and coastal rivers can protect millions of people.” Bangladesh has said it would need \$10 billion from big polluting nations to help it adapt to powerful storms, floods and rising seas. At present expected rates, this stage will occur in about 150 years from now.

Scenario	Land area '000km <sup>2</sup>	Population 1989 '000'000 est.	Population 2030 '000'000 est.
150 cm	22 (16%)	17 (15%)	34 (15%)
Bangladesh tot	134 (100%)	112 (100%)	224 (100%)

“The sea level will rise at least by three metres (yards) submerging some 18 percent of the country by 2050,” the Dhaka-based Institute of Water Modeling (IWM) said.

IWM was set up in 1996 for planning and management of Bangladesh’s water resources and to monitor rise in sea level and its probable adverse effects.

“A 600-metre wide forest will reduce the surge level by 50 cm.” According to another study by the Intergovernmental Panel on Climate Change (IPCC), the sea-level rise will wipe out more cultivated land in Bangladesh than anywhere in the world.



By 2050, rice production is expected to drop by 10 percent while wheat production by 30 percent due to water logging. Experts fear Bangladesh will suffer most in the near future because of global climate change if it fails to take any effective measures. Referring to the geographical situation of the Netherlands, the water expert said though the country is situated under sea level, its people are living there using cross dams surrounding the country and modern technologies.

“Bangladesh will also need to construct high dams in coastal areas using modern technologies. High power pumps will have to be set up to reduce waterlogging to ensure smooth farm activities in this region,” he said. Particularly the western ones, are responsible for the global climate change, as they are emitting huge Carbon dioxide gas harming the environment.

The effects of global warming have therefore affected the sea levels. Warmer temperatures usually raise sea level and this is by expanding ocean water, melting mountain glaciers and parts of the Greenland ice sheet. In this wiki I am going to discuss how global warming has an effect on rising sea levels around the countries of Bangladesh and Honduras.

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