The Health Impacts of Climate Change

From forest fires to grocery store prices, climate change will affect all of us. Unfortunately, however, these effects will be much more severe for people, depending on their geographical location, economic status, and more.

0:10

Text box: Berk Uzman; Uzman narrating

Climate change is real, and it is happening now. It is going to have direct and far-reaching consequences on all of us.

Animation of people from around the world; text box with quote

But it won't be affecting us all the same. For people living in poorer countries around the world and even people living in poorer areas of wealthier nations, the impact will be more severe. In fact, in a recent report, the United Nations points to studies that conclude climate change will worsen existing poverty and amplify inequalities, especially for those disadvantaged by gender, age, race, class, caste, indigeneity, and disability.

In this video, we're going to look at the effects of climate change on the health and well-being of people around the world.

World map showing climate change; clips of people studying and working to help the climate crisis

Before we get started, just a quick reminder: we're going to cover some pretty gloomy statistics. However, the situation is not hopeless. That is why the climate project exists. There is still time, and we all have a part to play in avoiding the worst of climate change.

1:10

To fully grasp the scale of global climate inequality, and the reality of the challenges we face, we asked an expert for help: Dr. Margot Brown is Vice President of Environmental Justice and Equity Initiatives at the Environmental Defense Fund.

Text box: Dr. Margot Brown; text boxes: four major impacts of climate change with relative photos; text box: geography and climate inequality; word maps showing temperatures

To keep things relatively simple, we're going to look at just four negative impacts of climate change: heat, flooding, disease, and food security, and how they impact low and middle income nations versus high income nations. Why are there differences? First, let's talk a little bit about geography and the role it plays here. The closer you are to the Equator, the hotter it gets. Many parts of the world will be getting dangerously warm, but even more so in tropical latitudes. Similarly, the closer one lives to rivers, lakes, and the oceans, the greater the exposure to flooding and potentially diseases that become more prevalent due to climate change.

2:09

World maps showing effects of climate change; photos showing fires, flooding, food shortages, etc; text box: heat; transition music

On top of this, we have to think about the difference in resources available to combat climate change and low and middle income nations. Colonization and industrialization play a large role in the disparity of resources. But for the sake of time, we're not going to cover that here. The bottom line is that low and middle income nations don't have as much money to fight fires to protect their populations against flooding, to provide medical care, or to make sure there's enough food to eat.

Let's look at our first negative impact of climate change: heat.

Text box: 146 different studies; world map showing temp. related death rates

The National Institute for Health looked at 146 different studies that has shown a direct correlation between extreme temperatures and higher death rates across countries in Asia, Africa, the Pacific, and Latin America.

3:05

Photos of people in South Asia in a heatwave

One place that's heating up particularly fast is South Asia, home to a quarter of the world's population. Summer in this region is becoming increasingly dangerous. One recent study found that nearly 150 percent increase in heat-related deaths between 1960 and 2009. In 2022, the first deadly heat wave came earlier than ever before, reaching as high as 120 degrees in early May.

Photos of people dying from heat

Many of the deaths caused by these heat waves are a result of the heart working to pump blood to cool the body down, resulting in heart attacks and other cardiac distress.

Photos of people struggling to cope with heat; text box: flooding; transition music

The problem is that for many poor people, there just isn't anywhere to escape the heat. There isn't always air conditioning at home or in public spaces. Sometimes even fans or reliable electricity to power them can be hard to come by.

4:04

Clip of a flooded street; world map showing flood rates

Flooding is another serious issue stemming from climate change. 1.47 billion people live in the most flood vulnerable countries. A 20-year study showed that the 10 countries with the highest death rates from flooding were all middle or low income, with Venezuela, Haiti, and Somalia affected particularly badly.

Photos of people struggling in floods

The deaths recorded in these studies are mostly the result of injury and drowning, but floods have much longer term effects as well. People often lose their homes and possessions to floods. Often, they have to go through the difficult process of rebuilding, but if flooding is bad enough and happens too often, they might even need to move to another region. Both rebuilding and relocation are expensive and people living in middle and low-income countries are less likely to have private insurance or to get government or international support for recovery.

5:01

Clip depicting the growth of diseases in a flood; text box: Infectious diseases; transition music

But this isn't the end of the problem that flooding creates. As water levels rise and floods hit many parts of the world repeatedly, they also contribute to one of the other major hazards of climate change: the growth of infectious diseases.

Clips of microbes and insects

Infectious diseases are caused by microbes, small organisms that carry diseases. When we think about the impact of climate change, we generally focus on a couple of key ways diseases are passed on, via our water or via insects that thrive in water.

But even in places where climate change brings drought won't be better off since the decrease in available water in these regions will drive people to drink more polluted water.

World map showing annual rainfall

Neither of these are new, but climate change has extended the rainy season in many places. This means that diseases stay around for longer and reach more areas.

5:57

Text boxes with various diseases; text box: a closer look at Malaria; transition music

As a result, diseases like cholera, malaria, and Dengue Fever—once on the decline—could surge back in the years ahead of us.

Photo of a mosquito; map of Africa

Let's look a little more closely into the link between climate change and one particular infectious disease: malaria, spread by the mosquito. And, let's focus on one particular region of the world: East Africa.

Malaria graph

Climate change in East Africa is increasing flooding and rainfall, which extends the seasons when mosquitoes are active and expands the regions where they live. In fact, scientists have already recorded roughly a 40 percent expansion of the range of malaria-carrying mosquitoes in the highlands of East Africa.

World map showing malaria death trends

This expansion is connected to the fact that 96 percent of the world's over 400,000 Malaria deaths in 2019 occurred in Africa, about half of those in East Africa

6:57

Text box: Food Security; transition music; photos of crops; graph showing crop/livestock loss

Now, let's take a look at food security. This is closely tied to the issues we've already covered. Extreme heat, drought, or flooding can dramatically shorten the growing season, reducing the amount of crops or livestock that can be raised in certain areas of the world. On top of that, heat, in particular, can make farming these crops, often outdoors, more dangerous, resulting in lost work days and less food production.

As much as climate change is impacting the food that comes from our farms, the situation is not much better at sea. Climate change is warming the oceans and also making them increasingly acidic.

World map showing the effects on fisheries

As climate change acidifies and warms our oceans, fish reproduction is expected to decline dramatically. Fishing in low and middle-income countries in Africa, Asia, and Latin America are expected to be the most affected.

7:54

Photos of people fishing

Many of the world's most vulnerable communities depend on fish and shellfish for much of their protein, including as much as 50 percent of the population in West Africa and 37 percent in Southeast Asia.

Map of Latin America

When fishing and farming are both affected, countries can find their food supply particularly devastated. Consider Latin America and the Caribbean, which suffered, in particular, during the decade between 2008 and 2018.

World map of La Nina weather patterns; food production loss infographic

This region is particularly vulnerable to La Nina weather patterns, which bring floods to the Caribbean and droughts in food growing areas and Argentina and Southern Brazil. Over this decade, a series of La Ninas combined with gradual decline in fish catches, the result was a loss of as much as 40 percent of the region's food.

Photos of people in grocery stores

In high-income countries, lower yields translate in the longer term to higher prices, an effect we are probably already seeing in our supermarkets.

8:51

Photos of people in grocery stores

This is certainly an issue for many and can be particularly challenging for people of lower incomes in these countries.

Photos of people's jobs, farms and fishing vessels

But in the low and middle income nations, especially Latin America, the Caribbean, Southern Asia, and Africa, there's also an economic consequence. Growing less food means people lose their jobs, their farms, and their fishing vessels. Whether rural or Urban, people in these regions will see food becoming more scarce in the future.

Infographic

By 2030, worldwide under nourishment is expected to increase to about 10 percent and as high as 30 percent in low-income African countries.

Animated child

The most significant contributing factor to these food shortages is climate change and the most vulnerable will be children, for whom nutritional deficiencies can lead to stunted growth, weakened immune systems, impaired mental development, and even death.

9:45

Text box: It's Not Too Late; transition music; photos of climate change rallies and people taking action

While the precise impact of climate change is difficult to predict, we can already see distinct patterns. Everyone will be affected. Low and middle income countries will be more affected and consequently less able to adapt. The result will be a cycle of increasing poverty and suffering. This is precisely why it is so critical that we act now through strategies that are evidence-driven to make the most possible impact. It's not too late and we all have a role to play.