

# GROWING CLIMATE IMPACTS

## OUR CHANGING CLIMATE

OCTOBER 2018

### A PROBLEM FELT AROUND THE WORLD

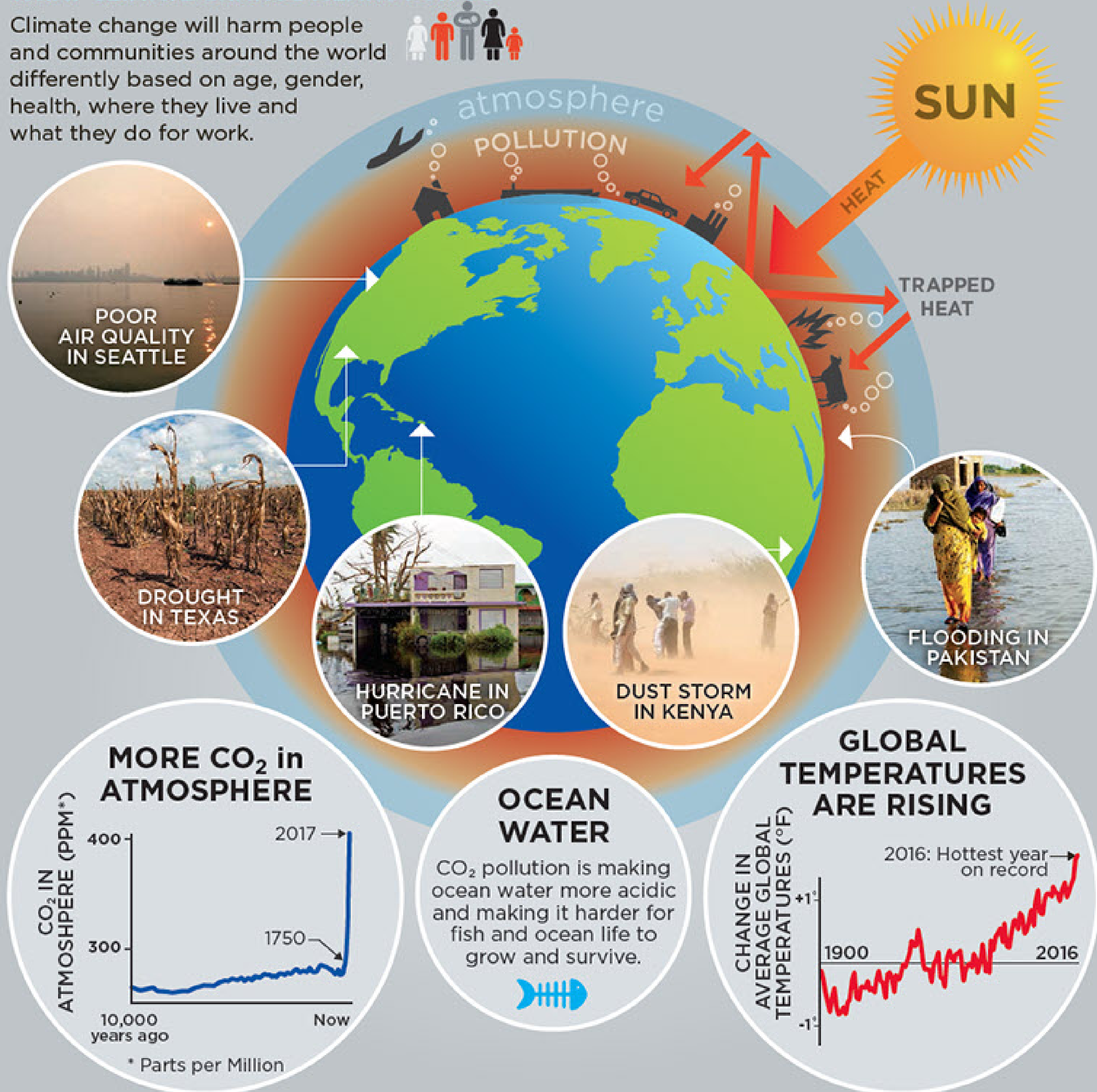
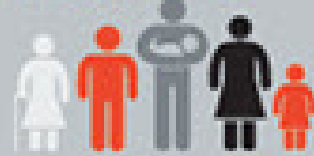
Carbon dioxide (CO<sub>2</sub>) is a natural gas that helps make the planet warm so life on earth can survive. Human activities are putting too much CO<sub>2</sub> gas in the earth's atmosphere and the ocean. This is harming our planet and is causing global temperatures to get warmer. This is called climate change.



More CO<sub>2</sub> in the atmosphere is creating dangerous environmental changes around the world that are not good for people. Additionally, more CO<sub>2</sub> in the ocean is making it harder for ocean life, like fish and shellfish, to survive. This means there is less seafood for people to sell and eat.

### WHAT CLIMATE CHANGE MEANS FOR US

Climate change will harm people and communities around the world differently based on age, gender, health, where they live and what they do for work.



Source: kingcounty.gov/services/environment/climate

More info: [newhavenclimatemovement.org](http://newhavenclimatemovement.org)



## Climate Impacts Around the World

### Climate Impact: Australia



In the great barrier reef, climate change has generated unusually high water temperatures. This has forced corals to release symbiotic algae from their tissue (a process called bleaching). Without the algae --their source of food-- corals become weak. Amidst current climate conditions, coral are not given enough of an opportunity to rebound before the next bleaching episode, and most die. We are watching the death of the biggest structure made by living organisms on our planet and one of the seven wonders of the world.

### Climate Impact: South Africa



While humans had a huge hand in accelerating climate change, many other species are paying a high price. A recent study suggested that climate change is having major adverse affects on aardvark food sources. Aardvarks all over Southern Africa are starving as their prey dies out in droughts. This is especially troublesome because Aardvarks are what is known as a keystone species. This means that other animals rely on the work they do and it is estimated that 27 animals use aardvark diggings.

### Climate Impact: China



In the Pearl River Delta of China, climate change is contributing to a dramatic increase in flooding. Individual cities in the region have spent over \$100 million on flood damage alone. Moreover, floods have caused tens of thousands of people to lose their home and ruined vast swaths of farmland. These floods have also had major financial implications worldwide; many of the rapidly developing cities in the region are major producers of the consumer goods we enjoy daily in the U.S.



GROWING CLIMATE IMPACTS: FOOD

# THE STATE OF FOOD AND AGRICULTURE

## CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY

ADAPTATION

2016

### CLIMATE CHANGE AFFECTS AGRICULTURAL PRODUCTION IN MANY REGIONS

The greatest vulnerabilities to climate change impacts are in sub-Saharan Africa and South and South-east Asia.

Food insecurity and climate change vulnerability present day

Productivity declines would have serious implications for food security.

Millions of low-income people that are already highly food insecure, would be affected. Smallholder producers in developing countries are amongst the most vulnerable.

All these effects have negative impacts on the productivity of crops, livestock, fisheries and forestry.

CLIMATE CHANGE POSES A SERIOUS THREAT TO FOOD SECURITY

Significant improvements can be achieved with the introduction of sustainable agricultural practices. Smallholders need support to access the right technologies to implement them.

### RESPONDING TO CLIMATE CHANGE

Innovation is key to farm system adaptation.

### Some examples of sustainable agriculture practices

- Cultivating nitrogen-efficient crop varieties
- No-till
- Cultivating heat-tolerant crop varieties
- Precision agriculture
- Integrated soil fertility management
- Improved pasture management
- Improved fodder grasses or legumes
- Natural predation of pests and reduction of pesticides
- Cultivating drought-tolerant crop varieties
- Drip irrigation
- Water harvesting & sprinkler irrigation

2030

How we mitigate climate change and adapt to it today will determine whether humanity succeeds in eradicating hunger and poverty by 2030.

Food and Agriculture Organization of the United Nations

#SOFA16  
#ClimateChange  
fao.org/publications/sofa

# Climate Impacts Around the World

## Climate Impact: Burundi

Hunger caused by climate change in Africa is becoming an increasingly critical issue with every passing year. According to Oxfam, 39 million people in Southern Africa do not have enough to eat due to droughts and flooding brought to their nations by the climate-change induced "super" El Niño. Burundi was hit especially hard; this small country was recently rated "hungriest in the world" by Global Citizen. If conditions continue as they are predicted to, many of the people of this area will be forced to migrate or adopt radical new farming practices. Many will likely die before either happen.

## Climate Impact: India

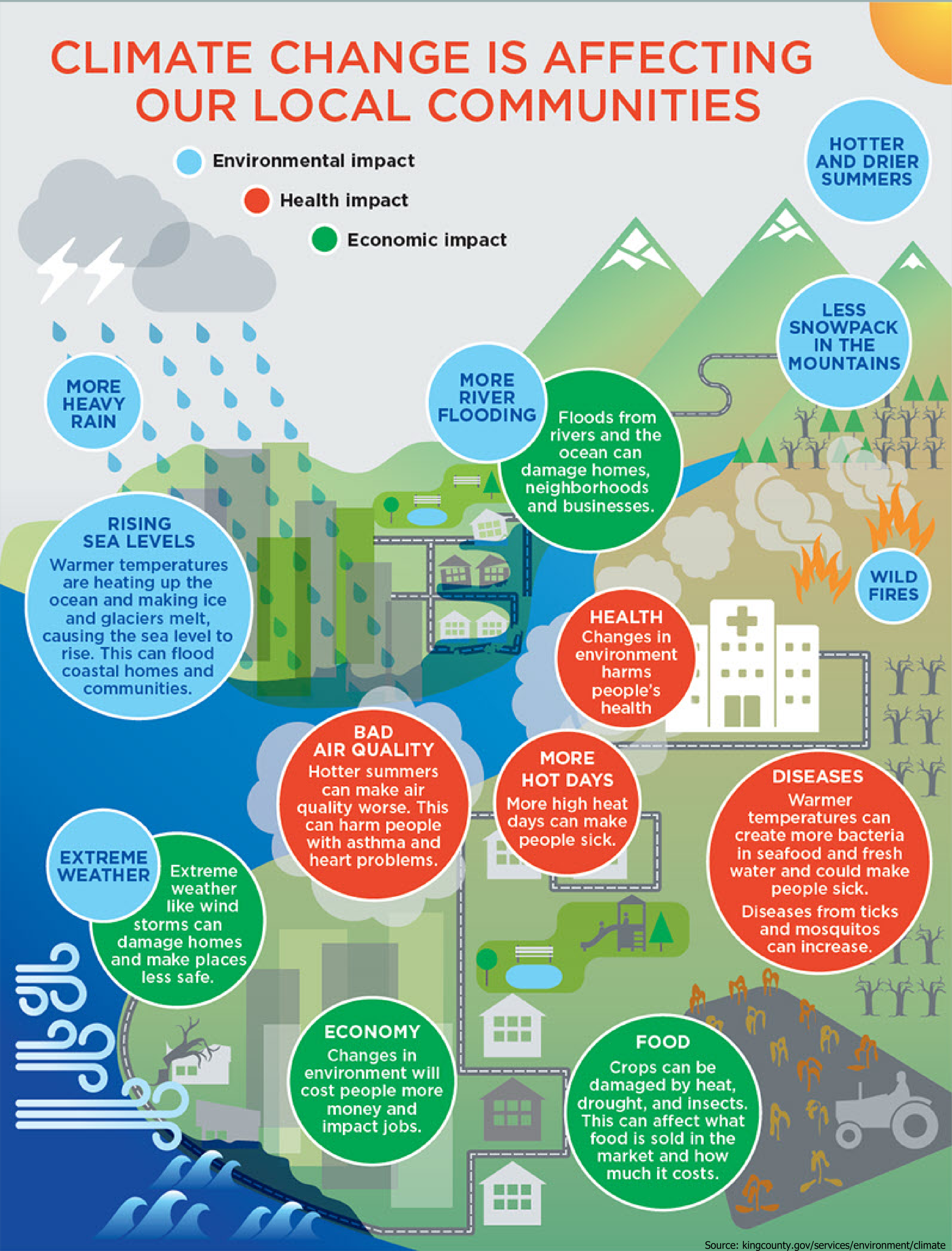
Throughout the last decade, climate change has caused severe droughts in once fertile parts of India. Soaring temperatures have gripped parts of southern and northern India in an extreme heat wave which has killed more than 500 people, with the government at times advising people not to go to work between 10 a.m. to 4 p.m. The hottest place in India in one recent heat wave was Allahabad, a city in the north which saw mercury rise to 47.7 degrees Celsius (117.8 Fahrenheit) while the capital Delhi recorded a high of 43.5C (110.3F)..

## Climate Impact: California

Devine Simpson of Alameda, California has suffered from severe asthma since she was just three-- and she is not alone. Between 2001 and 2009, the number of patients diagnosed with asthma rose by 4.3 million, according to CDC reports. Recent studies blame this epidemic on climate change. Erratic weather patterns cause plants to release more pollen earlier and longer, making it difficult to breathe. Air pollution from vehicles, worsened by climate change, could also be behind the increasing number of cases in the U.S.



# GROWING CLIMATE IMPACTS: LOCAL



More info: [newhavenclimatemovement.org](http://newhavenclimatemovement.org)



# Climate Impacts Around the World

Climate Impact: Syria



Climate change helped spark the violence in Syria. Just before the war began, the most severe drought on record drove up food prices and forced 1.5 million rural residents into Syria's already-packed cities--- just as the country was also accepting immigrants fleeing from the Iraq war.

Climate Impact: The Great Lakes



Climate change is already apparent in Lake Erie, where algal blooms are now a yearly hazard. Over the last few decades, climate change has caused this region to get more rain and less snow which has increased phosphorus runoff from farms to enter the lakes, and trigger the blooms. According to the National Oceanic and Atmospheric Administration, the blooms will only get worse and that, "future land use and climate change could drastically exacerbate algal blooms."

Climate Impact: Peru



Peru is struggling with the loss of its glaciers. Natural glacial runoff has supplied the nation with water for drinking, agriculture, and hydroelectricity. However, due to climate change, they have been melting at unprecedented rates--- having lost over 40% of the original mass since 1970. Peru's capital Lima, with nine million inhabitants, is the world's second most populous desert city, after Cairo. Even before climate change, it was severely hydrologically challenged and utterly dependent on Andean runoff.