

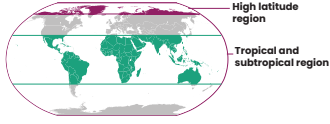
Global climate trends

Global Climate trends show an increasingly warm planet. Changes in temperature, precipitation and increasing extreme events may affect yield of food crops and livestock and pose a food security risk especially for vulnerable regions of the world.

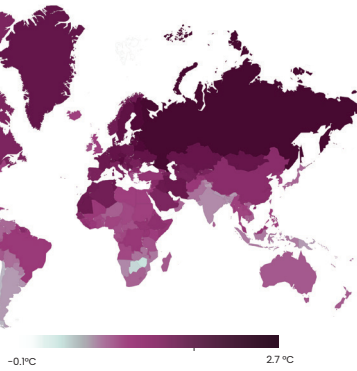
Global average temperature change

+1°C
global average temperature increase post industrial climate

The global average temperature is projected to increase by **2-4°C** above pre-industrial climate by 2050.

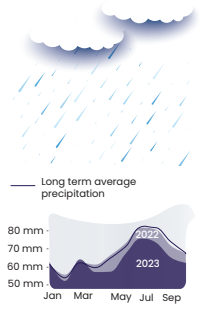
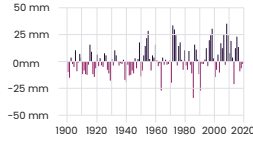


The largest increases are projected for the high latitude regions and lesser increases in tropical and sub-tropical areas.



Global precipitation anomalies

Increasing abnormal precipitation amounts have been recorded when compared with the average precipitation from 1901 to 2000 based on rainfall and snowfall measurements.



The changes in timing and intensity of rainfall events could significantly impact food and livestock production in rainfall dependent regions.

Drought
34%

of agricultural production loss in least developed, lower and middle income countries from 2008-2018

Globally, the areas sown for the major crops (barley, maize, rice, sorghum, soya bean and wheat) have seen an increase in the percentage of area affected by drought since the 1960s, from approximately **5-10% to 12-25%**.

Flood
19%

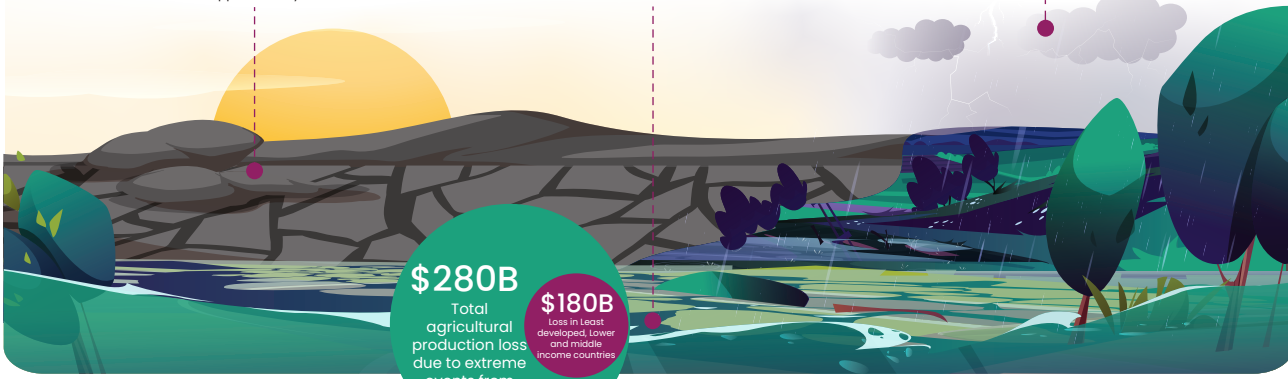
of agricultural production loss in least developed, lower and middle income countries from 2008-2018

Globally, total rain falling during heavy rainfall events and hence flood events is increasing, and models suggest that there will be more heavy rainfall events as the climate warms.

Storm
18%

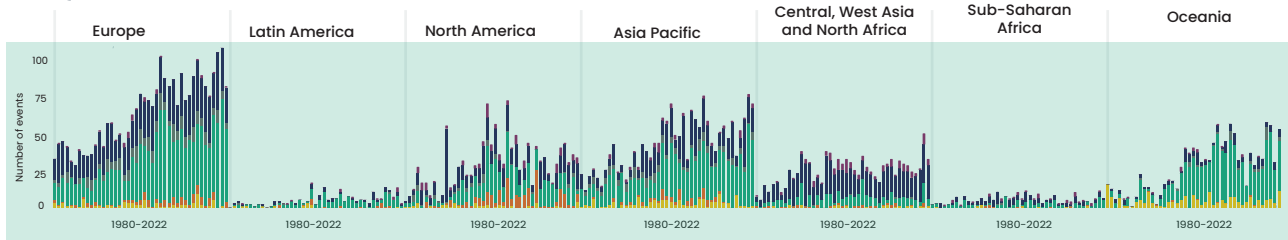
of agricultural production loss in least developed, lower and middle income countries from 2008-2018

Storms are accompanied by a high amount in loss of farm crops. They may become more intense in the future, they may exacerbate existing vulnerabilities.



Frequency of extreme events across world regions

Legend: Drought (Yellow), Extreme temperature (Orange), Flood (Green), Landslide (Grey), Storm (Dark Blue), Wildfire (Purple)

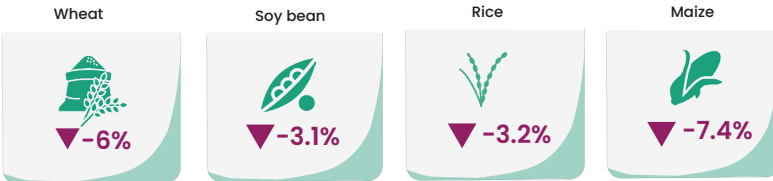


There is a high amount of flood events in Asia Pacific, Central, West Asia and North Africa, Latin America and sub-Saharan Africa, affecting growth and yield of staple crops such as cassava, wheat, maize, and sorghum.

Climate vulnerable crops and livestock

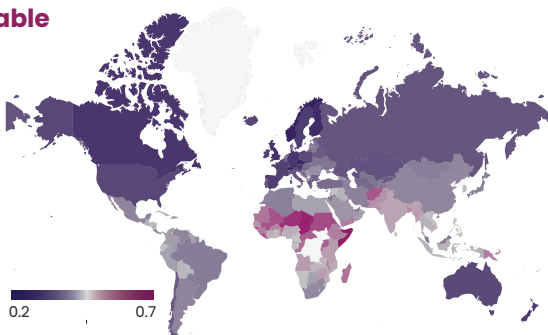
Staple crops such as wheat, soy bean, rice and maize are a major part of diet globally and supply a major proportion of energy and nutrient needs. A decline in production would mean a drastic change in diet and food, posing a food security risk especially in vulnerable regions. Current models project a decrease in global yield of these staple crops per degree celsius increase in global mean temperature.

As a means of livelihood and source of food, livestock farming especially of pastoral animals is threatened by climate change. Global projections estimate a decline in livestock of up to **7-10%** due to climate change with economic losses between **\$9.7 and \$12.6 billion**.



Climate vulnerable regions

The vulnerability Index measuring country exposure, sensitivity and ability to adapt to the impact of climate change, shows low and lower middle income countries especially are highly vulnerable to climate change impact.



Spotlight on the most climate vulnerable countries

- Somalia**
Index: **0.678/1**
The past five rainy seasons in Somalia, there has been inadequate levels of rainfall for harvesting and keeping livestock. This has resulted in almost total crop failure and a lack of rural employment opportunities.
- Niger**
Index: **0.632/1**
Niger is experiencing increasing temperatures and unpredictable rainfall patterns that have resulted in more frequent and severe droughts.
- Chad**
Index: **0.652/1**
In the fall of 2022, Chad experienced the worst flooding in 30 years with more than 1 million people affected and 1,149,114 acres of farmland destroyed.