BACKGROUND
Melting polar ice caps, rising sea levels, extreme weather patterns, and higher temperatures are all signs of global climate change. Many people have come to understand the long-term consequences of climate change on our environment and on the health and sustainability of the planet. But the day-to-day impact of a changing climate on the lives of ordinary people is less well known, but equally devastating.

A warming planet directly impacts the economies of several countries and affects the ability of farmers and others to earn a living and provide for their families. With longer periods of drought, changing temperatures, frequent and extreme flooding and the ravages of stronger hurricanes and cyclones, precious farmland is lost or becomes unproductive. This means farmers are no longer able to grow the traditional crops they rely on for basic subsistence. In some places like Bangladesh, whole coastal farm-based communities have been destroyed and their inhabitants displaced. National Geographic calls these people “climate refugees”. With loss of farmland, and growing conditions changing due to temperatures and other ecological factors, global food production is impacted which means lower incomes and less food for farmers and higher food prices for people all over the world. Additionally, entire global food processing and transport systems can be majorly impacted by weather and geography changes as well.

This case study will examine the relationship between climate change and food security, looking specifically at how global warming is impacting food production around the world. The case study includes resources about this issue on a global scale, with particular attention to the U.S. and Bangladesh. In Bangladesh, one of the countries with the highest number of climate refugees, the ability of people to grow their crops has been seriously affected by a changing climate. This means an increasing number of people in the country are food insecure, unable to provide for the modest nutritional needs of their families.
RESOURCES

Personal Stories:
- **Matt Russell: Agriculture and Climate Change in Iowa** - NRDC
- **Climate Action in Bangladesh** - UNFAO
- **Changing Climate, Changing life - a story of Manca Trawally** - UNFAO
- **The Human Impact of Climate Change** - YouTube
- **Perspectives from Farmers: What is the Future of Food for the World?** - Video

Art and Images:
- **Increasing Farmer's Resilience Amid Increasing Climate Threats** - United Nations FAO
- **Impacts of Climate Change** - Farming First Infographic
- **Climate Change, food and farming** - Ecology Matters Infographics
- **Food Security and Climate Change: Political Cartoon** - Eugene E. Bacasmas
- **These Watercolor Paintings Actually Include Climate Change Data** - Smithsonian
- **10 Artists on What Climate Change Actually Looks Like** - Outside
- **Seed diversity: a global route to food security? - in pictures** - The Guardian

Data and Maps:
- **Agriculture Statistics by FAO Bangladesh** - UNFAO
- **Food Security in the U.S.: Key Statistics and Graphics** - USDA
- **Food Insecurity and Climate Change: Infographic map** - WFP+ Met Office

Videos:
- **Beating Flood Damage in Bangladesh** - The Guardian
- **Climate Change Already Impacting Food Supplies** - CBS News
- **Feeding Nine Billion: Food and Climate Change** - YouTube
- **Climate Change, Global Food Security, and the U.S. Food System** - USDA
- **Making a Difference in Food Security and Nutrition** - CFS
- **Climate is changing in Bangladesh. Food and Agriculture must too** - UNFAO
Websites:

- [Agriculture & Food Security in Minnesota](#) - MN Department of Health
- [U.S. Climate Resilience Toolkit](#) - NOAA
- [Climate Impacts on Food Security](#) - WFP
- [Protecting California's Farmworkers as Temperatures Climb](#) - UC Davis

*= resource includes a solution

** The United Nations has adopted a universal set of [Goals for Sustainable Development](#). This case study is related to Goal #2 – Ending Hunger and Goal #13 – Action to Combat Climate Change.