

**Please Read:** We encourage all teachers to **modify** the materials to meet the needs of their students. To create a version of this document that you can edit:

1. Make sure you are signed into a Google account when you are on the resource.
2. Go to the "File" pull down menu in the upper left hand corner and select "Make a Copy." This will give you a version of the document that you own and can modify.



## Teacher Overview: *What effect has population growth and globalization had on the environment? How might changes in the environment affect us?*

[Go directly to student-facing materials!](#)

**Unit Essential Question(s):** Do the benefits of globalization outweigh the costs? | [Link to Unit](#)

**Supporting Question(s):** What effect has population growth and globalization had on the environment? How might changes in the environment affect us?



**Objective(s):**

- **Describe** the effects that population growth and globalization have had on the environment.
- **Explain** how the effects were caused by population growth and globalization.
- **Explain** how the effects on the environment might affect people in the future.

### Alignment to State Standards

#### NYS Social Studies Framework:

Key Idea	Conceptual Understandings	Content Specifications
<b>10.9 GLOBALIZATION AND A CHANGING GLOBAL ENVIRONMENT (1990–PRESENT):</b> Technological changes have resulted in a more interconnected world, affecting economic and political relations and in some cases leading to conflict and in others to efforts to cooperate. Globalization and population pressures have led to strains on the environment. (Standards: 2, 3, 4, 5; Themes: MOV, TCC, GEO, GOV, ECO, TECH, EXCH)	10.9b Globalization is contentious, supported by some and criticized by others.  10.9c Population pressures, industrialization, and urbanization have increased demands for limited natural resources and food resources, often straining the environment.	Students will compare and contrast arguments supporting and criticizing globalization by examining concerns including... <ul style="list-style-type: none"><li>• economic development and inequality (e.g., access to water, food, education, health care, energy)</li><li>• migration and labor</li></ul> Students will examine strains on the environment, such as threats to wildlife and degradation of the physical environment (i.e., desertification, deforestation and pollution) due to population growth, industrialization, and urbanization.

## Social Studies Practices

### NYS Social Studies Practices

**Gathering, Using, and Interpreting Evidence** (A1, A2, A5, A7)  
**Chronological Reasoning and Causation** (B1, B3)  
**Comparison and Contextualization** (C1, C3, C5, C6)  
**Geographic Reasoning** (D1, D3, D5, D6)

### Common Core State Standards

Depending on how you structure your lesson, you may address different standards. Below, are the standards that we believe are most important for this lesson.

Reading	Writing	Speaking and Listening
<p><b>Key Ideas and Details:</b> <b>CCSS.ELA-LITERACY.RH.9-10.2:</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.</p> <p><b>Craft and Structure:</b> <b>CCSS.ELA-LITERACY.RH.9-10.4:</b> Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.</p> <p><b>Integration of Knowledge and Ideas:</b> <b>CCSS.ELA-LITERACY.RH.9-10.7:</b> Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.</p> <p><b>CCSS.ELA-LITERACY.RH.9-10.9:</b> Compare and contrast treatments of the same topic in several primary and secondary sources.</p>	<p><b>Text Types &amp; Purposes:</b> <b>CCSS.ELA-LITERACY.WHST.9-10.1:</b> Write arguments focused on <i>discipline-specific content</i>.</p>	<p><b>Comprehension and Collaboration:</b> <b>CCSS.ELA-LITERACY.SL.9-10.1:</b> Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p>

Objective:

**What effect has population growth and globalization had on the environment? How might changes in the environment affect us?**

- **Describe** the effects that population growth and globalization have had on the environment.
- **Explain** how the effects were caused by population growth and globalization.
- **Explain** how the effects on the environment might affect people in the future.

## Introduction

➔ **Directions:** Respond to the prompts below with what you know or have heard about climate change.

# CLIMATE CHANGE

What is it?	What causes it?	What are the effects of it?

## Activity: What effect has population growth and globalization had on the environment? How might changes in the environment affect us?

➡ **Directions:** As you examine the following issues, answer the accompanying questions and use the information to fill in your [Effects of Globalization Graphic Organizer](#).

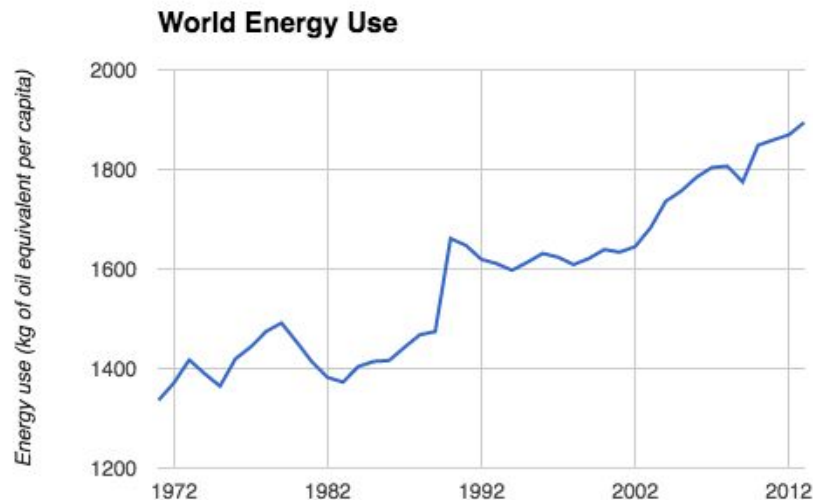
### Issue #1: Climate Change

**Climate change is a long-term increase in the Earth's overall temperature which will have massive and permanent ramifications for life on the planet.** It is primarily **caused by human activity** which has resulted in an **increase of greenhouse gas emissions**, which when released, heat the Earth.

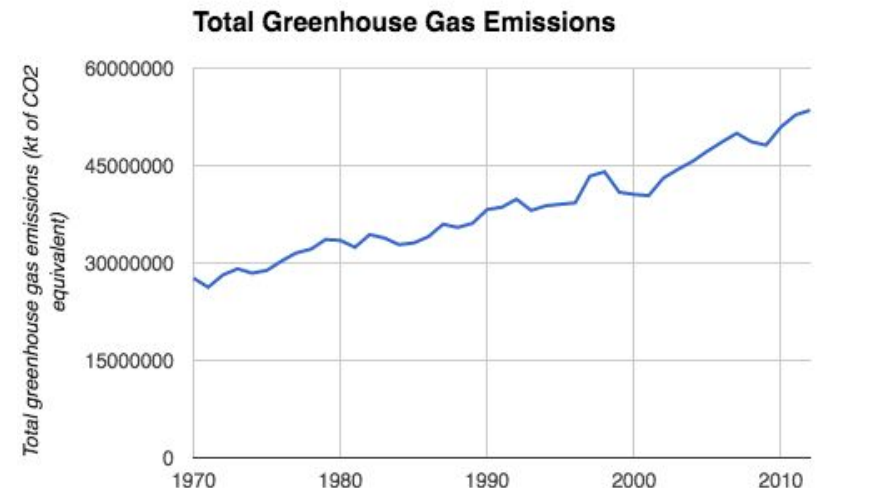
Population growth and globalization have contributed to an increase in greenhouse gas emissions because **most processes used to generate the energy** needed and **the processes for providing food (particularly livestock)** for a growing population with greater wealth, generates greenhouse gas emissions.



Watch this video from National Geographic, entitled, ["Climate Change 101 with Bill Nye"](#).



[Image](#) is courtesy of the World Bank Group

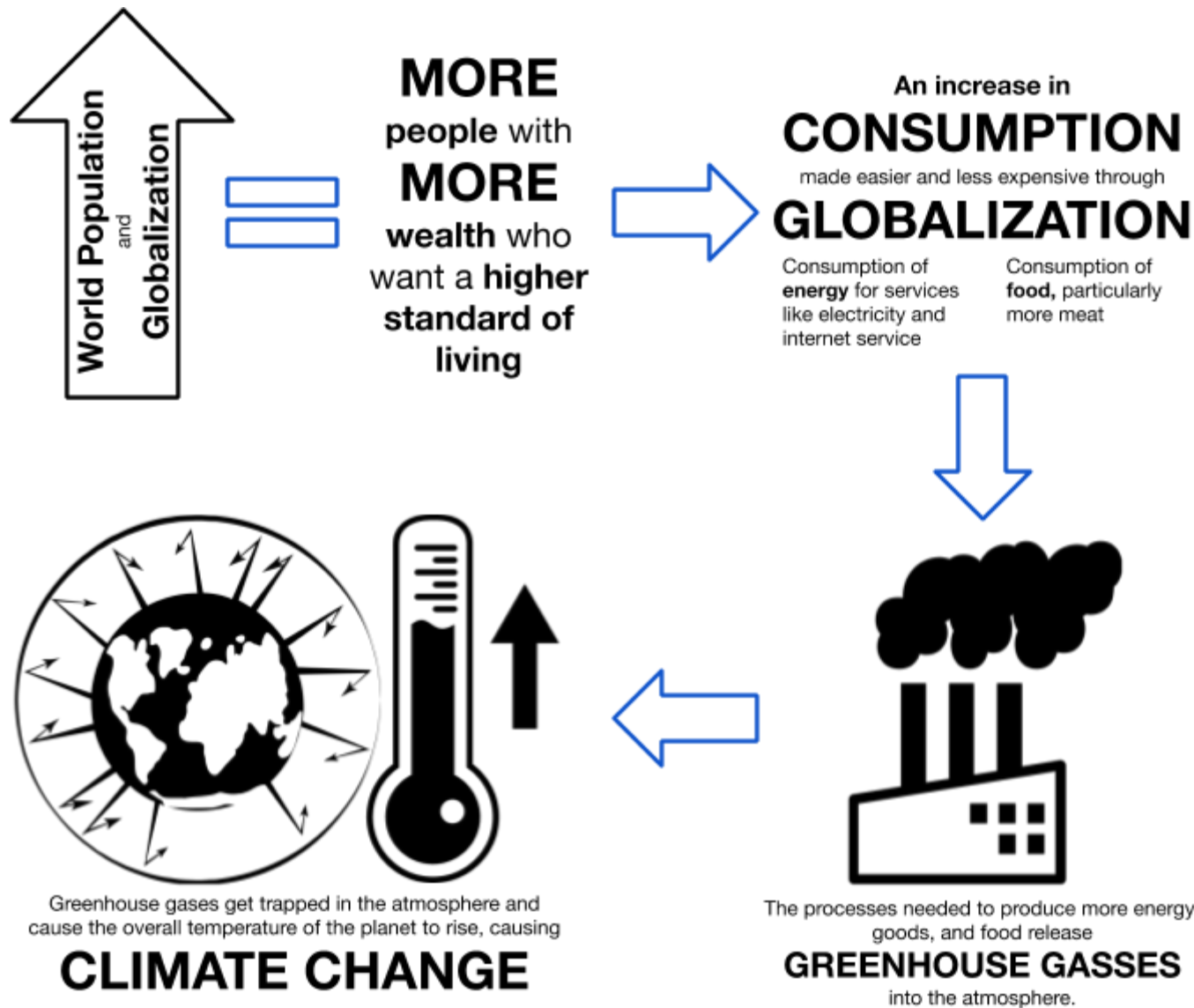


[Image](#) is courtesy of the World Bank Group

## How is climate change linked with population growth and globalization?



Watch this video from Crash Course, entitled, "[Globalization II- Good or Bad?](#)"(6:05-7:14), read the diagram below, and answer the questions that follow.



Sources: Global Warming icon by Mark S Waterhouse from the Noun Project, <https://thenounproject.com/term/global-warming/229900/>; Air Pollution icon by Esther Se.Kim from the Noun Project, <https://thenounproject.com/term/global-warming/447632/>; Thermometer measuring ascending temperature icon, Freepik, <http://support.flaticon.com/hc/en-us/articles/207248209-How-I-must-insert-the-attribution->

## Climate Change Questions

1. What is climate change?

2. What causes climate change?

3. What might be the effects of climate change if the Earth's temperature continues to rise?

4. Explain the link between climate change and...

population growth

globalization

## Issue #2: Water Scarcity



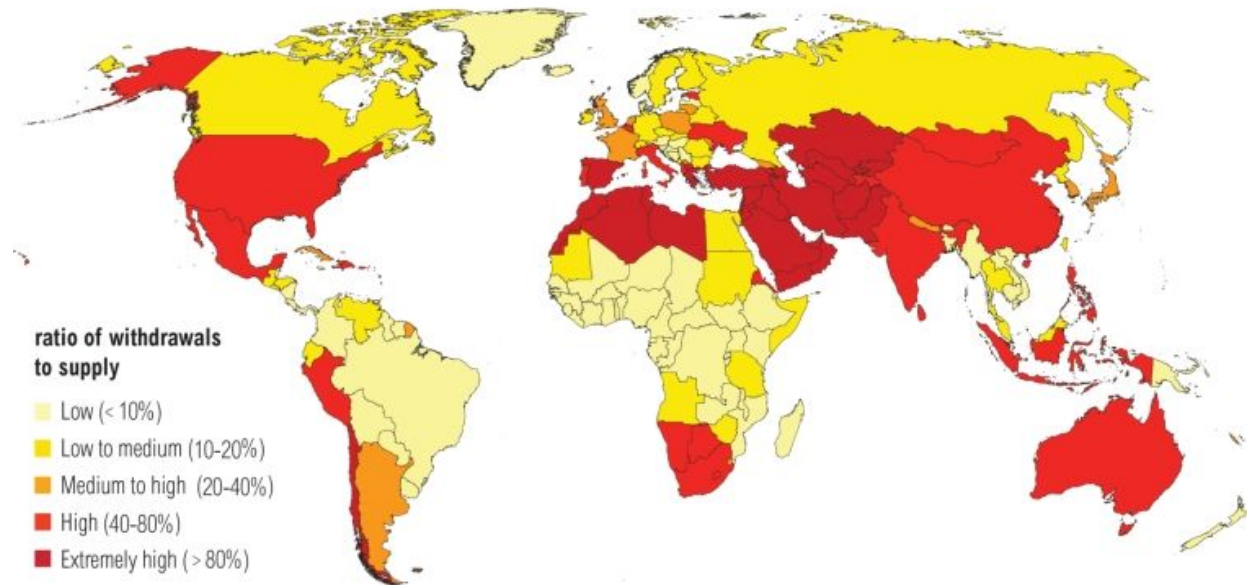
Watch this video from the World Bank, entitled, "[High and Dry: Climate Change Increases Water Risks, Hampers Growth](#)", examine the map below, and answer the questions that follow.

A 2016 World Bank Group report entitled “High and Dry: Climate Change, Water, and the Economy,” notes that “growing populations, rising incomes, and expanding cities will converge upon a world where the demand for water rises exponentially, while supply becomes more erratic and uncertain.” The report states that the freshwater needs of an expanding population that uses more energy and requires the expansion of agriculture to feed it “could reduce water availability in cities by as much as two thirds by 2040” if water management strategies continue as they are today. All of this, according to the report, is affected by climate change which can cause “water-related shocks” where there is very little water in some regions and too much water in others, causing massive flooding. In addition, the report cautions that changes in water availability and variability could lead to migration to places with more fresh water and conflict over freshwater sources, stating that “in a globalized and connected world, such problems are impossible to quarantine.”

Source: World Bank Group, “High and Dry: Climate Change, Water, and the Economy,”

<https://openknowledge.worldbank.org/bitstream/handle/10986/23665/K8517%20Executive%20Summary.pdf?sequence=10&isAllowed=y>

### Water Stress by Country: 2040



**NOTE:** Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

For more: [ow.ly/RiWop](https://ow.ly/RiWop)



WORLD RESOURCES INSTITUTE

[Image](#) is courtesy of The World Resources institute

**1. Based on the video and text above, why might there be water scarcity in the future?**

**2. Based on the map above, which regions of the world might be most affected by water stress in 2040? Which regions might be less affected?**

**3. What might be the effects of water scarcity in the future if water management methods are not improved?**

**4. Explain the link between water scarcity and...**

**population growth**

**globalization**



### Issue #3: Food Security

In a report last updated in March, 2016, the World Bank expressed the need for food that the world will face as a result of population growth in the face of the environment effects of globalization and climate change:

*The world needs to produce at least 50% more food to feed 9 billion people by 2050. But climate change could cut crop yields by more than 25%. The land, biodiversity, oceans, forests, and other forms of natural capital are being depleted at unprecedented rates. Unless we change how we grow our food and manage our natural capital, food security—especially for the world’s poorest—will be at risk.*

*Already, volatile food prices—and the price spikes that can result—are the new normal. When faced with high food prices, many poor families cope by pulling their children out of school and eating cheaper, less nutritious food. This can have severe life-long effects on the social, physical, and mental well-being of millions of young people. Malnutrition contributes to infant, child, and maternal illness; decreased learning capacity; lower productivity, and higher mortality. One-third of all child deaths globally are attributed to under-nutrition.*

Source: The World Bank Group, “Food Security,” <http://www.worldbank.org/en/topic/foodsecurity/overview#1>

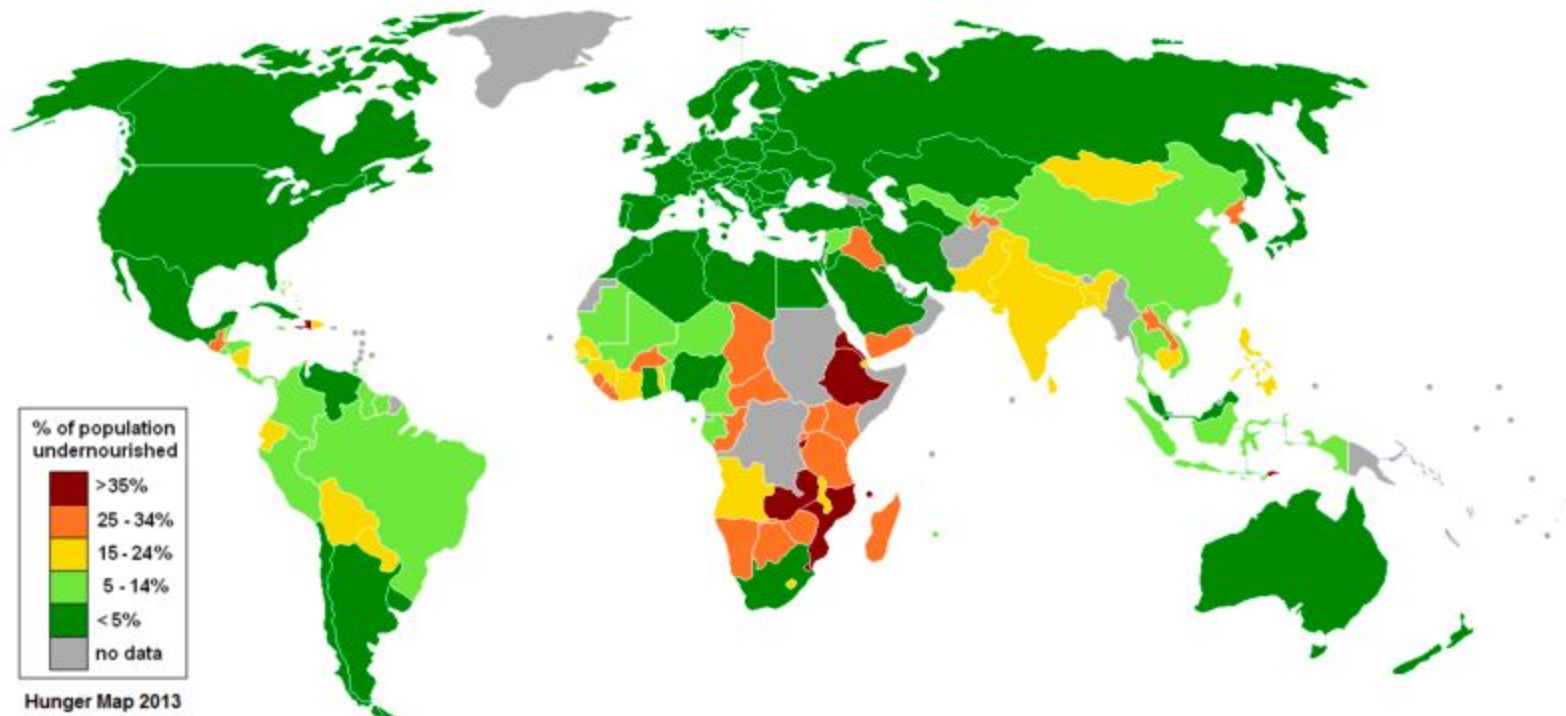


Image is courtesy of wikimedia commons licensed under the [Creative Commons Attribution-Share Alike 3.0 Unported](https://creativecommons.org/licenses/by-sa/3.0/) license.

1. Based on the excerpt from the World Bank report above, why might food security “be at risk” in the future?

2. What have been the effects of a lack of food security in the world thus far?

3. Based on the map above, which regions of the world are most prone to under nourishment? Which regions are not?

4. Explain the link between a lack of food security and...

population growth

globalization

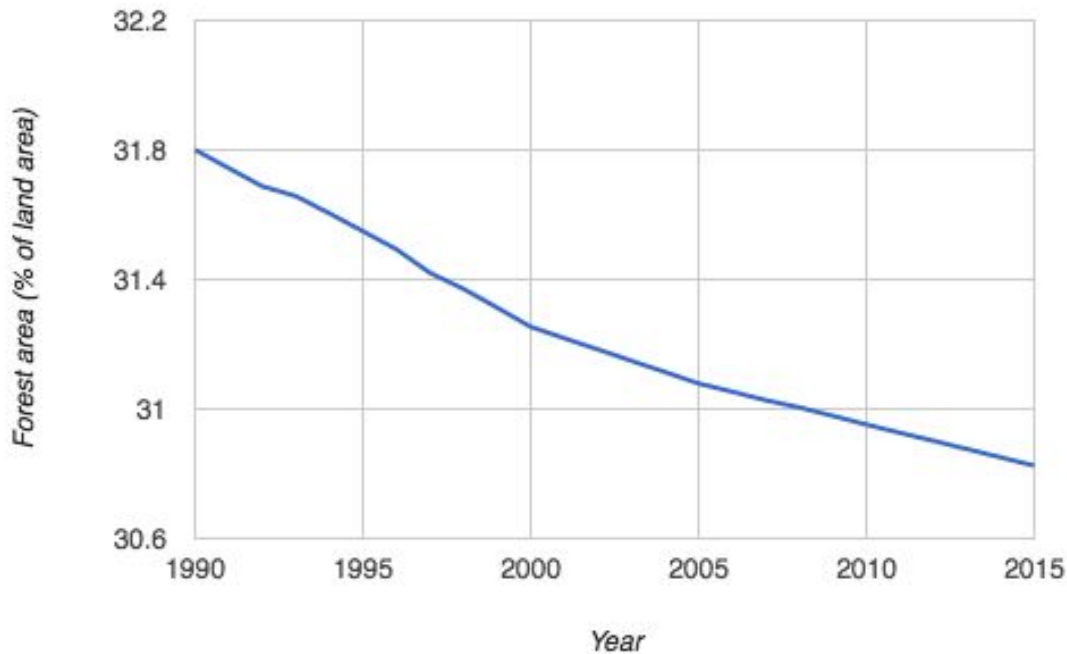
## Issue #4: Deforestation

Deforestation is the process of cutting down forests.



Watch this video from CNN, entitled, "[CNN Explains: Deforestation](#)", examine the graph below, and answer the questions the follow.

**Forest Area in the World (% of land area)**



[Image](#) is courtesy of The World Bank Group

1. Based on the graph to the left, describe the trend in forest area in the world.

2. Based on the CNN video, what are the causes of deforestation?

3. Based on the CNN video, what are the effects of deforestation?

4. Explain the link between deforestation and...

population growth

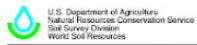
globalization

## Issue #5: Desertification

Desertification is the process that turns fertile land in arid (dry) climates into soil that cannot be used to farm, like a desert. Desertification is caused by human activities and climate change.

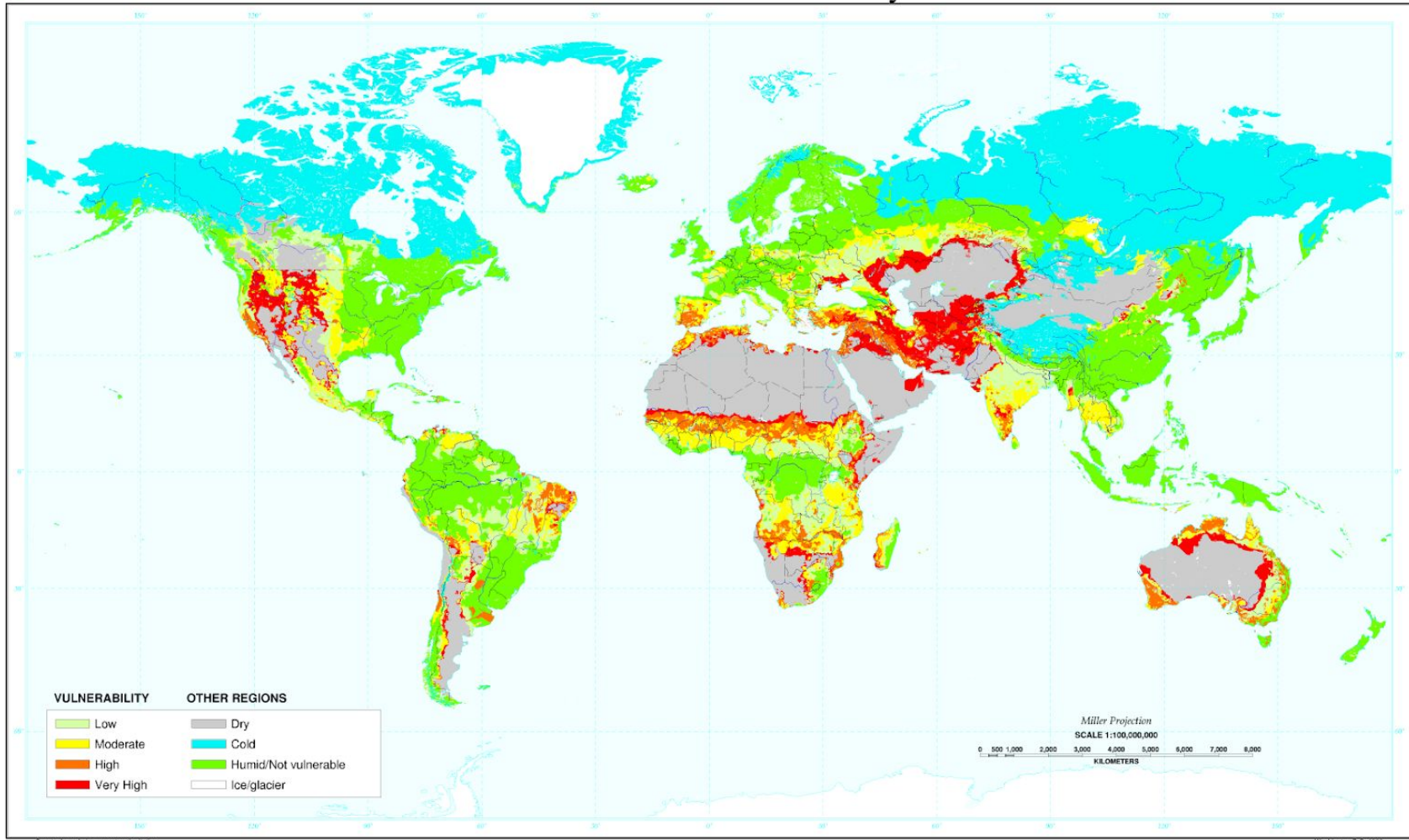


Watch this video from the Good Planet Foundation, entitled, "[Desertification](#)", examine the map, and answer the questions below.



U.S. Department of Agriculture  
Natural Resources Conservation Service  
208 Science Division  
World Soil Resources

### Desertification Vulnerability



Global Desertification Vulnerability Map  
[Image](#) is courtesy of wikimedia commons and is in the Public Domain

**1. What is desertification?**

**2. What causes desertification?**

**3. Explain the link between desertification and...**

**population growth**

**globalization**

**4. The narrator in the Good Planet Foundation video states that “desertification affects all mankind.” Why is that?**

**5. What can people do to prevent desertification in the future?**

## Issue #6: Migration

Throughout history, people have migrated in pursuit of better ways of life, for more food, and for safety from wars and disasters. Many believe that as a result of the environmental effects of population growth and globalization, there may be even more migrations in the future. People might be migrating from places where desertification has destroyed the land to places where the land is more fertile. They may migrate from places with little fresh water to places where there is much of it, or they may be migrating to escape conflicts caused by others fighting over fertile land and freshwater. A new category of migrant is being called a “climate refugee,” which is a person migrating from a place that has been affected by climate change and that people can no longer live in. The video linked below includes the stories of some of the first climate refugees who have to leave their island nations in the Pacific Ocean because the rise in sea water levels caused by climate change are putting their homes under water.

If migration continues to increase because of the environmental effects of globalization and population growth, those regions where the migrants want to settle will have to make decisions about who to admit, how many people will be permitted to enter, and how to provide for them and integrate them into their societies.



Watch this video from Seeker Stories, entitled, "[The World's First Climate Refugees](#)", examine the map, and answer the questions below.

**1. Why might there be more migration in the future?**

**2. What effects might migration have on the migrants and those who live where they are migrating to?**

**3. Explain the link between migration and...**

**population growth**

**globalization**

FA

**SQ 7:** What effect has population growth and globalization had on the environment? How might changes in the environment affect us?

➔ **Directions:** Using evidence from the documents above, respond to the task below in the space provided.

Identify ***three*** effects that population growth and globalization have had on the environment and for each:

- **Describe** the effect.
- **Explain** how the effect is caused by population growth and globalization.
- **Explain** how the effect on the environment might affect people in the future.