

# The Impact of Population Growth: Environmental Effects

by Sophia



## WHAT'S COVERED

In this lesson, we will cover the topic of impacts of population growth. We will discuss the three main categories of impacts and explore the projected future of population growth. Specifically, this lesson will cover the following:

1. Impacts of Population Growth
2. Population Growth Projections

## 1. Impacts of Population Growth

Impacts of population growth fall into the following three categories:

- Energy
- Land
- Water

As human populations have grown, the demand or need for energy has grown, too. Increased population has expanded cities and increased the number of technological devices, which require various forms of energy. Most of this energy comes from nonrenewable natural resources and their consumption is increasing atmospheric pollution and climate change.

Growing populations have also increased the need for developed land use, which has resulted in the degradation of habitats and loss of ecosystems. Deforestation, to acquire more arable land, has reduced oxygen production and carbon storage from trees. Species loss has resulted from degradation, and the migration of people has led to environmental depletion and degradation.

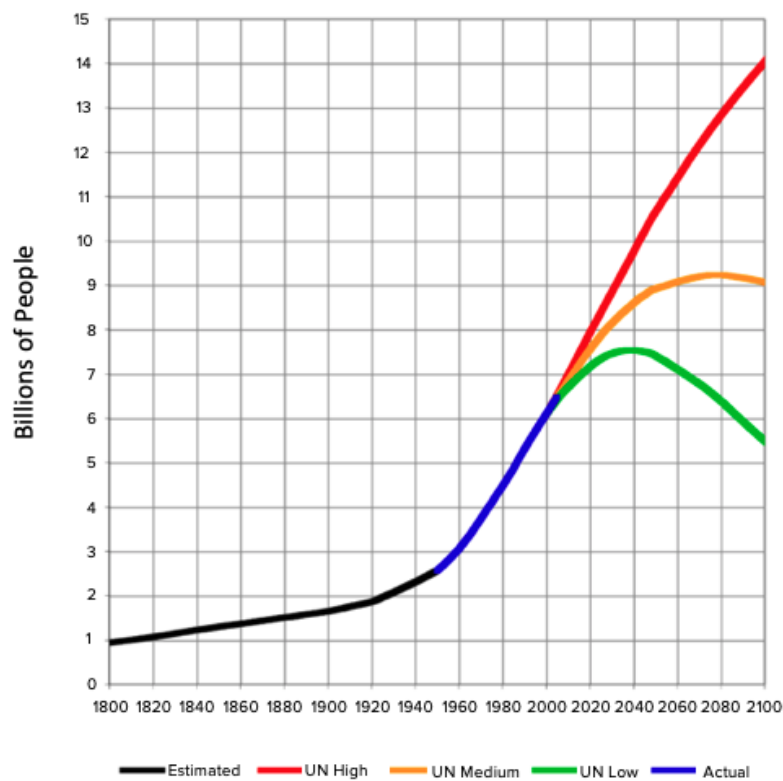
⇒ **EXAMPLE** The Rwandan refugees in Africa in 1994 deforested areas near their camps in order to survive.

Population growth has demanded more water resources, which has increased the need for dams for reliable sources of potable water and resulted in water pollution in freshwater, groundwater, and oceanic systems.

## 2. Population Growth Projections

Every year at current rates of population growth, 72 million people are added to the planet. The following are three major scenarios for projections of population growth, outlined in the graph below.

- Scenario 1 (the red line): If we maintain rates of exponential growth, by 2050, we will reach a population between 10 and 10.5 billion people.
- Scenario 2 (the orange line): If we maintain current rates of slowing growth, by 2050, there will be 8.9 billion people.
- Scenario 3 (the green line): If there is a radical slowing in population growth by 2050, there will be 7.4 billion people.



Even though these scenarios may not seem that different, the differences on impact will be drastic. Depending on which scenario becomes most accurate, human standards of living, food supply, water access, prevalence of disease, and environmental degradation will be dramatically different. In the past, technology and innovation have been able to support population growth. However, we don't know how it will play a role in the future and whether it will be able to mitigate the impacts.



### SUMMARY

In this lesson, we discussed the **impacts of human population growth**, focusing on the three main categories of energy, food, and water. We also explored potential **projected rates of population growth**

for the year 2050.

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