Unit 5

The Human Population Part 1

Scientists Disagree on Earth's Carrying Capacity

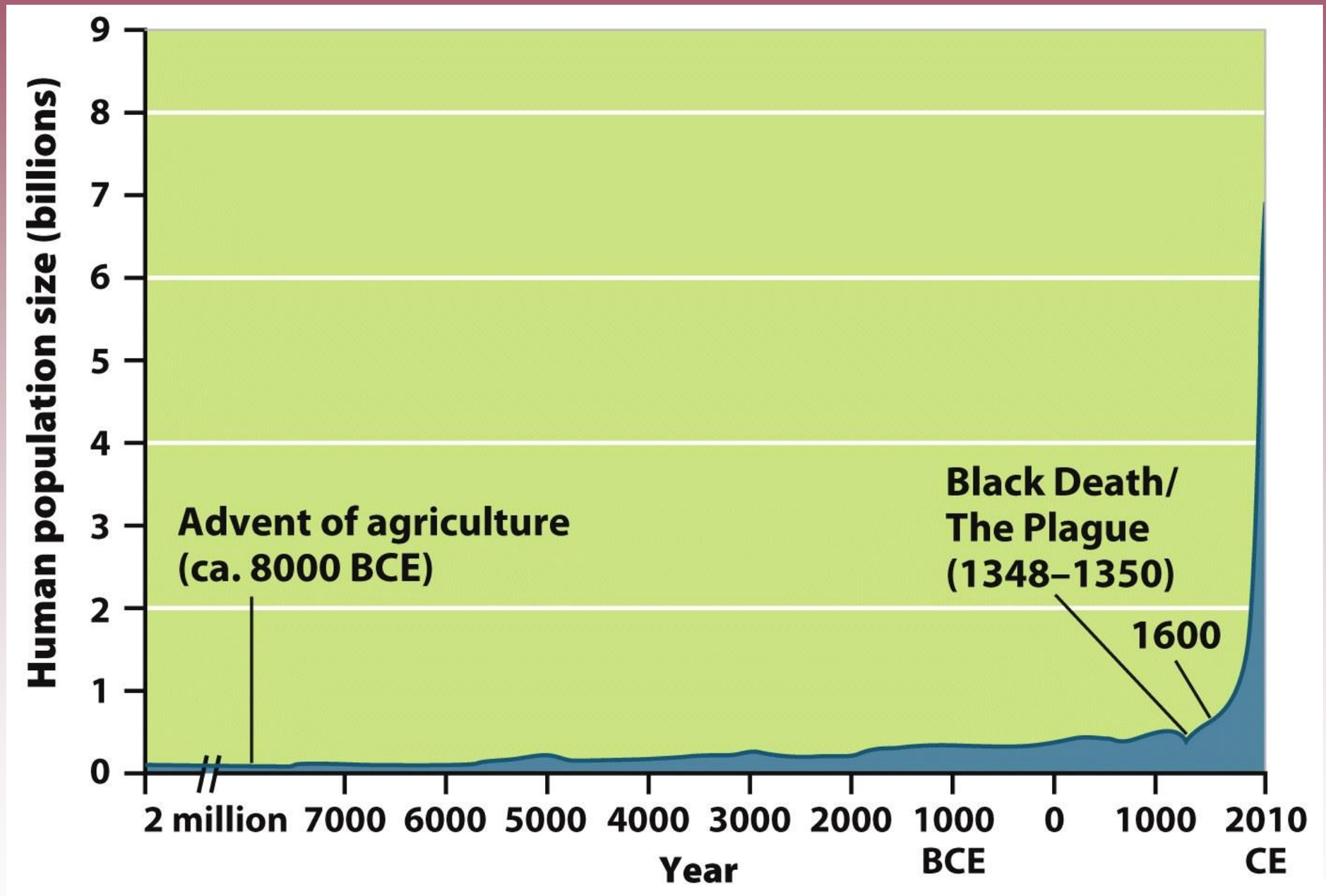

Figure 7.1
Environmental Science

Scientists Disagree on Earth's Carrying Capacity

- The following graphs show theoretical models of food supply and population size.

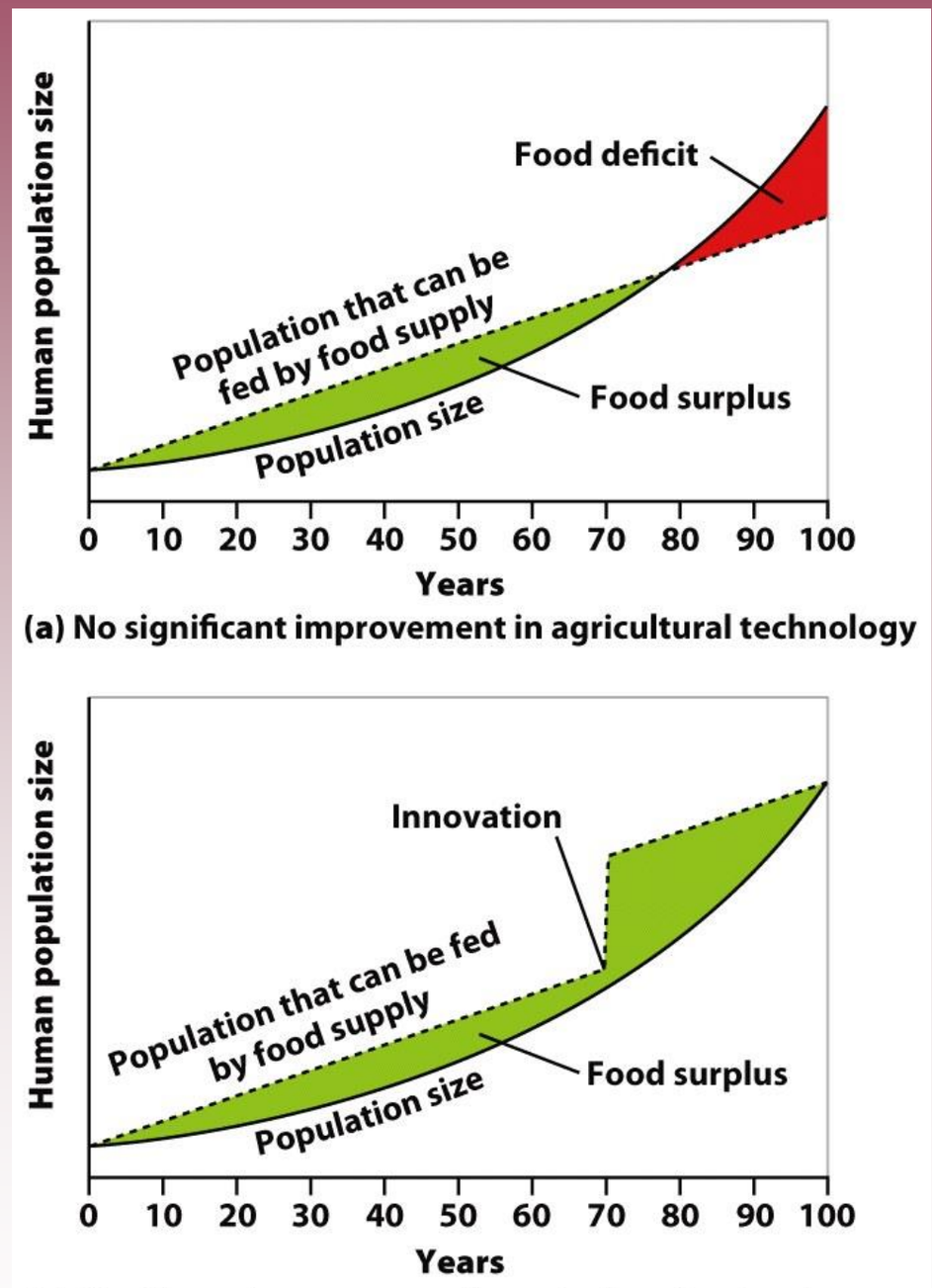

Figure 7.2
Environmental Science

Factors that Drive Human Population Growth

- Demography- the study of human populations and population trends.
  - Changes in Population Size
  - Fertility
  - Life Expectancy
  - Age Structure
  - Migration

Changes in Population Size

- **Immigration**- the movement of people into a country
- **Emigration**- the movement of people out of a country.
- **Net migration rate-** the difference between immigration and emigration in a give year per 1,000 people in the country.

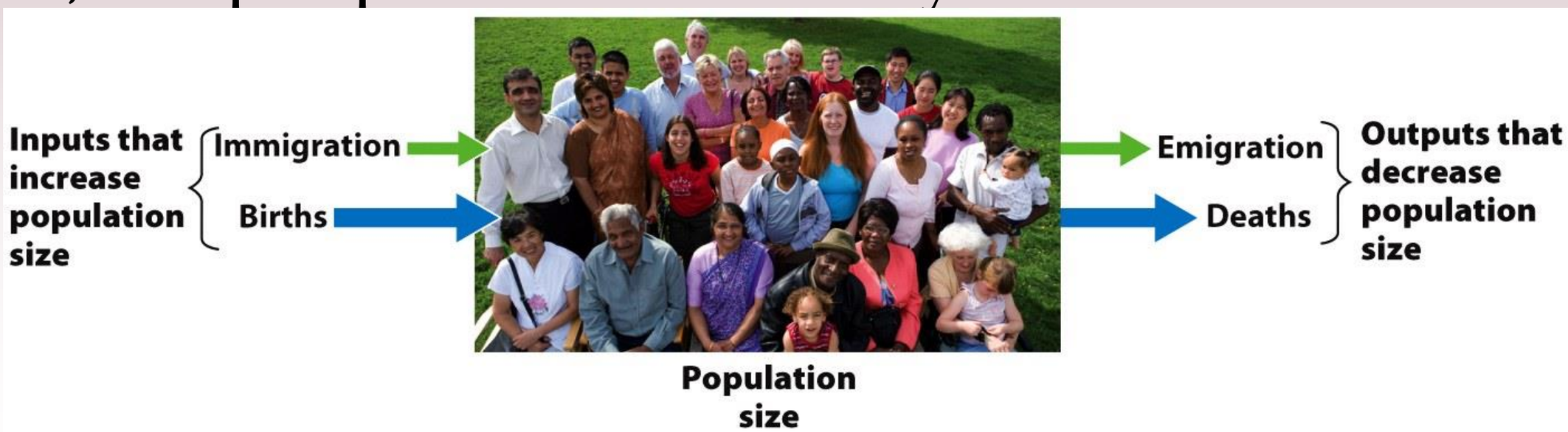

Figure 7.3
Environmental Science

Changes in Population Size

- Crude birth rate (CBR)= the number of births per 1,000 individuals per year.
- Crude death rate (CDR)= the number of deaths per 1,000 individuals per year.
    - Global population growth rate = (CBR- CDR)/ 10
    - National population growth rate = (CBR+ immigration) - (CDR + emigration)/ 10
    - Doubling time (in years)- 70/growth rate

Fertility

- Total fertility rate- an estimate of the average number of children that each woman in a population will bear.
- Replacement level fertility- the total fertility rate required to offset the average number of deaths in a population and for the current population size to remain stable.

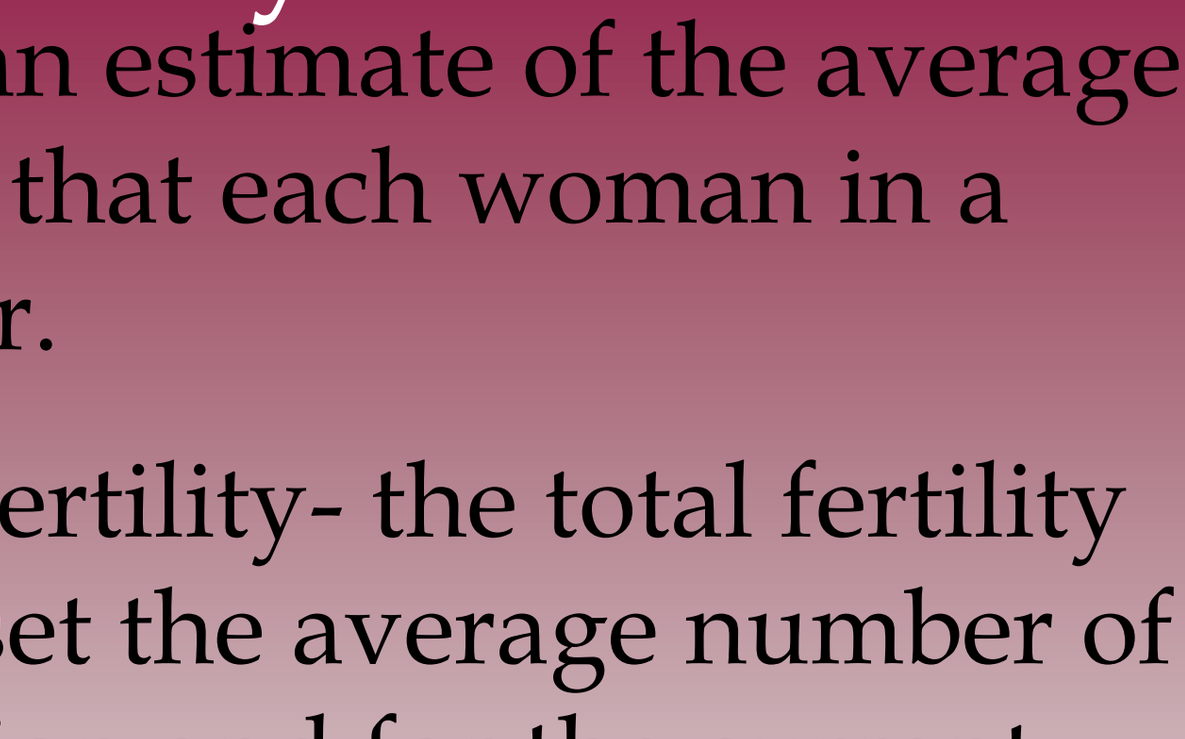

Figure 7.4
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Fertility

- Developed countries- countries with relatively high levels of industrialization and income.
- Developing countries- countries with relatively low levels of industrialization and income of less that $3 per person per day.

Life Expectancy

- Life expectancy- the average number of years that an infant born in a particular year in a particular country can be expected to live, given the current average life span and death rate of that country.

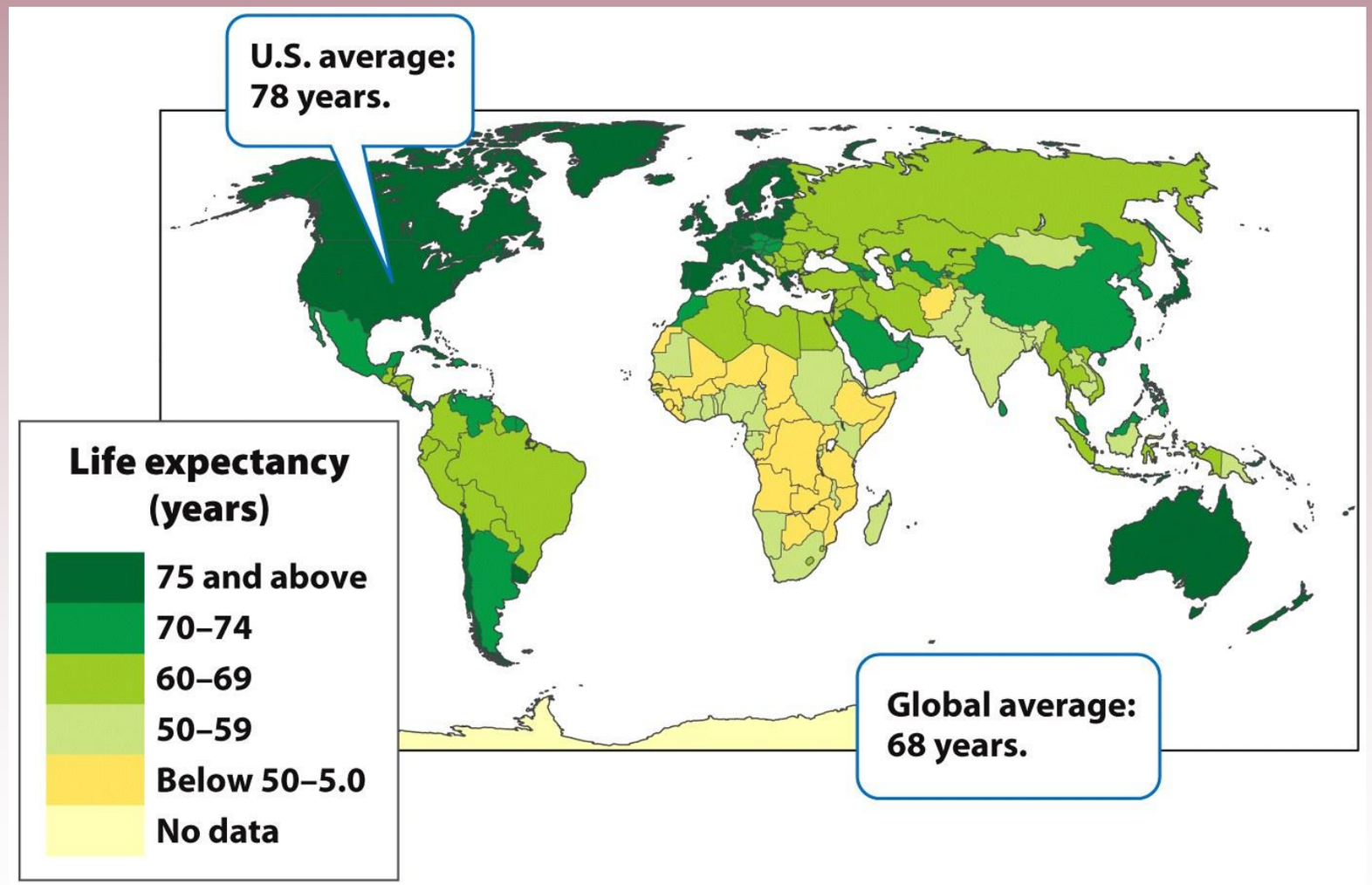

Figure 7.5
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Life Expectancy

- Infant mortality rate- the number of deaths of children under 1 year of age per 1,000 live births.
- Child mortality rate- the number of deaths of children under age 5 per 1,000 live births.

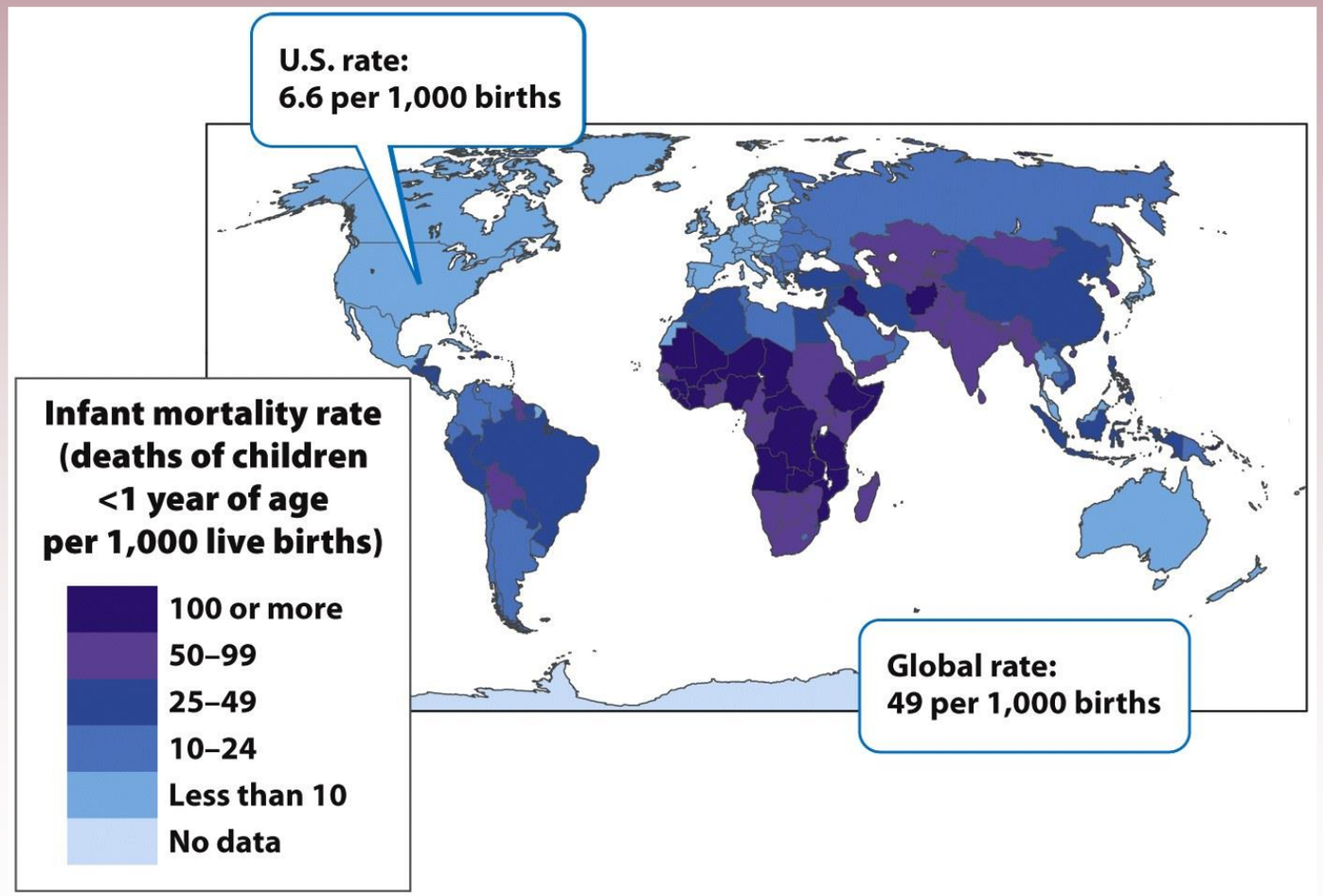

Figure 7.6
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Comparison

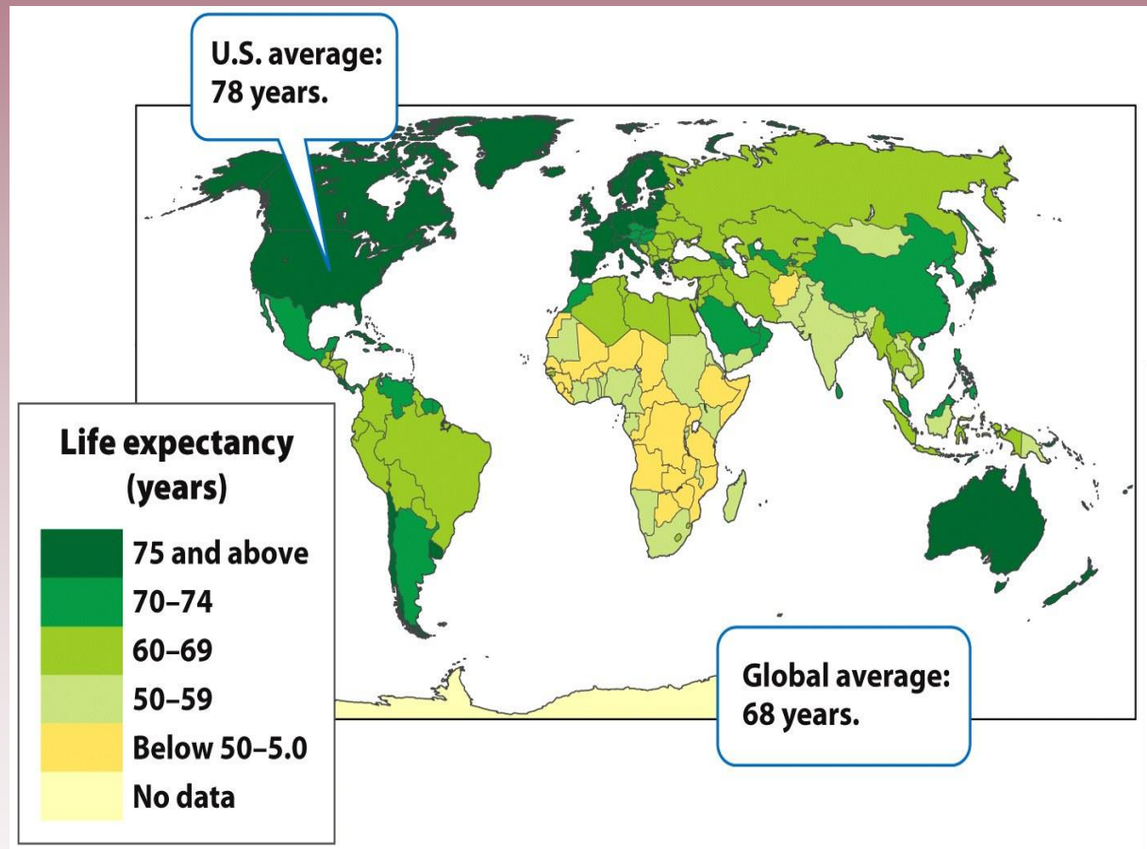

Figure 7.5
Environmental Science

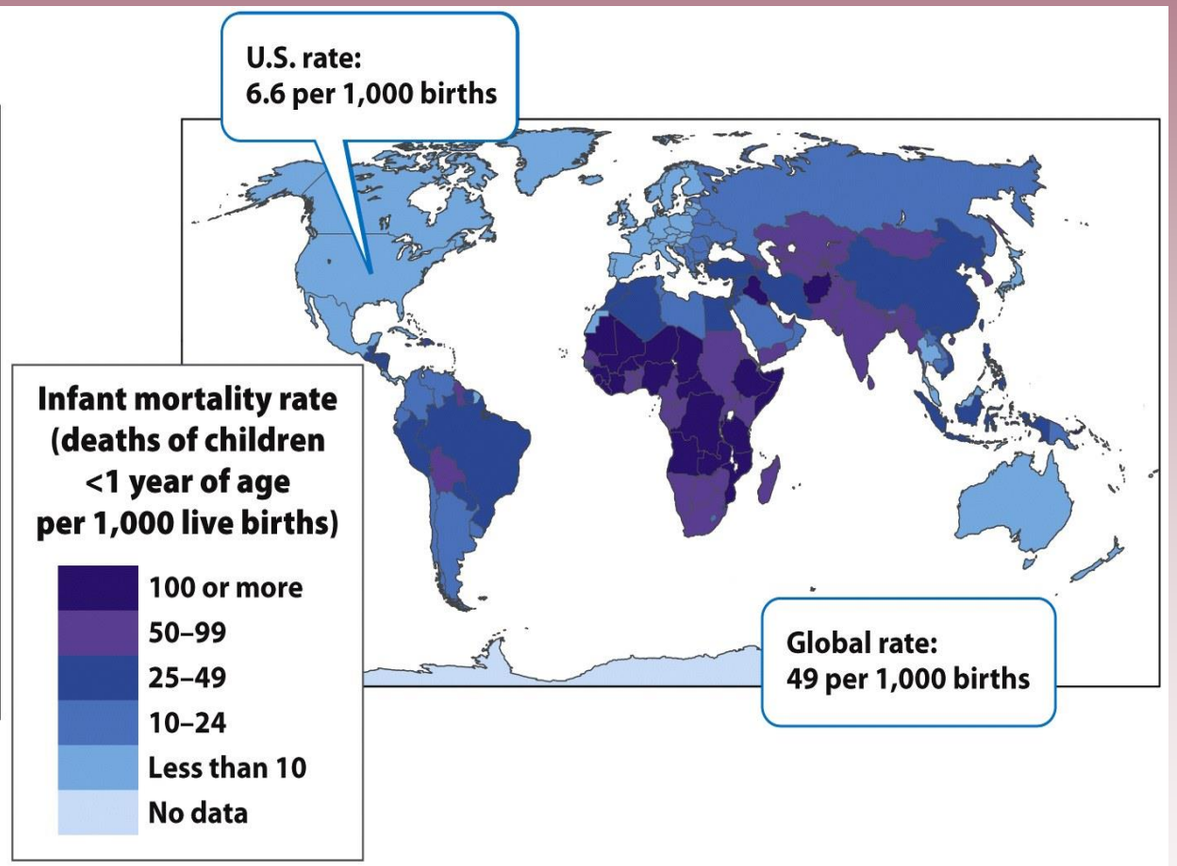

Figure 7.6
Environmental Science