# Lab 19 Response: Human Population Impacts

## Part 1: Reading Charts for World and Country Demographic Data

1. Start at the **World: Total population**line chart. What has happened to the total population between 1950 and the predicted population range in 2100? Explain your answer.
2. Now, look at the **World: Population by broad age groups** chart. What trends do you see? Explain how the population of each age group has changed between 1950 and the predicted population in 2100.
3. Look at the **World: Annual Rate of population change** chart. What trend do you see here? Explain your answer, including how the topic of this chart differs from the World: Total population chart.
4. Now pick a country from North America or Europe from the **Select the location** dropdown box. Take a screenshot of the Total Population chart or click the link below the chart to download the chart as a PNG. Paste the chart below.
5. Look at the**Total population**line chart for the country you chose. What has happened to the total population between 1950 and the predicted population range in 2100? Explain your answer.
6. Now, look at the**Population by broad age groups** chart for the country you chose. What trends do you see? Explain how the population of each age group has changed between 1950 and the predicted population in 2100.
7. Now look at the**Annual rate of population change** chart for the country you chose. What trend do you see here? Explain your answer.
8. Compare: how do the charts for the country you selected reflect or differ from the trends found in the world population charts? List three concrete similarities and/or differences.
9. Now pick a second country from either Asia, Africa, South America, or the Caribbean from the **Select the location** dropdown box. Take a screenshot of the Total Population chart for your new country or download the chart as a PNG. Paste the chart below.
10. Look at the**Total population**line chart for the second country you chose. What has happened to the total population between 1950 and the predicted population range in 2100? Explain your answer.
11. Now, look at the**Population by broad age groups** chart for the second country you chose. What trends do you see? Explain how the population of each age group has changed between 1950 and the predicted population in 2100.
12. Now look at the**Annual rate of population change** chart for the second country you chose. What trend do you see here? Explain your answer.
13. Compare: how do the charts for the second country you selected reflect or differ from the trends found in the world population charts? List three concrete similarities and/or differences.
14. Computer models for population growth are built based upon current circumstances. List two unforeseen circumstances that might occur to cause these models to be wrong. (Hint: if you look at the chart for the **Annual rate of population change** for Northern America, what happened to the population in 2020 and why?)

Part 2: Impact of Population Growth on Social Development and on the Environment

1. Who created the Understanding Global Change website? Are they an expert source? To answer this question, look at both the organization that created the website as well as its advisors and authors.
2. List at least three ways that human population growth impacts the environment, providing detail. Follow the links on the population growth page in order to get more information on each topic. You can also summarize pertinent passages from your textbook. Be sure to cite your sources, either with a page name and link from the Global Change website or with your textbook’s module information.
3. Try this in practice: Look for one additional expert popular article or website that documents a connection between human population growth and one of the topics you listed in the question above in more detail. Cite the website in APA or CSE format. (Find examples on an [APA citation guide](https://library.cod.edu/citing/apa/electronic) or [CSE citation guide](https://dal.ca.libguides.com/CitationStyleGuide/CSE).) Below the citation, explain why the source is credible using SIFT (see [Lab Activity 1](https://cod.pressbooks.pub/envirobiologylab/chapter/lab-1-introduction-to-the-scientific-method-information-literacy-and-data-literacy/)).
4. Summarize your source: What new information did you learn from your source?
5. The report “Why population growth matters for sustainable development” states that changes in population trends alone will not fix issues with unsustainable resource use. Summarize at least two arguments the authors make for why this is the case.
6. Wilmoth and his co-authors offer solutions beyond solely reducing the global population. What are they? Summarize and explain.