**The Habitable Planet**

**Unit 11: Atmospheric Pollution**

Introduction

1. Why is the study of human population trends important?
2. What is carrying capacity? Why are there varied estimates of Earth’s carrying capacity for humans?
3. What is demography?

Mathematics of Population Growth

1. What are the basic truths demographers apply to human societies?
2. What are the most important determinants of population growth?
3. Why did industrialization have such a great affect on population growth?
4. Why did desired family size decrease following industrialization?
5. Describe the process of demographic transition.
6. Describe the phenomenon of fertility transition.
7. What is population momentum?
8. What are the opportunities and challenges presented by the “baby-boom” generation?

Determinants of Demographic Change

1. What factors are involved in determining fertility?
2. What factors influence a country’s total fertility?
3. Why are fertility rates lower in developed countries?
4. What is mortality?
5. Describe age structure.
6. How is longevity in a society assessed?
7. What factors raise life expectancy?
8. Describe migration.

World Population Growth Through History

1. Why was life expectancy short in pre-industrial society?
2. How were living conditions improved in industrialized nations from 1850 to 1950?
3. What may Earth’s population be in 2050?
4. Why is the world’s population still increasing, despite the fact that fertility rates are falling in many developing countries?
5. Why will 21st century population growth differ from the past decades?
6. What is replacement level? What is the current replacement level?

Population Growth and the Environment

1. What problems do developing countries face as their populations grow?
2. What are the three major elements that determine a society’s influence on the environment?
3. Describe the two major forms societies’ environmental impacts take.
4. Why were family planning programs initiated in the 1950s? What was the result?
5. What was the aim of family planning programs?
6. In terms of environmental harm, what may be more important than population size?
7. Why do economies pollute more during early stages of economic development?
8. What is “leapfrogging”? Give an example.

Urbanization and Megacities

1. What population milestone was reached in 2007? What caused this trend?
2. Why is urbanization a “predictable outcome” of industrialization and the demographic transition?
3. What are megacities? Metacities?
4. What were the two megacities in the 1950s? What will likely be the six metacities by 2015?
5. Describe a “slum”.
6. What are some countries, like Egypt and Thailand, doing to address urbanization/slum issues?

Other Consequences of Demographic Change

1. Why is the issue of economic growth relevant to the environment?
2. What is the dependency ratio? What is the dependency ratio of North America?
3. Why are dependency ratios important to economic growth?
4. What is a demographic dividend?
5. What happens when a country earns a demographic dividend?

Demographic Convergence and Human Lifespan Trends

1. Describe the demographic trends of the past few decades.
2. What is demographic convergence?
3. What has dramatically reduced life expectancy across Africa?
4. Why do poor nations lag behind the world?
5. What may happen if aid to foreign nations is increased?
6. Why do some experts contend this idea?
7. What do effective public health programs need to focus on?
8. What may life expectancy become during this century?