

## *Human Geography*, AP Edition Chapter 12

### Appendix 1: AP Human Geography Topic III.C.3. Differences in Cultural Attitudes and Practices toward the Environment

As discussed in Chapter 12, culture plays an important role in the formation of the human landscape. It holds that if two cultures have different views on how the environment should be used or managed, their cultural landscapes will reflect these differences. In the United States, cultural attitudes towards environmental conservation developed slowly. In the mid to late nineteenth century, a few influential Americans saw the way that the scenic beauty of natural landmarks such as Niagara Falls had been destroyed by commercial interests and sought to protect natural wonders such as Yosemite Valley and Yellowstone, which became the first national park in 1872. Over the next century, the environmental movement grew beyond only conservation. Today, while environmental issues are debated, most Americans believe that the environment should be protected, although they disagree whether or not economic growth should be sacrificed in the name of conservation.

Around the world, cultural differences towards the environment are quite evident. In India, for example, people will routinely litter or allow garbage to be thrown into rivers even though their homes are kept spotless. This is attributed to some to a lack of a strong sense of public space in Indian culture. Traditionally in Hindu society, castes only socialized within their own groups. Thus, there was little need for clean, organized public spaces used by all and where social interaction could occur.<sup>1</sup> Activists are now working to change Indian attitudes towards pollution of public spaces. A 2014 survey by the National Geographic Society found numerous cultural differences between countries of the world.<sup>2</sup> For example, the survey found that Germans are much more likely to want to repair a broken object than replace it, but Japanese respondents were more likely to want to replace something. The same survey found that Americans were less likely to want to pay more for a “green” product than respondents from many other countries.

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<sup>1</sup> <http://thediomat.com/2014/10/why-india-is-dirty-and-how-to-clean-it/>

<sup>2</sup> <http://news.nationalgeographic.com/news/2014/09/140926-greendex-national-geographic-survey-environmental-attitudes/>

## Appendix 2: AP Human Geography Topic VI.C.5. Natural Resource Depletion, Pollution, and Climate Change

The world has warmed in the past century. According to the Intergovernmental Panel on Climate Change (IPCC), the average combined land and sea temperature increased by 1.53°F between 1880 and 2012. The 30 year period from 1983 to 2012 may have been the hottest three decades in the past 1400 years.<sup>3</sup> In the United States, temperatures have increased 1.3°-1.9°F since 1895, the beginning of record keeping.<sup>4</sup> Scientists are largely in agreement that humans have contributed to temperature increases. For example, the IPCC attributes half of the global surface temperature rise between 1951 and 2010 to humans. How have humans contributed? In the past century, industrialization and urbanization has greatly increased the amount of greenhouse gases, such as carbon dioxide. Greenhouse gases absorb infrared radiation and thus can trap heat in the atmosphere. Carbon dioxide is released into the atmosphere by various means, including the burning of fossil fuels.

Urbanization contributes significantly to climate change. A century ago, the world's population was not even 2 billion people. Today, it is over 7 billion people with nearly 55% living in cities. Urban dwellers rely on energy grids, transportation systems, and jobs that contribute to the burning of fossil fuels. City residents simply cannot live without energy. As rural residents in developing countries stream into cities in places like China, India, and Sub-Saharan Africa, their individual contribution to the release of greenhouse gases usually increases. As for the future, by mid-century, there will likely be 2-3 billion more urban dwellers than there are today.

In addition, deforestation around the world has reduced the planet's capacity to absorb carbon in the atmosphere. As global populations rise, more land is needed for agriculture (farming and grazing) and for housing and cities. In addition to absorbing carbon, trees help keep soils moist and return water vapor to the atmosphere. Currently, around 50,000 square miles of trees are lost each year.

The observed effects of climate change are numerous:

- 1) Because oceans absorb over 90% of atmospheric heat increases, the oceans have expanded like the liquid in a thermometer. This has caused sea levels to rise 8 inches since 1880. Some scientists predict that sea levels could rise an additional 1-4 feet before the end of the century. A rise of this amount will significantly affect human settlements. Important coastal cities such as New York, Mumbai (India), and Guangzhou (China) will have to invest billions in flood control and other measures to hold back the sea.

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<sup>3</sup> IPCC, 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1–30, doi:10.1017/CBO9781107415324.004.

<sup>4</sup> Walsh, J., D. Wuebbles, K. Hayhoe, J. Kossin, K. Kunkel, G. Stephens, P. Thorne, R. Vose, M. Wehner, J. Willis, D. Anderson, S. Doney, R. Feely, P. Hennon, V. Kharin, T. Knutson, F. Landerer, T. Lenton, J. Kennedy, and R. Somerville, 2014: *Ch. 2: Our Changing Climate. Climate Change Impacts in the United States: The Third National Climate Assessment*, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 19-67. doi:10.7930/J0KW5CXT.

- 2) The poles are warming and now have less snow and ice. By the middle of the century, the Arctic Ocean might be almost ice-free in the summer. Glaciers around the world have retreated. In the United States, the Great Lakes have seen a significant reduction in ice cover during the winter in the past four decades.
- 3) Growing seasons have increased in many areas because there is less frost. This can benefit some crops that we want to grow but also extends to weeds or invasive species. In areas that are low on water, an increase in the growing season may lead to more plants drying out during the growing season if watering is not increased. An increase in dried plants can lead to more wildfires. Overall, continued warming of the planet will likely change traditional agricultural patterns in ways that are not yet clear. Crop patterns may change while some areas become less productive and others more productive.
- 4) Precipitation patterns have changed. In the United States, for example, some areas are seeing increases in rainfall while others have experienced decreases. On the whole, more areas are getting wetter. Some regions are experiencing heavier downpours than in the past.
- 5) There have been changes in the frequency and severity of some kinds of weather events, such as floods, droughts, and heat waves. Some scientists claim that the frequency and severity of hurricanes have also increased. Severe storms disrupt transportation and trade and require investment from municipalities. They are also a public health hazard causing injury and death.