



Possessions of an Indian family

FIGURE 7.13 Differences in Affluence These two families have greatly different numbers of possessions. Those with more possessions have a greater ecological footprint.

THE ECOLOGICAL FOOTPRINT CONCEPT

The environmental impact of the developed world is often underestimated because the population in these countries is relatively stable and local environmental conditions are good. However, developed countries purchase goods and services from other parts of the world, often degrading environmental conditions in less-developed countries. Thus, the environmental impact of highly developed regions such as North America, Japan, Australia, New Zealand, and Europe is often felt in distant places, while the impact on resources in the developed region may be minimal.

This has led to the development of the concept of the ecological footprint of a society. The **ecological footprint** is a measure of the land area required to provide the resources and absorb the wastes of a population. Most of the more-developed countries of the world have a much larger ecological footprint than is represented by their land area. For example, Japan has a highly developed economy but few resources. Thus, it must import most of the materials it needs. One study calculated that the ecological impact of Japan is nearly five times larger than its locally available resources. The same study estimated that the ecological footprint of the United States is 1.5 times locally available resources.

It is clear that as the world human population continues to increase, it will become more difficult to limit the environmental degradation that accompanies it. Since much of the population growth will occur in the less-developed areas of the world that have weak economies, the money to invest in pollution control, health programs, and sustainable agricultural practices will not be present.

While controlling world population growth would not eliminate all environmental problems, it could reduce the rate at which environmental degradation is occurring. It is also generally believed that the quality of life for many people in the world would improve if their populations grew less rapidly. Why, then, does the human population continue to grow at such a rapid rate?

(This item omitted from WebBook edition)

FACTORS THAT INFLUENCE HUMAN POPULATION GROWTH

Human populations are subject to the same biological factors discussed earlier in this chapter. There is an ultimate carrying capacity for the human population. Eventually, limiting factors will cause human populations to stabilize. However, unlike other kinds of organisms, humans are also influenced by social, political, economic, and ethical factors. We have accumulated knowledge that allows us to predict the future. We can make conscious decisions based on the likely course of events and adjust our lives accordingly. Part of our knowledge is the certainty that as populations continue to increase, death rates and birthrates will become equal. This can happen by allowing the death rate to rise or by choosing to limit the birthrate. Controlling human population would seem to be a simple process. Once people understand that lowering the birthrate is more humane than allowing the death rate to rise, they should make the “correct” decision and control their birthrates; however, it is not quite that simple.

BIOLOGICAL FACTORS

The scientific study of human populations, their characteristics, how these characteristics affect growth, and the consequences of that growth is known as **demography**. Demographers can predict the future growth of a population by looking at several biological indicators.

Birthrate and Death Rate

Currently, in most countries of the world, the birthrate exceeds the death rate. Therefore, the size of the population must increase. (See table 7.2.) Some countries that have high birthrates and high