Environment and Society:

The natural environment is Earth's surface and atmosphere, including living organisms, air, water, soil, and other resources necessary to sustain life. Like every other species, humans depend on the natural environment to survive. Yet with our capacity for culture, humans stand apart from other species; we alone take deliberate action to remake the world according to our own interests and desires, for better and for worse. Why is the environment of interest to sociologists? Environmental problems, from pollution to acid rain to global warming, do not arise from the natural world operating on its own. Such problems result from the specific actions of human beings, which mean they are social problems.

The Global Dimension

The study of the natural environment requires a global perspective. The reason is simple: Regardless of political divisions among nations, the planet is a single ecosystem, a system composed of the interaction of all living organisms and their natural environment. The Greek meaning of eco is "house," reminding us that this planet is our home and that all living things and their natural environment are interrelated. A change in any part of the natural environment ripples throughout the entire global ecosystem. Consider, from an ecological point of view, our national love of hamburgers. People in North America (and, increasingly, around the world) have created a huge demand for beef, which has greatly expanded the ranching industry in Brazil, Costa Rica, and other Latin American nations. To produce the lean meat sought by fast-food corporations, cattle in Latin America feed on grass, which uses a great deal of land. Latin American ranchers get the

land for grazing by clearing thousands of square miles of forests each year. These tropical forests are vital to maintaining Earth's atmosphere. Deforestation ends up threatening everyone, including people in the United States enjoying their hamburgers (N. Myers, 1984a).

Technology and the Environmental Deficit

Sociologists point to a simple formula:

I= PAT

Where, I=Reflects environmental impact

P= Society's Level of Population

A= Society's Level of Affluence

T= Society's Level of Technology

Members of societies with simple technology—the hunters and gatherers hardly affect the environment because they are few in number, are poor, and have only simple technology. On the contrary, nature affects their lives as they follow the migration of game, watch the rhythm of the seasons, and suffer from natural catastrophes such as fires, floods, droughts, and storms.

Societies at intermediate stages of technological development, being both larger and richer, have a somewhat greater capacity to affect the environment. However, the environmental impact of horticulture (small-scale farming), pastoralism (the herding of animals), and even agriculture (the use of animaldrawn plows) is limited because people still rely on muscle power for producing food and other goods.

Humans' ability to control the natural environment increased dramatically with the Industrial Revolution. Muscle power gave way to engines that burn fossil fuels: coal at first and then oil. Such machinery affects the environment in two ways: We consume more natural resources, and we release more pollutants into the atmosphere. Even more important, armed with industrial technology, we are able to bend nature to our will, tunneling through mountains, damming rivers, irrigating deserts, and drilling for oil in the arctic wilderness and on the ocean floor. This explains why people in rich nations, who represent just 23 percent of humanity, account for half of the world's energy use (World Bank, 2011).

Not only do high-income societies use more energy, but also they produce 100 times more goods than people in agrarian societies do. Higher living standards in turn increase the problem of solid waste (because people ultimately throw away most of what they produce) and pollution (industrial production generates smoke and other toxic substances).

From the start, people recognized the material benefits of industrial technology. But only a century later did they begin to see the long-term effects on the natural environment. Today, we realize that the technological power to make our lives better can also put the lives of future generations at risk.

Evidence is mounting that we are running up an environmental deficit, profound long-term harm to the natural environment caused by humanity's focus on short-term material affluence (Bormann, 1990). The concept of environmental deficit is important for three reasons. First, it reminds us that environmental concerns are sociological, reflecting societies' priorities about how people should live. Second, it suggests that much environmental damage—to the air, land, and water—is

unintended. By focusing on the short-term benefits of, say, cutting down forests, strip mining, or using throwaway packaging, we fail to see their long-term environmental effects. Third, in some respects, the environmental deficit is reversible. Societies have created environmental problems but can also undo many of them.