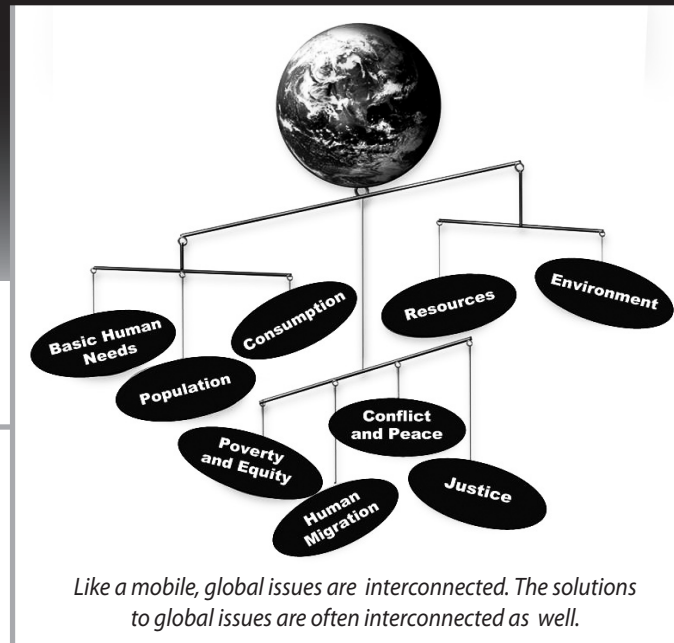


Global Issues and Sustainable Solutions

3 of
20

Join us on Wednesdays and Fridays for Skills for Everyday Living, a series that goes beyond the classroom to prepare students for the many challenges of the real world. Our current topic is **Global Issues and Sustainable Solutions**, developed by *Facing the Future*. Series ends June 13.



"Nature provides a free lunch, but only if we control our appetites."

— William Ruckelshaus, first EPA Administrator

People and the Planet

There are certainly many people on the planet right now (about 6.6 billion, in fact!) — twice as many as there were just 40 years ago and 78 million more than just one year ago. Even in the time it takes to read this paragraph, about 80 more people will have been added to the planet.¹

That seems like a large amount of growth. But are there too many people? Have we grown beyond Earth's ability to support us all? Scientists use a term called "carrying capacity" to figure this out. Carrying capacity refers to the maximum number of people the planet can support (or "carry") now, without using up resources that future generations will need to support themselves. In other words, carrying capacity is the number of people that is sustainable — not using resources faster than the earth can reproduce them.

What's Your Shoe Size?

Because it's difficult to determine Earth's exact carrying capacity, some scientists have developed another way to study the impacts of human population and consumption. They use a concept called "Ecological Footprint."

Each person has an Ecological Footprint, the area of Earth's productive surface that it takes to support that person. This includes farmland, pasture and fishing grounds to provide food, as well as forested area to provide lumber and paper. It takes into account freshwater resources such as lakes and rivers. It includes all the area necessary to provide energy and jobs and dispose of wastes (including carbon dioxide). It also includes buildings, roads and recreational areas.

Ecological Footprints vary tremendously with each person's lifestyle and resource consumption choices. Experts calculate that the average person in India has a Footprint of about 2 acres. That means that 2 acres of land are required to support the average person in India, supplying that person's food, shelter, energy, oxygen and waste disposal needs. By comparison, the average Footprint is 6.4 acres in Mexico, 13.8 acres in France, and 23.7 acres in the United States.² This is an average, and some people in each of these countries have Footprints that are bigger or smaller.

An acre is about the size of a football field. So now you can imagine the size of these people's average Footprints and see the differences between them. If everyone on Earth had a Footprint the size of the average U.S. citizen (24 football fields apiece), it would take *five more planets* to support us all.³

As population grows, the total human Footprint on Earth grows too. If the average level of resource consumption per person increases, the human Footprint on Earth also increases. If both population and resource consumption per person increase — as is the case today — the total human Footprint on Earth grows even faster. The size of our Ecological Footprint can affect other species when we use environmental resources they depend on.

What Can We Do to Reduce Our Footprint?

If more people means a bigger global Footprint, then stabilizing our population is one way to limit our Footprint on the planet. If we reduced world population over time, we would have even more resources available for each person.

Another way to shrink our global Footprint is through technology. Much of the human Footprint today is taken up by the wastes we create, especially the land and

water area needed to absorb our carbon dioxide emissions. The good news is that there are some technologies — such as more effective farming techniques and more energy-efficient appliances — that allow people to consume resources while lowering their Footprint.

Of course we can also shrink our Footprint by reducing resource consumption. Some of this can be done by understanding what we truly need and not consuming more than we need. This means looking closely at how we live, including how much and what kind of food we eat, how we get around, what we do for recreation, and what we choose to buy.

One challenge is that some people in the world desperately need to increase their consumption of resources. There are 1.2 billion people who live in extreme poverty around the world; they need more food, more education, more health care, and more fuel and energy resources. Only after their basic needs have been met and when they have economic options can these people make choices about sustainable consumption.

Ultimately, the number of people Earth can support depends on the choices we make. Every day, each of us makes decisions about our lifestyle, our economic system, our values and what kind of world we want to live in. What kinds of choices can you make that will help enhance Earth's carrying capacity?

¹ About 253 new people are born worldwide every minute. U.S. Census Bureau, February 4, 2008, <http://www.census.gov/cgi-bin/ipc/pcwe>.

² Based on 2003 data from Global Footprint Network, "Ecological Footprint and Biocapacity (2006 Edition)," http://www.footprintnetwork.org/gfn_sub.php?content=global_footprint.

³ Based on data from World Wildlife Fund (WWF), "Living Planet Report 2006." WWF International, Switzerland, 2006. http://assets.panda.org/downloads/living_planet_report.pdf

Activity

- ❖ Measure your Ecological Footprint by visiting www.myfootprint.org, and answer this question: If everyone lived like you, how many planets would we need?
- ❖ You can compare your Footprint to average Footprints around the world by viewing the National Footprint Results from the Global Footprint Network at www.footprintnetwork.org.

Take Action!

- ❖ Do a trash audit. Write down everything you throw away during the course of one day. Evaluate your list to see if any of the items you threw away could be reused or recycled in your community. Share your findings with your friends and family members, and then get started reducing and recycling your waste.