

Technology Impacts on Ecology

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Ecological Impacts of Technology
Sunday, March 01, 2009

Technology has had negative impacts on our environment from the clearing of rainforests to the building of factories. Rainforests are considered valuable for the timber they provide. Logging is the largest form of forest degradation and destruction. Logging companies must use heavy machinery to build roads so they can make their way through the forest. The heavy machinery compacts the soil, causing the chance for regeneration to decrease. Logging damages the rainforest's ecosystem by causing loss of biodiversity and disrupted habitat of hundreds of species. The cleared land is then used for grazing animals and subsistence farming. The timber taken from the forest is used for building materials or for burning to create heat. Developing new conservation policies to help save the rainforests is a must. (Causes of Rainforest Destruction)

Deforestation and degradation causes 20% of global greenhouse gas emissions. The Carnegie Institution's Department of Global Ecology has created a new tool for monitoring tropical deforestation, known as the Carnegie Landsat Analysis System Lite (CLASLite). "The Stanford University-based group says CLASLite 'will rapidly advance deforestation and degradation mapping in Latin America, and will help rain forest nations better monitor their changing carbon budgets.' The technology will prove useful as the REDD (Reducing Emissions from Deforestation and forest Degradation) mechanism — currently under negotiation at international climate talks — comes online". (Mongabay)

Pollution can affect the air we breathe and the water we drink. It comes from power plants, factories, industrial processes, automobiles, and trucks. The list can go on. Some types of

pollution can affect the earth's ozone layer. Ozone-depleting gases contain chlorine and bromine. Halogen source gases contain chlorine and bromine atoms, which are known to be harmful to the ozone layer. Emissions of such gases are the result of industrial processes and consumer products. "For example, the CFCs and HCFCs, once used in almost all refrigeration and air conditioning systems, eventually reach the stratosphere where they are broken apart to release ozone-depleting chlorine atoms. Other examples of human-produced ozone-depleting gases are the "halons", which are used in fire extinguishers and contain ozone-depleting bromine atoms. The production and consumption of all principal halogen source gases by human activities are regulated worldwide under the Montreal Protocol." We can help protect the ozone by purchasing product that are marked "ozone friendly" or "CFC free". (Know Your Ozone)

Technologies used to measure the ozone have become quite sophisticated. Ground-based measurements are completed at various ground stations using the Dobson spectrophotometer and Light Detection and Ranging (LIDAR). Airborne measurements are completed by way of balloons, rockets, and aircraft that carry instruments into the atmosphere. Satellite measurements provide comprehensive data because they are capable of observing the atmosphere in all types of weather, and over the most remote regions on earth. (Measured Ozone Depletion)

In my opinion, affluence is the worst ecological problem created by technology. Factories are able to mass produce useful and affordable products. We are a spoiled species. Products that make our lives easier are too readily available. Computers and the Internet make it even easier to obtain those products. I believe that the United States is the least conservative country in the world. Not only do we create a huge amount of waste, we are addicted to shopping. We shop for things we don't even need. I think that if we want to create a sustainable earth for future

generations, we need to realize that the things we accumulate while we are here cannot be taken with us when we leave. That includes the natural resources that the earth provides to us.

I think that laws should be made as to what can be thrown away and where. In other words, make a law that states landfills are not permitted to take recyclable items such as paper, plastic, and glass. This law would also require that the person who is throwing away such items must take them to the appropriate recycling facility. If people had to divide up the garbage they have and then transport it themselves to the appropriate facilities, maybe they would cut back on what they buy. Buying more than what they need would be a hassle for them to get rid of the leftovers. For example, used tires are not permitted in landfills. There are people in the world who practice recycling on their own. I think that making it a law would cut back on a lot of waste that is degrading our planet.

Another subject to think about would be aerator septic systems. I learned from a friend, who had this type of septic system installed for her home, that she has to be very careful as to what types of products she buys. Although this type of system is expensive and runs on electricity, it can also be expensive to maintain. My source told me that since all her plumbing goes through this system, she has had to go as far as making her own laundry detergent from natural products. She explained that using store brands causes the system to fail, which in turn, causes the need for high-cost maintenance. Most bath soaps and cleaning chemicals will cause the system to fail as well. Having a septic system like this sure would help you to cut back on the different types of products you usually buy. Purchasing natural products would save the cost of constantly maintaining the septic system while making you a more environmental friendly consumer.

Works Cited

1. "Causes of Rainforest Destruction." Save the Rain Forest. 2008. 25 Feb. 2009
<<http://www.savetherainforest.org>>.
2. "Know Your Ozone." Ministry of Environment and Forests. 1 Mar. 2009
<<http://203.199.76.111/sites/campaign/test/ozone/web/index.html>>.
3. "Measured Ozone Depletion." University at Albany. 1 Mar. 2009 <<http://www.albany.edu/>>.
4. Mongabay.com. "Rainforest canopy-penetrating technology gets boost for forest carbon monitoring." Mongabay.com. 4 Dec. 2008. 28 Feb. 2009 <www.mongabay.com>.