

Impact of Technology on Environment

Dr.G.Amutha Ranjini¹, Dr.A.Jeya Sudha², Dr.S.Josephine³, Dr.J.Maria Prema⁴

¹ Assistant Professor of Bio-Science, V.O.C. College of Education Thoothukudi - 628001, TamilNadu

² Assistant Professor of History, St. Ignatius College of Education (Autonomous), Palayamkottai, Tirunelveli, Tamil Nadu

³ Director of Physical Education, St. Ignatius College of Education (Autonomous), Palayamkottai, Tirunelveli, Tamil Nadu

⁴ Assistant Professor of Education, St. Ignatius College of Education (Autonomous), Palayamkottai, Tirunelveli, Tamil Nadu

Abstract

Increases in industries coupled with technological progress affects the environment in a number of ways. Using of computers both in the home and universe has a considerable impact on the environment. Emission of large quantity of greenhouse gases such as CO₂, SO₃ in the air by large industries causes air pollution which in turn has degraded environment. Further, technology contributes to depletion of resources. New technological goods are often burdensome to the environment. While technology can be a powerful force to improve our standard of living, it comes at a cost. The introduction of computer systems into both the home and work environments has eradicated the need to have reams of paper files; in the long-run these simple changes will have a considerable impact on the environment and help to preserve forests. The industrial revolution has brought about new technologies with immense power. This has been succeeded by continued industrialization and further technological advancements in developed countries around the world. The industrial revolution has brought about new technologies with immense power. This was the transition to new manufacturing processes in Europe and the United States, in the period from about 1760 to 1840. This has been succeeded by continued industrialization and further technological advancements in developed countries around the world.

Keywords: Technology, Industrialization, Advancement and Environment

Introduction

At the beginning of the third millennium, many global environmental problems, such as diminishing biodiversity, climate change, ozone depletion, over population, and hazardous wastes, are causing significant impacts. A sound environment is always required to sustain healthy lives for each and every person worldwide. The modern world is basically established on high technologies. The industrial revolution has brought about new technologies with immense power. Technology is taken in the broader sense to mean not only machines and equipment, but also the skills, abilities, knowledge, systems and processes necessary to make things happen. When looking at environment and technology, it is important to understand the context within which it has to be analyzed. The situation is paradoxical - technology represents both the source of environmental damage that is facing today, as well as an opportunity to repair this damage, and avoiding it in the future.

Technologies for Environment

Technology for environment looks at any and all technologies and their impact on the environment in their inputs, throughputs and outputs. They include, for example, cleaner and resource efficient technologies which can decrease material inputs, reduce energy consumption and emissions, or recover valuable by-products. Technology management for the environment includes goods and services which provide environmental protection in different domains: water, solid waste, air, soil, noise, natural resources, or other miscellaneous services.

Environmental Technologies

Environmental technologies, on the other hand, are technologies developed for the specific purpose of addressing an environmental problem. These include, for example, technologies for sewage treatment, water purification, minimising waste disposal, processing pollutants, or proper handling of toxic/hazardous wastes. It helps explain the complexities of global environmental problems such as greenhouse gases emissions or hazardous/toxic wastes, but also exhibit the critical role of technological innovation to address those issues.

Impact of Technology on the Environment

The modern world is basically established on high technologies. The impact of technology on the world's environment has come at a severe cost to humans. The effects of technology can be good and bad depending on their effects on the nature or the environment. A sound environment is always required to sustain healthy lives for each and every person, globally. The random utilization of high-tech applications may spoil the ecological balance of the earth and the negative effects are slow down the health of all life on this earth. The more civilized humans became, new technologies were invented to make life comfortable and easy.

Saving Environment with Technology

Though technology and environment are thought to be on the opposite ends of the spectrum, humans are looking for ways to save the environment with technology. So, be it generating renewable, green energy or using sensors to monitor endangered species, technologies like AI and IoT are helping create a sustainable future for us.

1. Techno Trash

Impact of computers and the Internet have unfortunately been negative, much of it has also been positive. Here's just a few of the ways that technology is helping to improve the environment

- It helps us develop and produce new materials and technologies that are sustainable and do not harm the environment.
- It allow to monitor and study our environment to better understand
- It helps to create smarter technologies that respond to adjust themselves to reduce their environmental impact, such as lights that can sense when no one is in the room and automatically turn off.
- It allows having a worldwide virtual laboratory, so that experts from all fields can share their research, experience and ideas to come up with better, smarter solutions.
- It allows for paperless communication like email and online bill paying to reduce the amount of trees cut down.

Sometimes people can get so excited about using a new technology that they overlook the negative impact on the environment.

2. Renewable Energy Technology

One of the most significant ways to contribute to saving the environment is to sustainably generate and use the available energy resources. Due to the non-renewability of fossil fuels like coal, petroleum, and natural gas, replace with new ways to generate energy with technology. Energy storage includes developing low-cost storage solutions for energy in the form of modern batteries and improved fuel cells. Some examples of technology-efficient energy solutions are fuel cells, lithium-air batteries, hydrogen energy storage, and thermal energy collectors. Sustainable electricity generation includes generating electricity from renewable resources like the sun, wind, and the tides. Solar energy has gained tremendous impetus in the recent years.

3. Saving Endangered Wildlife

With Alan Eddison's remark, 'Modern technology owes ecology an apology,' environmental scientists have started focusing on remedying the ecological balance caused by human beings.

- Remote monitoring - drones to detect the wildlife sounds and noises and any predator harm or natural distress.
- Smart collars embedded with GPS, meters, and sensors to keep track of endangered species like rhinos and elephants.
- Gene sequencing techniques to save in danger of extinction species from incurable diseases like cancer.
- SIM-based collars for animals near human habitats to reduce animal-human conflicts

4. Artificial Intelligence (AI)

- AI technologies to planetary health in one of four areas: biodiversity, climate, water, and agriculture.
- AI is having an impact on agricultural practices and will soon transform how farming is done in industrialized nations, reducing our reliance on pesticides and drastically lowering water consumption.
- AI will make autonomous vehicles more navigate more efficiently, lowering air pollution.
- AI is being deployed by material scientists to develop biodegradable replacements to plastics and develop strategies to clean our oceans, which receive some eight million metric tons of plastics annually.

5. Environmental Monitoring

In areas where poachers commonly hunt endangered animals, conservationists have begun using drones to keep an eye on the area. The drones act as security cameras that can cover vast distances, for those hunting illegally to get away with breaking the law. **Geo-Spatial Measurement of Air Pollution** systems draw in air around gas and oil facilities to test the amount of pollutants present. **Environmental Simulation Testing** helps ensure new products and technologies are up to standards before they hit the market and start to affect our planet.

Conclusion

Our technological innovations have the potential to harm our environment, but if we use them wisely and develop sustainable ideas, they could also help solve the ecological problems. Tech may not be the lone answer to climate change, but it may be an important part of the solution.

Reference

1. Boots B, Russell CW, Green DS (2019) Effects of microplastics in soil ecosystems: above and below ground. *Environ Sci Technol*. <https://doi.org/10.1021/acs.est.9b03304>
2. Ebenhard, T. Conservation breeding as a tool for saving animal species from extinction. *Trends in Ecology and Evolution* 10, 438-443 (1995).
3. McKinney, M. L. Extinction vulnerability and selectivity: combining ecological and paleontological views. *Annual Review of Ecology and Evolution* 28, 495-516 (1997).
4. Stuart, S. N., Chanson, J. S. et al. Status and trends of amphibian declines and extinctions worldwide. *Science* 306, 1783-1786 (2004).

5. "endangered Species." Current Issues: Macmillan Social Science Library. Detroit: Gale, 2010.
6. Assessing biofuels: towards sustainable production and use of resources, International Resource Panel, United Nations Environment Programme, 2009
7. "Threatened Species". Conservation and Wildlife. Archived from the original on 25 May 2017.