

Chapter 11

Role of Information Technology in Environmental Communication: Green Communication

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ABSTRACT

Environmental communication emerged in the United States in the 1980s and reached multiple milestones in the area of environmental protection and management. Information and communication technological advancement took a quantum leap in supporting environment-related problems through internet. Involvement of ICT in protecting the environment led to the development of 'green websites', which are associated with policies to improve, conserve, recycle, and check the carbon emissions and for the development of eco-friendly products. Environmental nature communication is the exchange of information observed during interaction of plants with ecosystems. It was discovered that organs of the plants communicate when in danger to protect themselves from predators. Application of communication devices like drones, collars, Wifi, usage of software servers for data collection, monitoring will be a way forward to conserve bioresources. Therefore, environmental communication will analyse data for scientific studies in protecting our earth. The chapter provides an overview of environmental communication.

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INTRODUCTION

Environmental communication is the application of technology for the management and protection of environment. It is a multidisciplinary subject with diverse areas like environmental studies, communication, sociology, risk analysis and management. Through communication technology exchange of information and knowledge on environmental issues is done for mitigating environmental problems. Six essential components exist in environmental communication, ecological laws, cultural dimension, effective networking, usage of media, environmental ethics practice and resolution (Flor & Alexander Gonzalez, 2004). Living beings will communicate in three ways known as systems theory, i.e., exchange of knowledge with the world and other living systems, exchange of materials and exchange of energy for their survival. Technological advancements has connected environment with researches through the use of computers, satellites, communication devices to gather environment information. Information Technology is used in various environmental studies for monitoring, analysing and mitigating the changes through Remote Sensing technology, Geographical Information System (GIS) and Global Positioning System (GPS) that gives early identification of changes in forecast and provide a warning system to the users. GIS is an established technology with software databases gathers information through remotely located satellites for environmental surveys for management and communication of ground level resources.

A number of softwares databases on environmental information have been developed for environment protection and communication. Database consists of gathering data on different topics. It is a computerised format which can be retrieved whenever necessary. Database information can be retrieved very quickly in the computer. Computer databases information can be of various types like database of wildlife, a conservation database, a database of forest cover, etc.

1. **National Management Information System (NMIS):**

This database provides information projects related to research and development collected by NMIS of Department of Science and Technology, also have the information on research scientists and staff involved.

2. **Environmental Information System (ENVIS):**

Government of India has established Environmental Information System (ENVIS) in 1982 under Ministry of Environment which is a decentralized network system for data collection, data storage and data retrieval, this information can be used by the scientists, researchers and environmentalists for future studies. Environmental Information System (ENVIS) has established 25 different centres all over the country, with its headquarters in New Delhi these centers in various organizations of the country which focuses on high priority areas of environmental aspects like toxic chemicals, pollution control, mangroves, corals and lagoons management. clean technology, remote sensing, coastal ecology, biodiversity, Western Ghats and Eastern Ghats environment protection, renewable energy, desertification, Himalayan ecology, mining etc.,

3. **Remote Sensing**

Satellite imagery provides us with real knowledge by remote sensing about different physical and biological resources and also, to some degree, on their state of depletion in digital form through remote sensing. Digital information is gathered on environment aspects like water logging, desertification, deforestation, urban sprawl, river and canal network, mineral and energy reserves and so on.

4. **Geographical Information System (GIS):**

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