SES'S L.S.RAHEJA COLLEGE OF ARTS AND COMMERCE

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ENVIRONMENTAL MOVEMENTS and MANAGEMENT

The 4 important Environmental Movements in India are as follows.

1. The CHIPKO Movement   2. The APPIKO Movement

3. The Narmada Bachav Andolan   4.Save Western (Sahyadri) Ghat Movement

Students you should try to learn all these important movements as they have created the history of mass awareness for environmental protection amongst common men.

ENVIRONMENT MANAGEMENT: DORNEY, 1989 DEFINES E.M .AS FOLLOWS.

'E.M. is a generic description of a process undertaken by systems-oriented professionals with a natural science, social science, an engineering, law or design background, talking problems of the human – altered environment on an interdisciplinary basis from a quantitative and or/ futuristic viewpoint."

Characteristic of E.M.

1. It is a generic term.
2. It supports Sustainable Development.
3. It integrates different viewpoints regarding development.
4. It deals with a world affected by large scale interventions.
5. It has a multidisciplinary approach.
6. It has a long term objectives.
7. The concern ranges from local to global
8. It shows opportunities and also addresses threats and problems.

Need and Relevance of E.M.

E.M. helps to identify the problems and finds solution. It aims to restrict and regulate the exploitation and utilization of natural resources. It tries to regenerate the degraded environment. As E.M. advocates the control of pollution and renewal of natural resources, Sustainable Development is possible through E.M. It improves performance through better management of environmental cost.

It assesses the impacts of proposed projects and activities on environment.

CONCEPT and History of ISO 14000 AND ISO 16000

ISO, the International Organization for standardization is an independent NGO, among 163 member countries up to 2015. It was founded in 1947. The head quarter is at Geneva, in Switzerland. ISO gives world class specifications for products, services and systems to ensure quality, safety, and efficiency. There are more than 20 thousand standards. It covers everything from manufactured products and technology to food safety, agriculture and healthcare.

ISO certification is a seal of approval from an external body. It provides international standard requirements or gives guidance on Good Management Practice.

ISO 9000; 2000 is a written set of standards published in 1987.

ISO 14000:

This series of standard is designed to cover the whole area of environmental issues for organizations in the global market place. This series emerged as a result of Urugay Round of conference. ISO 14000 covers the following.

1. Environment Management systems

2. Environmental Audits

3. Environmental Performance Evaluation

4. Environmental labelling

5. Life Cycle Assessment

6. Environmental aspects in product standard

These standards apply to all types of organizations and are designed to encompass diverse geographical, cultural and social conditions. The ISO family addresses various aspects of environmental management.

Development of the ISO 16000 SERIES:

Since 1987, WHO has been framing and publishing guidelines about indoor and outdoor air quality. ISO 16000 was prepared by the European Committee for standardization – CEN, Technical committee CEN/TC 264. The series is related to monitor indoor quality and indoor air pollution.

CARBON CREDIT

Is a measure in units of Certified Emission Reduction. Each CER is equivalent to one ton of CO_2 reduction or its equivalent Green House Gases. Carbon Credits are "Entitlement Certificates" issued by the UN Framework Convention of Climate Change to the implementation of the approved CDM i.e. Clean Development Mechanism projects. Developed countries that have exceeded the levels can either cut down emissions or borrow or buy carbon credits from developing countries.eg. If an environmental group plants enough trees to reduce emissions by one ton, the group will be awarded carbon Credit.

China and India are moving up fast as the world's Carbon Credit trading states. Indian Companies have already earned 7.9 million through Carbon Credit trading.

Carbon credits:

Are measured in units of certified emission reduction i.e. CER. Each CER is equivalent to one ton of CO_2 reduction or its equivalent Green House Gases. Various industries that have scope of generation of CERs are as follows.1. Agriculture, 2.Energy, 3. Manufacturing Units, 4.Metal Production 5. Mining, 6.Chemical industries and 7. A-forestation and Reforestation.

CER's are issued on early basis. They are issued on the basis of performances of eco-friendly projects and buyers are mostly companies in rich countries like Europe – Germany and U.K. which are unable to go through replacement of their polluting units in keeping with QYOTO Protocol.

CARBON BANK: can advise companies that want to go carbon neutral. The carbon Bank provides a platform that enables individual and corporate clients to keep tracks of GREEN House Gases in a secure environment. A few banks like SBI, ICICI Bank, IDBI and SIDBI have already made in roads in to the market.

ENVIRONMENT PROTECTION ACTS/ LAWS:

The list of Acts and Laws is given as follows for your reference.

1. **The wildlife protection Act - 1972**
2. **The water ACT –1974**
3. **The Forest Conservation Act, 1980**
4. **The Air Act , 1981**
5. **The Public liability insurance Act**
6. **Ozone Depleting substances Regulation and Control Act 2000**
7. **The Biological Diversity Act , 2002**
8. **The Electricity Act - 2003**
9. **Hazardous wastes amendment rules – Act 2003.**

EIA means Environment Impact Assessment.

It is an important management tool for ensuring optimal use of natural resources for Sustainable Development.

Definition: A formal process used to predict the environmental consequences of any development project.

It includes the natural as well as socio-economic and political aspects.

It assesses the surrounding, the cultural land use, cultural resources, infrastructural facilities, health and safety risks, pollution levels, etc at the project site.

EIA consists of the following stages in project design.

1. **Project Identification and Proposal**
2. **Project Appraisal**
3. **Project Implementation**
4. **Project Monitoring**
5. **Completion of Project Report**
6. **Evaluation**

CONCEPT AND COMPONENTS OF GEOSPATIAL TECHNOLOGY

Geo refers to the Earth as a whole. The term space is a 3 dimensional which has the ability to judge the position and distances. Geospatial Technology – GST, is applicable to our study of environment at both local and global level. It is a scientific study in a systematic way and at the same time it is the study of application of environmental sciences. The advancement of GST has come in a form of software called as GIS i.e. Geographic Information System. I t is being used by planners, businessmen, architects, and in transport services in Environment Management.

Geospatial technology refers to the techniques and instruments used for collecting, mapping, and analysing geographical data on earth's surface and human societies. A number of new discoveries and inventions helped in the development of new technologies like Aerial Photography, Remote sensing, Geographical Information System (GIS) , Global Positioning System (GPS) ECT. This technology is effectively used in resource planning, and management, waste management, traffic control, Disaster Management, and various other areas related to environmental planning and management.

APPLICATION OF GIS for ENVIRONMENTAL MANAGEMENT

The environmental professional uses GIS to produce maps, to measure environmental impact or trace pollutants. Following are its uses in various fields.

1. Natural Resources Management
2. Wetland Management
3. Coastal Zone Management
4. Mapping of deforestation areas
5. Forest FIRE Management
6. Desertification
7. Disaster MANAGEMENT, Preparedness, and Mitigation
8. Wildlife Management

9. Site suitability for Waste Treatment Plant
10. Environment Impact Analysis

GIS IN EVERYDAY LIFE:

According to NASA, GIS is an integrated system of computer hardware and software.

Today there are various sources of information like Reports, statistics, maps, photographs, imageries, audio clips, videos, and digital CDs. A GIS can display many layers of information for the same area, either singularly or in different combinations according to the need. So it can be used as data management tool by individuals, organizations, schools, colleges, govt. Agencies, planners, industries businessmen and social workers to solve the problems effectively.

REMOTE SENSING

This term Remote Sensing refers to the acquisition of information about an object without physical contact. The term usually refers to the gathering and processing of information about Earth's environment through photographs and related data acquired from an aircraft or satellite.

Remote sensing can provide multispectral and multi-scale data to be used in variety of purposes. The common application of remote sensing image and aerial photography is land use and land cover mapping. It is also used in collecting information on topographic elevation, temperature soil moisture content, vegetation biomass and surface roughness.

GPS or Global Positioning System

GPS is based on a constellation of 24 high altitude satellites. GPS helps us in fixing our position on the surface of the earth. Since GPS data is available in digital form at all times and in all parts of the world, it can be used anytime and its analysis can be done very quickly. Studies have already been conducted in environment monitoring, analysis of wildlife, terrain, infrastructure, studies of weather forecasts, and oceanic studies.

There has been enormous progress towards the integration of remote sensing, GIS, and GPS because of the fat development in the field of computer hardware and software. So it is very well said that Technology can be very effective tool if it is used in a proper way in Environment Management.

REVIEW QUESTIONS:

1. Critically explain the concept of Carbon Credit and Carbon Bank.
2. Briefly explain the need and relevance of Environment Management.
3. What is EIA? Describe various steps involved in EIA?
4. Enlist the Environment Protection Acts / Laws in India?
5. Discuss the application of 'Geo-Spatial' technology in environmental management.
6. Give in detail about any two Environment Movements in India.