UNIT 18 CHALLENGES IN ENVIRONMENTAL MANAGEMENT

Structure

18.1 INTRODUCTION

During the last few decades, there has been an increasing consciousness and concern that the environment in which we live has deteriorated very fast. The air we breathe and the water we drink is getting polluted, rains are becoming erratic, forests are getting depleted, large number of plant and animal species are becoming extinct, the top soil is being eroded and even the ozone layer is getting damaged. There is also a danger of global warming. This environmental degradation threatens the very existence of human beings. The tragedy is that these problems are being created by human beings themselves.

As you know, we receive all the life supporting materials from our environment but, in return, we do little for the environment. Basically, what is needed is that we should manage our environment properly. Our interference with environment should be minimal and we should ensure that it does not deteriorate and cause a challenge to our existence. We should, therefore, gather information relating to our environment so as to understand the danger it is faced with. We must assess and analyse carefully the impact of our activities on environment to adopt precautionary measures in advance. Therefore, there is a need to educate the people to develop a positive attitude towards the environment.

In this unit we shall deal with challenges of environmental management. In the next unit you will study the effect of various developmental activities on environment.

Objectives

After reading this unit you should be able to:
- explain the importance of database planning of developmental projects,
- outline the problems in preparing a reliable database report on environment,
- list reasons for the indifferent attitude of people, in general, towards environment in our country,
- describe the role of government and list problems faced by it in environmental management,
- describe the contribution of some non-governmental voluntary organisations concerned with environment.

18.2 INADEQUATE DATABASE AND RESEARCH ON ENVIRONMENT

Environmental studies is a new area that is of prime concern to us. You will be surprised to know that even at the International level attention to environment was not being given till the sixties. Very few people attached any importance to the Stockholm Conference which was held in 1972. However, some activities started in the field of environmental sciences, when Stockholm Conference brought the

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problems of deteriorating environment to the notice of the world leaders. Earlier to this the environmental problems were generally considered to be local problems.

The developed and industrialised countries have been facing tremendous environmental problems on account of their unplanned industrialisation and growth in developmental activities. Consequently, they started turning their attention to environmental management much earlier. They also had enough resources to support these activities. The developing countries which on the other hand, had just started industrialisation and developmental activities, did not face such problems so acutely. The environmental problems of the developing countries were generally related to underdevelopment, poverty and lack of resources. For them, demands such as drinking water, food, shelter, clothing and health were much more important, and for this reason they could not pay proper attention towards environmental management. Also, the subject of environment being new, very little was known about its relationship to other sciences such as climatology, sociology, geography, economics, health and hygiene. Only recently, people have started realising that management of the environment is not possible unless we have information on other areas related to environment.

Database is the collection of interrelated data. Whenever required, the data or a part of it can be retrieved. Database is generally, based on computerised information. However, information or data stored in any other form also forms database, for example, the cards used in a library to locate a book. The cards contain requisite information about all the books, journals, magazines, etc., available in the library. Similarly, compiling information about the individuals in a city, state or a country is also generating a database. It is difficult to use the information available in the form of cards, reports, books, files, etc., if the information is large. The same information, if fed into a computer in a proper way may become easily manageable and we can retrieve the desired information very fast. This is why the term database is generally used in relation to computerised information.

We will discuss below some of the areas in which environment related database has to be generated.

18.2.1 Database on Communities

India is a large country with different types of climate in different areas. The soil type, water availability, altitude, latitude and longitude vary from area to area. These differences are responsible for formation of different biological communities in different areas. A biotic (living) community includes the entire population of a given area. Here population means groups of individuals belonging to one species. In a given area there may be populations of different species of plants and animals. All these populations together form the 'Biotic Community' of the area. Therefore, the biotic community of a large area contains large number of plants and animals of different species. The number of individuals and the types of species will depend on the ecological conditions of the area. For example, where conditions are favourable for growth, not only a large number of individuals are found but a large number of species may also be found. Management of environment has direct bearing on the biotic communities of the area. The type of communities, a particular area can support will depend on the environment of the area. Also, the living organisms or the biotic community present in an environment will affect the environment. If the composition of these communities is altered drastically, it may lead to a change in the environment itself and the ecosystem at large. You may have studied about the fertile areas turning into deserts, or lakes and ponds becoming swamps and finally getting filled up. A case in point is the extinction of a number of water bodies due to unwanted growth of water hyacinth. Hence, for the proper management of environment, it is essential to have a thorough knowledge about communities present in the environment.

Plant and animal communities have to be studied in detail and information about these should, therefore, be available. In fact, information and data available at present on various biotic communities is not adequate. This is not the situation in India alone. All over the world, there is very little information available regarding biotic communities. Out of an estimated 5 million to 30 million of life forms existing on this planet, only about 1.7 million have been identified and recorded. About the rest of them, we virtually know nothing. Similarly, India is known to have not less

than 45 thousand species of plants and 65 thousand species of animals. A large number of these are endemic, i.e. they are restricted to certain areas only. However, we do not have detailed information about most of them. Especially, the role played by these organisms in maintaining the environmental balance and their role in future evolution of new species is almost unknown. This information is very vital from the point of view of environmental management. Much of the information available so far is only of taxonomic nature. For effective environmental management, we should have detailed information about the plant and animal communities present in our country. Only then we can save them and our environment from degradation. If the environment is altered, many of these species may be lost. Similarly, if these species are forced to become extinct, it may adversely affect the environment. Species become extinct generally due to habitat changes.

Their habitat gets changed due to human activities so much that they cannot survive. Some of the threatened habitats in India are:

1) The Agastyamalai Hills (Western Ghats)
2) The Silent Valley and the New Ambrabalam Reserve (Western Ghats)
3) The Periyar National Park (Western Ghats)
4) The Eastern Himalayas
5) The Western Himalayas

These areas are facing the grim prospect of losing their biological diversity, which means that the number of species inhabiting them will be reduced. It is very unfortunate that we do not have sufficient information about the species present in these threatened habitats. Hence, we would be losing 'unknown' wealth. For example, a recent survey on the status of the sarus crane has revealed the declining trend of sarus population in the country due to the disappearance of wet lands. Likewise, a study had shown the tiger to be a threatened species. In order, to save this species from total extinction the 'Project Tiger' was undertaken in 1973. This Project has considerably checked the rate of fast decline in tiger population. Unless we know about the habit and habitat of the threatened species, we cannot take suitable measures to save them. This example must have helped you to realise how important it is to have information on biotic communities. If we have sufficient information and we know the conditions in which a community can survive well, we can make efforts to save the community or a particular species.

Now, the Ministry of Environment and Forests, Govt. of India has taken up the task of compiling a database on various biotic communities. It will be called 'Comprehensive Conservation Database' and was expected to be completed by the end of 1990. Already, **Wildlife Database** and **Conservation Database** are in existence. However, these did not prove to be sufficient. Therefore, a **Comprehensive Database** has been planned.

18.2.2 Data on Geomorphology and Climate

Data on other topics related to environment such as **geomorphology**, climate, **limnology**, ground water, etc. are also not sufficient. One important reason is that India does not have sufficient resources to generate this data. As far as manpower is concerned, we have more than enough and, in fact, our trained persons working in other countries are doing similar work there. But in India, we do not have sufficient funds to provide the supporting infrastructure. The data available in these areas have been generated, keeping mainly agriculture in mind or occasionally, industries. The general environment has not been given adequate weightage so far. For example, **topographical maps, geological maps** etc. have been prepared for large areas in the country. Similarly, weather data and climatic data are collected regularly for the purpose of forecasting rains, cyclones, storms, snowfall, etc. But until recently, not much effort was made to study other parameters which could help in environmental management. For example, **forest cover, species diversity, vertical stratification** of atmosphere, chemistry of atmosphere, incoming insolation (exposure to sun's rays), **soil erosion,** deforestation, silt load in rivers, lakes, etc. were not being studied. In the absence of information on these aspects, it was difficult to utilise the available information for successful environmental management. You have already studied that if there is a tall chimney emitting pollutants, the local conditions such as wind direction, wind speed, **thermal stratification of atmosphere,** etc. determine how much of the pollutants will reach a particular place. Earlier, only tall chimneys were

considered sufficient. Now, climatological data is taken into consideration before setting up an industry. You may have read about the danger to Taj Mahal due to emission of gases from Mathura Refinery. Data on local weather conditions, wind speed, wind direction, etc. helped a lot in solving the problem. Now some steps like large-scale plantation of trees around the area are being taken to protect the monument. To cite another example, whenever a dam is constructed, a reservoir is made to store water for the dam. Life of the dam is very much dependent on the life of the reservoir and its capacity. Capacity of the reservoir is dependent, in turn, on the amount of silt deposited with time. Earlier, dams were built with rough estimates about siltation. Later, it was found that the life of the dams was shortened due to faster siltation than estimated. Siltation in the reservoir is dependent on **soil erosion** in the catchment area which, in turn, depends on the vegetation cover. Therefore, before planning such projects, soil erosion rate in the catchment areas should be studied. Similarly, data on geology of the area should also be taken into consideration.

However, we do not have the desired information about these aspects for different parts of our country. So we often depend on data and information generated elsewhere which lead to errors in judgement. More and more directly applicable information is now becoming available as a result of new researches and studies being made indigenously. Even if we look at the publication of **"World Resources"** which is regularly brought out by world Resource Institute; we find that it contains substantial information about India. Much of the information given here is generated indigenously.

18.2.3 Data on Research Personnel

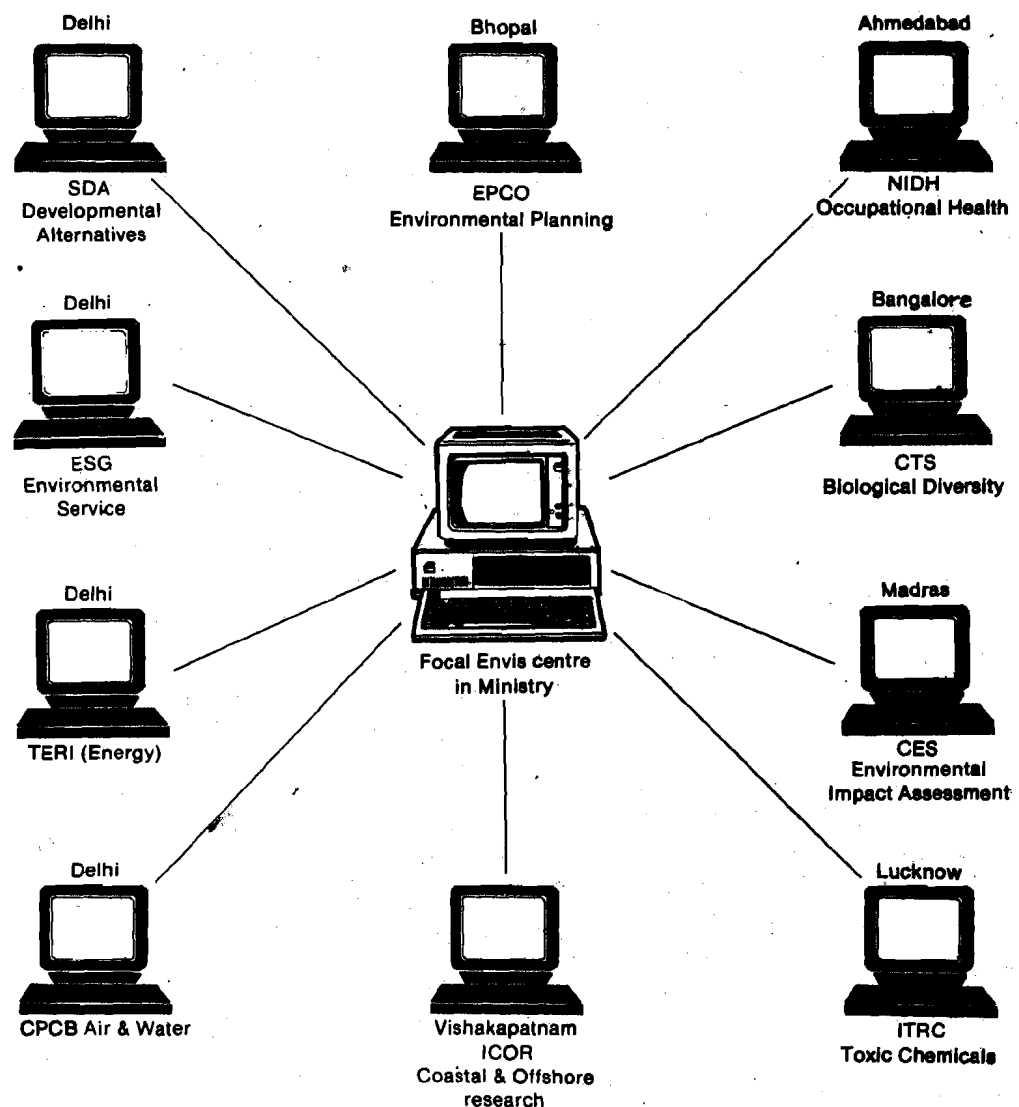Research is an integral part of science. In order to know more and to remain

Fig. 18.1 : The ten ENVIS centres and their locations

.up-to-date, research has to be carried on continuously. India has a large number of trained technical persons. In the field of environment and related subjects, substantial research is being carried out in the country.

Even developed countries are taking advantage of researches done in India. However, database on research personnel engaged in these studies is presently not available. National Management Information System (NMIS) of the Department of Science and Technology is planning to create a **database** on such research personnel in the near future. The NMIS has, however, compiled a database on Research and Development projects, which also give information about the scientists involved in various projects.

Here it must be mentioned that the Ministry of Environment and Forests. Govt. of India has created an information system called ENVIS. Its main centre is located in Delhi in the Ministry of Environment and Forests and it has ten centres spread in different parts of the country (Fig. 8.1). These centres have been entrusted with the responsibility to collect, compile and provide information on different aspects of environment to the users.

ENVIS can also provide information on a large number of topics related to environment as given in Table 1. This is, in fact, a major success. Functioning of ENVIS is being improved steadily.

One of the publications of the ENVIS is **"Paryavaran Abstracts"** which give information about published work of Indian scientists. **Paryavaran Abstracts,** brought out quarterly, serve as a good source of information regarding researches in the field of environment, before a full-fledged database on the subject become available.

Table 1 : ENVIS Centres and Areas of their Activities

Institution (1)	Area (2)
Central Board for the Prevention and Control of Water Pollution, New Delhi (CPCB)	Pollution control (water & air)
Industrial Toxicology Research Centre, Lucknow (ITRC)	Toxic chemicals
Society for Development Alternatives, 22, Palam Marg, Vasant Vihar, New Delhi (SDA)	Environmentally sound alternatives, appropriate technology
Environmental Service Group, B/1, LSC, J Block, Saket, New Delhi (ESG)	Media and Parliament related to environment
Institute for Coastal & Offshore Research, Andhra University, Visakhapatnam (ICOR)	Coastal and offshore ecology; Remote sensing for environmental mapping; and Eastern Ghats ecology
Tata Energy Research Institute, 90, Jor Bagh, New Delhi (TERI)	Renewable energy resources and environment
Centre for Environmental Studies, College of Engineering, Anna University, Madras (CES)	Eco-toxicology; Bio-degradation of wastes; Environmental impact assessment and systems analysis
Centre for Theoretical Studies, Indian Institute of Science, Bangalore (CTS)	Western Ghats ecology
Environmental planning & Coordination Organisation, Department of Environment, Bhopal (EPCO)	Environmental management
National Institute of Occupational Health, Meghani Nagar, Ahmedabad (NIOH)	Occupational health

SAQ 1

Answer the following.

a) Why is 1972 important in terms of environment?

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b) List some of the threatened habitats in India.

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c) How does erosion in the catchment area affect the life of a dam?

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d) What is ENVIS? List the activities of at least three of the ENVIS centres.

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e) Why is it important to have a database on biotic communities?

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18.3 INSUFFICIENT PUBLIC AWARENESS AND ITS REASONS

Public awareness can play a vital role in environmental management. Damage to environment is caused by the activities of individuals who are not conscious and who do not have adequate knowledge of the environment. For example, when we cut forests on a large scale to get timber and fuelwood or clear land for agriculture, we damage the environment. Similarly, when we throw liquid or solid wastes into ponds, rivers, lakes or oceans, we damage the aquatic environment. When pollutants in large quantities are allowed to enter the atmosphere, it leads to air pollution. You have learnt that unscientific agricultural practices and unplanned industrial processes and even grazing of pastures can damage the environment. There is no doubt that agriculture is essential, grazing of animals is unavoidable, forests have to be harvested for their produce, industries and thermal power plants have to be set up, dams have to be built and automobiles have to run for transporting people and goods. We cannot do away with these. However, we can certainly do these things in a scientific and planned manner so that the balance of the ecosystem does not get disturbed. Every natural system has a limited capacity to absorb shocks. If these shocks exceed the limit, repair becomes difficult. For example, if we harvest mature trees from a forest and leave the young one's to grow, the forest will continue to grow and provide timber and fuel continuously. Similarly, if a water body receives biodegradable wastes in a controlled way, which means that it does not contain toxic chemicals, the water body can take care of the wastes without undergoing drastic changes. However, if the same water body is used for dumping all kinds of wastes in unlimited quantities, the water body will become polluted, resulting in damage and death of the aquatic life in it. Let us take one more example. If the pastures are used for grazing of animals in a scientific manner, the pasture can remain useful indefinitely. However, if the pasture is overgrazed, greenery will soon vanish. Wind and water erosion will take away the fertile soil and the area will be rendered barren.

Thus you can see that, we can use our natural resources and environment in two possible ways. The one, where the environment is not endangered and we get the benefits indefinitely. The other alternative is to use the resources and environment in an unscrupulous manner. In the latter case, we may get more benefits for sometime, no doubt, but in the long run we will be the losers. Obviously, every wise person would like to go for the first alternative. However, many a time people adopt

the second alternative due to ignorance and lack of information. For example, if a herdsman is told of the consequences of overgrazing, he would never like to go for it. Similarly, if a person living in a forest is explained about the ill-effects of over-exploitation of forests, he would like to desist from it. Therefore, the important point is to make people aware of these things. Hence, environmental awareness becomes imperative. Governments are making efforts in various ways to create environmental awareness among people. For example, the Ministry of Environment and Forests, Govt. of India, has one full division called Education and Information Division. Its main role is to create awareness among all classes of people, help in informal education related to environment and provide information related to environment. In order to create general awareness, this division undertakes various activities. There is one important programme known as National Environment Awareness Campaign which has been organised every year since 1986. The campaign aims at creating environmental awareness at the national level. **Environment Month** is the period of maximum activity under this programme. Funds are provided to voluntary organisations, universities, schools, colleges, government agencies to conduct programmes for environmental awareness. In 1986, as many as 115 organisations were provided funds, whereas 207, 204 and 305 organisations were provided funds in 1987, 1988 and 1989 respectively. These organisations create awareness through rallies, exhibitions, 'padyatras', drama, dance and film shows, essay competitions, painting and drawing contests, seminars, workshops, etc. (Figures 18.2, 18.3 & 18.4).

Fig. 18.2 : Painting competition for children under National Environmental Awareness Programmes of Ministry of Environment & Forests.

Fig. 18.3 : Environmental Campaign under National Environmental Awareness Campaign

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Fig. 18.4 : Judges, Lawyers, Professors, etc., participating in Green March Organised by Indian Council for Enviro-legal Action founded by Ministry of Environment & Forests.

In addition to the National Environmental Awareness Campaign, the Ministry of Environment & Forests provides funds for organising eco-clubs in educational institutions, for holding seminars and workshops, for making films on environment and various other activities which can create awareness. State Governments also allocate funds for this purpose. Communication media like Doordarshan, and All India Radio also highlight and project the importance of environment. As a result, general consciousness towards environment has grown during the last few years. Now, we find that environmental issues are discussed even by common people. The Ministry of Environment and Forests, Govt. of India, has also brought out a Directory of voluntary organisations working in the field of environment under its ENVIS programme.

However, the present level of awareness is still inadequate. Our country is very big and it has a large number of environmental problems and challenges. To cope with these successfully, we need much better awareness, among every class of citizens. Illiteracy among the masses is a big obstacle in achieving this goal. It is easier to make a literate person aware of any problem than an illiterate person. Another reason is that the whole subject of environment is very new and it would require some time for the environmental awareness to reach the masses. Inadequacy of communication facilities and funds for the purpose are additional factors.

Before we take up implementation of various programmes related to environment in the next section, you try the following SAQ.

SAQ 2

a) What are the two possible ways to use our natural resources and environment? Which is the better method according to you?

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b) What are the various methods employed by the Ministry of Environment and
Forests to inculcate general awareness among people?

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18.4 PROGRAMME IMPLEMENTATION

Management of environment is possible only through concerted efforts of all the components of society such as government and non-governmental organisations, industrialists, agriculturists, voluntary social welfare organisations as well as the general public. The final controlling authority in most of the issues related to environmental management is the government itself. For example, most of the forest areas are owned by the government, only the government can build dams, roads, railways, etc. Industrial or any other related activity cannot start without the approval of the government. Similarly, government is directly or indirectly responsible for meeting the costs of floods, droughts, epidemics, and other environmental disasters. Therefore, the government has to apply various checks and controls so that the environment is managed properly. However, the management of environment cannot be successful until and unless everybody takes interest in it. It is difficult for the government to directly involve the masses in general. Here the role of non-governmental agencies becomes vital. They do not have to follow the formalities which a government department has to do. Further, they have the additional advantage of being in direct contact with the masses. Let us look at these aspects in a little more detail.

18.4.1 Role of Government and the Problems Faced

In India the Central and State Governments own, control and develop almost all the country's forests, dams, major irrigation systems, power stations, railways, ports, roads, mines and even industries. In recognition of their responsibility in preserving the environment, the Govt. of India created the Department of Environment and later the Ministry of Environment and Forests in 1985. The Ministry of Environment and Forests is entrusted with planning, protection and coordination of environment and forestry programmes. The Ministry is involved in conservation and survey of flora, fauna, forests and wildlife, prevention and control of pollution, afforestation, regeneration of degraded areas and protection of overall environment. To accomplish these tasks, the Ministry undertakes various measures. One of these tasks is the assessment of environmental impact prior to implementing any project which can damage environment. A study is made to evaluate its possible impact on environment and steps are suggested so that least damage is caused to environment when the project is implemented. For example, if a dam has to be built on a river, assessment is made as to the type of environmental problems that the dam will cause when built. There may be many kinds of environmental problems like siltation of the reservoir, water-logging in the area, submerging of forests, displacement of the population, etc. Corrective measures have to be implemented beforehand so that the probable damages due to the dam can be avoided. The Ministry implements various pollution control laws directly and through the Central and State Pollution Control Boards. These agencies are responsible for controlling the discharge of wastes and pollutants into the environment. Standards have been set for such discharges and the Ministry has notified standards for discharges into air, water and soil by different industries. One such standard is shown in Table 2. Now noise is also considered to be a pollutant and standards have been fixed for permissible limits of noise. In addition, the Ministry undertakes eco-regeneration programmes, provides assistance to

organisations implementing environmental and forestry programmes, promotes research related to environment and forestry and implements programmes concerning extension, education and training.

Table 2 : Minimal National Standards (MINAS) for Effluent of a Sugar Industry

Parameter	Concentration
pH	6.5 to 8.0
BOD	100 mg/litre
(Bio-chemical Oxygen demand)	
Suspended Solids	100 mg/litre

Source : Central Pollution Control Board, New Delhi

State Governments have also set up their own departments to look after environment. In their own jurisdiction, they implement programmes related to environmental protection, environmental awareness, pollution control, eco-regeneration, etc.

As forests play a very important role in maintaining the balance of the environment, forest protection and afforestation are given extra weightage at the Central and State levels. Creation of reserve forests, regulation of forest harvest and raising of new forests are some of the steps that need to be adopted. In case, some forest has to be cut for developmental projects, a clause is introduced in the approval of the project. This is called compensatory forestry, which means that new forest has to be planted in an area equal to the forest area cut for the project. Wildlife management is also a part of the environmental protection. For protecting wild species, wildlife sanctuaries, parks and zoos are created.

The government undertakes these projects at various levels but it faces many problems. The foremost problem is related to lack of cooperation. For every activity which has the potential of threatening the environment, government has suggested corrective steps. For example, for control of pollution there are effluent treatment plants, air pollution control equipment, noise reducing appliances, etc. People engaged in activities which can cause pollution are supposed to adopt them. But they do not do so readily. They consider these devices as non-productive. So, they try to avoid them. Even if they are forced to erect or install these plants, they do not maintain and run them regularly just to save some money. Government is empowered to take legal action against such offenders. But this does not solve the problem. Court cases continue for years and no judgement is made; meanwhile the environment becomes the victim. Similarly, illegal cutting of trees from forests, large-scale deforestation and killing of wild animals is done for small profits. People do such acts for their personal gains and it is not always possible for the government to punish them. You have read in Unit 7, that the area which was under forest at the beginning of the 20th century has come down to about 1/3. Similarly, several species of animals and plants have already become extinct or they are on the verge of extinction. This problem cannot be solved only through legal and administrative measures. People have to realise that they have some responsibility towards their environment.

18.4.2 Role of Non-Governmental Agencies and the Problems Faced

Non-governmental agencies or voluntary organisations can play a very important role in environmental protection and management. These agencies are free from government control and they can take decisions on their own and can undertake activities which they like. As said earlier, they have the advantage of being in direct contact with the masses. The non-governmental or voluntary agencies are spread all over the country, even in small villages, and as such they have no problem in reaching people. Being based among the masses they have no language problem, they can communicate with people in their own language and dialect. Also, since they know the local customs, traditions, folk arts, etc., they can use these media to reach people.

Voluntary organisations have played a very important role in our country in creating mass awareness towards environment. They have made people aware of the environmental problems which are caused due to neglect and uncontrolled exploitation of natural resources. They have also helped a lot in controlling these

problems. You must have heard about 'Chipko' movement (movement of hugging trees). This name was given because women used to cling to trees so as to save them from being cut. You will read more about this movement later in this course. Another movement which attracted attention all over the country and even outside was related to Silent Valley in Kerala. A dam was to be built there. The dam could generate electricity which could benefit people of that region. But more than that, the dam was going to submerge large areas of rich primeval forests. It could lead large-scale damage to the unique ecosystem of Silent Valley. People raised their voice against the Silent Valley Project. Finally, the project had to be abandoned. Similar movements at large or small scale are still going on in other parts of the country. The recent 'March to Western Ghats' is one such example. Bharat Jan Vigyan Jatha organised in 1987 was an effort by voluntary organisations to educate people about science including environment.

At present, a very large number of non-governmental organisations are active in our country in different areas of general concern. Environmental protection has also attracted a very large number of such organisations. The Ministry of Environment and Forests, Govt. of India has also compiled a Directory of non-governmental organisations active in the field of environment. This Directory gives state-wise details about these organisations.

The voluntary organisations are making extensive contribution but they also face difficulties. First of all, they often do not have adequate trained personnel to carry out various programmes. Another difficulty is that they have no easy access to authentic information and data. Above all, these organisations have to always work under great financial constraints. They have no source of income and so for most of their activities they have to raise funds on their own. Some voluntary organisations do undertake scientific studies, information collection and programme implementation on behalf of other agencies including government departments. Through these activities they generate some income. But this is not assured income and hence they have to face financial problems. Also, administrative support at local level is not available to voluntary organisations; the reason is that generally their activities are against the interest of powerful people such as forest contractors, industrialists, colonisers, etc. Some of the important non-governmental organisations working in the field of environment are:

1) **Kerala Sastra Sahitya Parishad,** Trichur (Kerala). This agency has contributed substantially to environmental protection in Kerala and the adjoining areas.

2) **Dasholi Gram Swarajya Mandal,** Gopeshwar (U.P.). This organisation started the Chipko Movement. Now, it is engaged in forest conservation, protection of soil against erosion, etc.

3) **Delhi Science Forum,** New Delhi. This organisation consisting of scientists and technocrats is making extensive contribution. It organised the Bharat Jan Vigyan Jatha in 1987, where environment was given a special status.

4) **Sanjeev Seva Samiti,** Udaipur (Rajasthan). It is engaged in tree plantation, wasteland development, soil conservation, nursery raising, spreading environmental awareness, etc.

5) **The Kubda Milk Producers Cooperative Ltd.,** Kubda, Mehsana (Gujarat). This organisation is working in various fields including environment. It is engaged in creating awareness towards environment, taking up programmes for afforestation, soil and water conservation.

SAQ 3

Answer the following :

a) What are the advantages which voluntary agencies have in creating environmental awareness?

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b) List the difficulties faced by the voluntary organisations.

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18.5 SUMMARY

In this unit we have discussed the following:

● Our future depends on how our environment is managed today. If we destroy the environment, we may threaten our own existence.

● For successful environmental management, information on various aspects of environment is essential. We must have data on biotic communities, geomorphology, climate and various research activities related to environment.

● Government is taking various steps to protect the environment and manage it properly.

● Public awareness is extremely important for environmental management and protection. During the last few years public awareness has certainly increased. This has happened due to positive participation of the government and non-governmental agencies. Non-governmental agencies face several difficulties. But, they are making substantial contribution in the field of environmental protection.

18.6 TERMINAL QUESTIONS

1) Give two important reasons why environment has become a matter of concern for us.

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2) Give some examples of environmental damage, you have noticed in the area you live. Suggest some remedial measures.

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3) When did the Ministry of Environment start National Environmental Awareness Campaign? What is the aim of this campaign?

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4) Why is it necessary to have environmental impact assessment done before a project is launched?

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5) Describe how raising awareness among masses can help to save our environment.

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18.7 ANSWERS TO QUESTIONS

SAQ 1

I) a) In 1972 Stockholm Conference on environment was held where a large number of heads of state participated.

b) See Section 18.2. Five of them are listed there.

c) Erosion leads to faster siltation. Fast siltation will shorten the life of the reservoir.

d) ENVIS is an information system created by the Ministry of Environment and Forests, Govt. of India. It has ten centres. Activities of various centres may be seen in Table 1.

e) Management of environment has direct bearing on the biotic communities of the area. The type of communities, a particular area can support, will depend on the environment of the area. Therefore, the management of the environment is not possible unless we have information on the biotic communities.

SAQ 2

a) i) Where the environment is not endangered we get the benefits indefinitely.

ii) To use the resources and environment in an unscientific manner leading to environmental degradation. First method is the better one because in the long run we will be free from environmental hazards. If we opt for the second method, we may get more benefits for some time but in the long run we will be the losers.

b) i) Ministry of Environment and Forests has one division which is called Information and Education Division. It provides informal education related to environment. This division also undertakes other activities like funding for various environment related projects.

ii) There is National Environment Awareness Campaign which aims at creating general awareness at the National level.

iii) It provides funds for organising eco-clubs in educational institutions, for holding seminars, conferences, etc.

SAQ 3

a) It is difficult for the Government to directly involve the masses in the management of environment. Hence, the role of voluntary organisations becomes vital. Also they do not have to follow the formalities which a government department has to follow. Besides, the non-governmental agencies have the additional advantage of being in direct contact with the masses.

b) In carrying out various environmental programmes, the voluntary organisations face various difficulties such as lack of trained personnel, no easy access to authentic information and data, financial constraints, etc.

Terminal Questions

1) i) Our environment has deteriorated very fast during the last few decades.

   ii) Damage to environment is likely to threaten the very existence of human beings.

2) Air and water are becoming polluted; rains are becoming erratic, forests are shrinking; plant and animal species are vanishing, fertile layer of the soil is being eroded, food materials are becoming contaminated, ozone layer is getting depleted and there is a trend towards global warming, etc.

3) See Section 18.3

4) Through this exercise estimate is made as to how a particular project will affect the environment after it is implemented. Once the nature of the problem to be encountered in future is known, corrective measures can be taken in advance.

5) One of the important causes of damage to environment is the ignorance of the masses. If we understand the implications of what we are doing, there is every likelihood that we will not undertake activities that are harmful to our environment. Awareness means we should equip ourselves with the knowledge of environment. Therefore, once we become aware, we will be careful and consequently the environmental damage will be less.