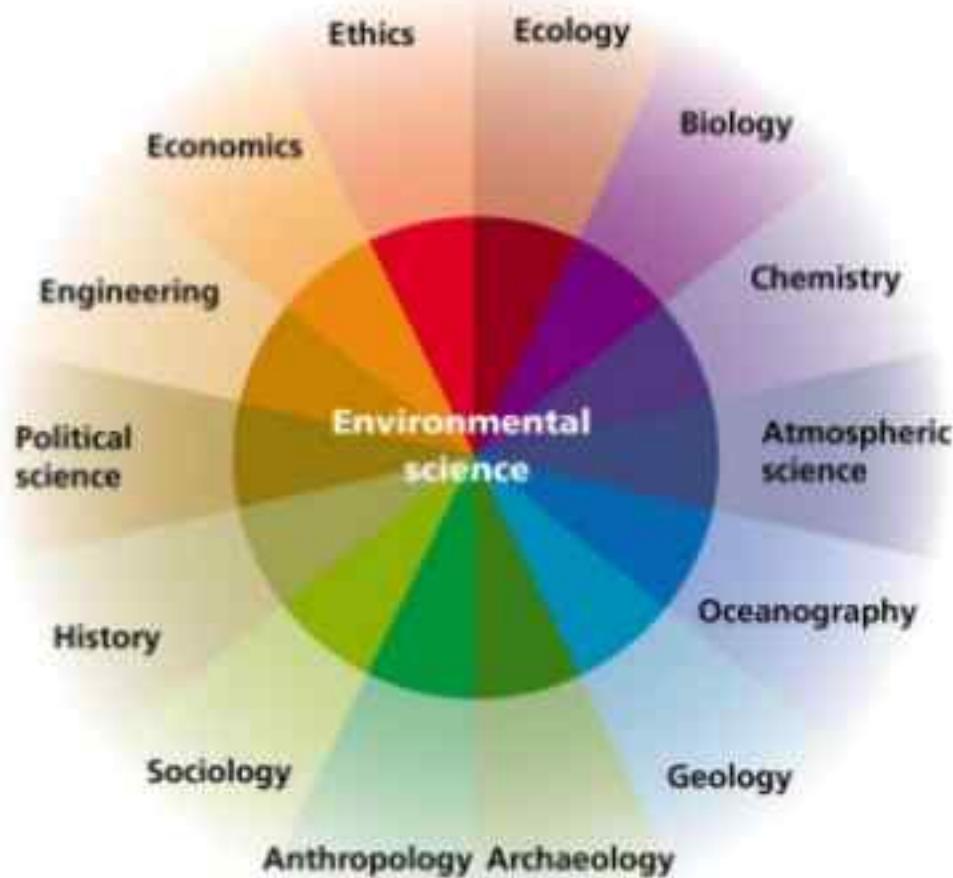


Multidisciplinary Nature of Environmental Studies



Environmental Studies requires skills that encompass a range of disciplines including chemistry, biology, earth sciences, atmospheric science, statistics, mathematics, and geography.

'Environment' is derived from the French word *Environner* which means to encircle or surround. All the biological and non-biological things surrounding an organism are thus included in environment. Thus **environment is sum total of water, air and land, inter-relationships among themselves and also with the human beings, other living organisms and property.** The above definition given in Environment (Protection) Act, 1986 clearly indicates that environment includes all the physical and biological surroundings and their interactions. Thus, in order to study environment one needs knowledge inputs from various disciplines. Life Sciences including Botany, Zoology, Microbiology, Genetics, Biochemistry and Biotechnology help in understanding the biotic component and their interactions. The physical and chemical structure of the abiotic components and energy transfer and flow are understood with the help of basic concepts of Physics, Chemistry, Geology, Atmospheric Science, Oceanography and Geography. Mathematics, Statistics and Computer Science serve as effective tools in environmental modeling and management. Subjects like Education, Economics, Sociology and Mass communication provide the inputs for dealing with the socio-economic aspects associated with various developmental activities. A synthesis with Environmental Engineering, Civil Engineering, Hydraulics and Chemical Engineering form the basis for various technologies dealing with the control of environmental pollution, waste-treatment and development of cleaner technologies that are important for protection of the environment. Environmental laws provide the tools for effective management and protection of the environment. Environmental Studies, therefore, is a multi-disciplinary subject where different aspects are dealt with a holistic approach.

Need for Public Awareness

(The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 and popularly known as 'Earth Summit' followed by the **World Summit on Sustainable Development** at Johannesburg in 2002, just 10 years after the first summit, have highlighted the key issues of global environmental concern and have attracted the attention of the general public towards the deteriorating environment.) Any government at its own level cannot achieve the goals of sustainable development until the public has a participatory role in it. (Public participation is possible only when the public is aware about the ecological and environmental issues. A drive by the government to ban the littering of polythene cannot be successful until the public understands the environmental implications of the same. The public has to be educated about the fact that if we are degrading our environment we are actually harming our own selves. This is because we are a part of the complex network of environment where every component is linked to another. It is all the more important to educate the people that sometimes the adverse impact of environment are not experienced or noticed until a threshold is crossed. So we may be caught unawares by a disaster.

There is a Chinese proverb "*If you plan for one year, plant rice, if you plan for 10 years, plant trees and if you plan for 100 years, educate people.*" If we want to manage our planet earth, we have to make all the persons environmentally educated.

In 1991, the Supreme Court of our country issued directive to make all curricula environment-oriented. This directive was, in fact, in response to a Public Interest Litigation (PIL) filed by M.C. Mehta vs. Union of India (1988) that prompted the apex court to give a mandate for creating environmental awareness among all citizens of India.

Need for Public Awareness

- Earth's resources are dwindling and our environment is being increasingly degraded by human activities and hence something needs to be done.
- Government alone cannot perform all the clean-up functions.
- Individual/group efforts in their own every possible way has to be made to protect our environment.
- Mass public awareness: newspapers, radio, television strongly influences public opinion on conserving our environment.

Methods for Public Awareness

- ✓ Environmental education
- ✓ Through media
- ✓ Through organizing seminars & conferences
- ✓ Entertainment
- ✓ Science centers
- ✓ Involvement of youth
- ✓ Through print, broadcast and internet