

Chapter 1
Introduction

CHAPTER – 1

INTRODUCTION

We have not inherited the earth from our ancestors

We have borrowed it from our children.

Native American Proverb

1.1. Introduction

In this era of depleting resources and deteriorating standards of life due to ever increasing problems of pollution, poverty and illiteracy. Various problems related to the earth like global warming, ozone layer depletion is now a household term. There is an immediate need of environmental awareness. Unfortunately, there is a considerable lack of awareness with interrelated nature of all human activities and the environment.

It is lack of awareness, low sense of civic responsibility, and growing tendency of indifference and negligence, which is by some or the other way refraining to think consciously well in advance. There is a need to increase public sensitivity towards environmental problems and involvement in their solution and foster a sense of public responsibility, greater motivation and commitment towards the environment. The famous international conference on environmental education organized by UNESCO and UNEP held in 1971 has provided incentive to numerous researches works in field of research in environmental education.

As follow up of the 96th recommendation UNESCO—UNEP (United National Environment Program), The International Environmental Education Program (IEEP) was started in 1975. Its basic aim was to include government as well as national state and international organizations in formal/informal education system and program to achieve the goals –

- Affiliation and awareness towards interdependency of economic, social, culture and ecological aspects of environment.
- Development of new behavior patterns and more responsibility amongst individuals, groups and communities for protection and rectification of environment.

The above quality itself gives the revolutionary idea of the basic and necessary relationship that must develop between an individual and its very own life supporting system. “And of course, that is a call for the future, as the coming years require nothing less than a totally new way of looking at reality; a new way based on renewed understanding of the interactive relationship between human being and the physical relationship.”

1.2. Background of the Study

Every element, objects and living being in the universe is created by the same Supreme Being. Environment is not conceived as a physical, lifeless entity – it is a living mechanism where Homo sapiens are one of the many species. Though nature has a self—balancing system but unlimited use of natural resources and unplanned destruction has affected self—balancing system of nature to the extent that now we are facing different problems, of environmental pollution. Man's quest for development has not left any aspect of the environment untouched. His zeal for advancement has affected the environment and the quality of life on this earth, so that these problems have arisen on the global scale. In the recent years, the nations have realized the damage being caused to Mother Nature in due course of time. Man is the main component involved in the conspiracy of disturbing the naturally balanced system; which remains balanced unless its range of balance is not disturbed. But the worst part is that Man is exploiting nature almost to the part of no return. In the last few decades, man has brought accelerated changes in balance of nature, through his power to transform the environment. On an individual basis human beings can prove to be the driving force to bring a positive environmental transformation which may give birth to the solutions related to the present environmental problems. The need of the hour is that the present individuals should realize the extreme dependence of life on environment. The mechanism of life cannot work and be productive if the main “tool or fuel” of life supporting system malfunctions. Man is using the nature not for satisfaction of basic needs but for the fulfillment of his unquenchable greed.

The growing population is also the gift of the society as a whole which along with the help of advanced research, technology, etc. are contributing their best to increase the burden on Mother Earth. It may be noticed that all the other environmental problems we encounter, occur directly or indirectly due to the increase in the number of

individuals in the society. The growing number of human species has increased the competition amongst them to survive. Though DARWIN'S theory indicated "survival of the fittest" but this competition is posing the maximum threat for the survival of the earth. Every individual is equally fit to survive and utilize the environment according to his needs hence the biggest loser is the environment itself. In the last four decades the Global Population has doubled from three billion to over six billion.

This has caused tremendous pressure on the earth's resources, for example, every day on earth we lose over 100 square miles of forest and about two square miles of productive land, and at the same time the society adds a quarter of a million people to the world population. Uncontrolled population has caused land mismanagement and habitat destruction which has resulted in the extinction of 70-100 plant and animal species. (GEO, UNED 1999) The process of urbanization is accompanied with a greater concentration of population in and around mega cities, which lead to major problems of housing, sanitation, water, electricity, etc. Another consequence of uncontrolled population is intense use of non—bio degradable things made of materials like plastics, rubber etc.) Hence, causing Environmental Degradation. It refers to visible reduction on the availability of goods and services, quantity and quality wise, from the physical environment and the renewable natural resource base.

On one hand the advancement of science and technology have added to the human comforts by giving us automobiles, electrical appliances, supersonic jets, space crafts, good medicines, better chemicals to control harmful insects and pests, etc. But on the other hand, they have given us a very serious problem to face, that is pollution. Pollution can be defined as an undesirable change in the physical, chemical or biological characteristics of the air, water or land that can harmfully affect health, survival or activities of humans or other living organisms. It is manifested in a number of ways including, air pollution, land degradation, deforestation and forest degradation, degradation of aquatic systems/wetlands, degradation of grazing lands, loss of biodiversity, depletion of fishery resources and degradation of the urban environment. The relationship between man and environment is very closely related to the promotion of sustainable development.

No program can be successful until and unless every citizen volunteer to take the task herself. The Chipko Movement is the biggest e.g., to prove that "People's Participation"

is the keyword in saving environment. At the dawn of Industrial Revolution, the planet's natural abundance was so great that the global human community was so easily supported by the forests, fisheries, water, soil and other resources found throughout the world. Man is now therefore facing one of the most horrible ecological problems and the problem of pollution of his environment which some time in the past was pure, virgin, undisturbed, and basically quite hospitable for him. During the last decade, a disparate picture contradictory to the very concept of sustainable development has been perceived in reality. The recent earth summit at Johannesburg has belied the hope of myriads, enkindled by a promise of the previous Rio summit on sustainable development. The world appears no better a place than what it was at Rio, ten years before.

In fact, the concern is that the environmental problems have never been as high as it is now. It is essential to recurrent the attitude towards the use of environmental resources and re-educate our self to treat the environment with great caution and control. It is indispensable to educate the school children about the environmental conditions because they the face of the future.

1.2.1. Global Environmental Changes

Environmental pollution results mainly from improper handling of domestic waste, dumping untreated industrial effluents and surface run—off from agricultural areas which have received over doses of fertilizers and pesticides. The environment consists of various components including air, water, land etc. which are interconnected and interdependent which is collectively called the Ecosystem.

Pollution is observed in all the environmental components. This includes air pollution, water pollution, noise pollution, radiation etc. The recent effects of the global environmental changes cannot be ignored because of their multiple disastrous consequences. In one such headline of a newspaper (Times of India 27 April 2021) acknowledged that “Switzerland's Glaciers Cauldron Dry”. The news said that the alpine glaciers have already lost 10 per cent of their ice. According to a 2005, study by the European Union's environment agency, the previous three years were the hottest on record in Europe after the continent's temperature case by 0.95° C during the 20th century. Also, another headline proved the water pollution to the disastrous even after measures been taken by government. The (Times of India, March 31 2021) said that

pollution in Ganga Reaches Septic Level. Experts said that “almost 96 per cent of pollution in the river is caused at “point sources” with sewers and open drains bringing pollutants in domestic and municipal land falls, while only 5 per cent is by the direct users, especially in the case of river like Ganga, which was in a constant use for religious reasons. Air pollution is the most hazardous and most widely spread mode of pollution. 60 per cent of the diseases associated with respiratory infections are linked to exposure to air pollution. Pollutants such as Sulphur dioxide, Ozone, Nitrogen Oxide, Carbon Monoxide and Volatile Organic Compounds (VOCs) come mainly from motor vehicle exhaust.

Three million people die every year due to air pollution. Environmental conditions caused 20 per cent of deaths worldwide in children under age five. Also, fetal exposure to chemicals such as lead (Pb) increases a child’s chances of having brain damage or development problems after birth. The continued industrial and chemical activities on our earth have resulted in one of the biggest environmental hazards called as “Global Warming”. Its main agents are the greenhouse gases (mainly carbon dioxide) which are responsible for forming an insulating layer in the atmosphere. This blanket of greenhouse gases traps the sun’s heat and causing the planet to warm up.

Global warming is not only responsible for the climatic condition but also affects the ecology of the earth. In February 2004, consultants to the Pentagon released a report laying out the possible impacts of abrupt climate change on national security. Worst case, global warming could make large areas of the world uninhabitable and cause massive food and water shortages, sparking widespread migrations and war. The idea that such extreme changes are possible underscores the urgent need to start cutting air pollution. In 2003, for example one extreme heat wave caused more than 20,000 deaths in Europe and more than 1,500 deaths in India. There are several disastrous effects of the constantly rising temperature. Melting glaciers and ice-caps will lead to rising sea-levels. That in turn would lead to coastal flooding all around the globe. Warmer sea surface temperature will fuel more intense hurricanes in the southeastern hurricanes in the Atlantic and Gulf Coasts. Forest, farms and cities could face transplanted new pests and more mosquito borne diseases. Disruption of habitats such as coral reefs and alpine meadows could drive many plant and animal species to extinction. Apart from the greenhouse gases, one other major contributor to the deterioration of the earth's atmosphere are the CFCs. The CFCs are the hazardous carbon compounds known as

chlorofluorocarbons, which are massively being used in modern devices like refrigerators. The direct effect of the CFCs is on the ozone layer, whose concentration has been continuously decreasing which is alarming.

Another major component of the ecosystem is the land and therefore its pollution is also a major issue in the present era. The very basic importance of "land" lies in the fact that all the human life on the earth is on the "land" itself apart from other life forms like the animals, plants, etc. Land pollution has many forms like the soil erosion, soil salinity etc. The main causes of this degradation are deforestation, overgrazing, fuel wood consumption, agriculture mismanagement, the establishment of industries and urbanization. Soil erosion and degradation which occur due to loss of green areas, strong acids, chemical pollution etc. have severe effect on the environment. List of above-mentioned problems is very long, but the notable fact is that all these factors are very much interrelated. Deforestation is a problem which is of grave concern since it can have an adverse effect on the land and the agriculture on it and also has critical implications for the world's climate. Forested areas are disappearing in most parts of the world at a rate of two percent per year and in some areas faster still, resulting in soil erosion and flooding.

1.2.2. Human interference induced problems

As we earlier discussed that today, people all over the world face grave environmental problems. The continuing depletion of natural resource, deforestation, extinction of many plant and animal species, rise in global temperature, environmental pollution, thinning of life saving ozone layer etc. are few examples of environmental degradation. These problems are further being compounded with population explosion, food crisis, hunger, malnutrition, poverty, insanitation, and unbridled consumerism which together has caused serious strains on the essential life-support systems of our planet. For example, unsafe water kills three million people each year many of which are children. Nearly two billion people cope daily with the problem of finding enough water, and as many as 3.5 billion-almost half the world's projected population-could face water shortage by 2025 (Sat apathy, 2007). Every year 15.2 million hectares of forest in tropical countries cut down and converted into other uses. Greenhouse gases, notably carbon dioxide coming out from power plants, automobiles, and burning forests, acting

as agents of climate change are contributing to warming climate that causes shifting precipitation pattern, melting glaciers, and rising sea levels. (Parashar 1996).

The concept of sustainable development, which became well known through the famous, Brundtland report, entitled 'Our common Future' published in 1987 recognized that natural resources are not inexhaustible, and the current trends of economic development and the accompanying environmental degradation are unsustainable. There is urgent need to look in to the health of global environment for the future of everyone. Education is the first and foremost human right, as proclaimed in article 26 of Universal Declaration of Human Rights. Education is the key to building up the skills and capacities in all domain necessary for techno—economic development. It is the means where people may hope to address some of the most profound problems confronting our societies in the current century. As such, education can help set the parameters of future action to help restore our planet and prevent future action to help restore the planet and prevent future ecological deterioration (Yodmani 1997). Considering education as the instrument to environmental sustainability, United Nations in December 2002 in its General Assembly by resolution 57/254 has proclaimed 2005-14 and the Decade of Education for Sustainable Development (DESD) in order to help all, consider and learn the values, behavior and lifestyles required for a sustainable future and for societal transformation (Adams 2006). It calls for building public awareness so that everyone is contributes to the decade. As teachers are the most critical agents of change responsible for growth, development and progress of societies and communities, it is pertinent to look into the role of teacher training institutions in promoting environmental sustainability.

1.3. Environmental Education - Concept, Need and Objectives

Education refers to a process of awareness building and sensitization, which can be geared to the education, school children, to college and university students or to different occupational groups. According to Merle O' Neill (2000) of Earth Times, "something more than education is required to produce environmental action watershed projects" are part of an effort to introduce environmental literacy into curriculum of schools. An ongoing involvement with nature combined with knowledge was the strongest contributing factors to the development of Environmental literacy.

Department of Natural Resources (DNR) provides activities which can be used with students to enhance information on environmental education for kids. These are changing the land, conduct fish survey, how to plant a tree, observing wetland habitat, trees and air quantity. So, environmental education takes care of the relationship of man with his fellow human beings in addition to man—nature relationship. In order to accomplish the goal, environmental education should develop certain standards, which prompt people, without fear of the law, to protect the environment. The goals of environmental education are at four levels—ecological foundations, conceptual awareness, investigation and evaluation and action skills training and application. Traditional thinking in environmental education seems to be more effective in saving the environment. Also, it is observed that behavior of the people towards the environment can be changed by giving people knowledge about the environment. Recently a number of researches have contributed to our understanding of behavior change, which indicates that there are three levels of variables, namely, entry level, ownership and empowerment variables and act in more or less linear fashion. Environmental Education is of relatively recent origin in countries around the world, much is being done in most countries in the region not matter that is to be used in the teaching/learning process but also possible strategies for its implementation in formal school programmers as well as in the out of school sector. In the words of Mr. Amadeus Mother O'Dowd, Director General of UNESCO —

“In an area as new as that of Environmental Education, clarification of the concepts and principles which should guide our action is of crucial importance.”

What must be done is to state as clearly as possible not only what is meant by environmental education. According to Tan M.C. (1994) the broad aims of environmental education at secondary level of education are –

Behavior – Practice of environmentally friendly habits in home and community affairs;

Knowledge – Application of knowledge in resolution of problems at the community level;

Skills – Simple problem solving and decision-making.

Environmental education is a process of recognizing values and classifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter

relatedness among man, his culture, and his biophysical surroundings environmental education also initials practice in decision making and self formulation of a code of behavior about issues concerning Environmental quality. Environmental education has two components by environmental and education, environment is the sum total of all the conditions and influences that affect the life and development of organisms. Education involves knowledge, understanding and application of facts and concepts pertaining to that discipline. Environmental literacy is hence the desired outcome of environmental education programs. Environmentally literate individuals understand both ecological and socio—political systems and have the inclination to apply that understanding to any decisions that pose consequence for environmental quality. Hence environmental education takes care of the relationship of man with his fellow human beings in addition to the man nature relationship. In order to accomplish this goal, environmental education should develop certain ethical standards which prompt people, without fear of law to product environments. The goals of environmental education are at four levels—ecological foundations, conceptual awareness, investigation and evaluation and action skills training and applications traditional thinking in environmental education.

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1.4. Statement of the Problem

The title of the Present study is as follows – “**Impact of Environmental Awareness on Attitude of Senior Secondary School Students—A Study.**”

1.5. Significance and Need of the Present Study

The issues of environmental education have been discussed at various national and international seminars, workshops, symposium etc. The United Nations conference on the Human environment convened in Stockholm in 1972, provided an impetus for renewed interest in environmental education during the 1970s.

In our country the environmental problems seem to be a great challenge before the humanity. It is essential for the young school going as well as the adult people, calling

for their more active involvement towards better future through development of better appreciation and understanding of the consequences of unplanned human activities upon the total bio-physio and socio-economic environment. In the year 1981, a survey conducted by UNESCO/UNEP-IEEP revealed that in the Asian region the pressing needs were felt at almost all levels of education. University education, technical and vocational education and teacher education was one of the high priority areas.

The very basic criteria observed by the investigation was that the students have considerable knowledge and information about the environment but what is missing is the sense of protecting the environment which is mainly due to the lack of compassion and zeal for the preservation of the

1.6. Operational Definition of Terms

1.6.1. Environment

Conceptual Definition – In the most general term environment is defined as “the sum of all physical, chemical, biotic and cultural factors that affect life of mass in every way”. The Oxford Dictionary defines environment as “condition, circumstance, etc., affecting people’s life”. According to Gloria J. Studdard “The environment is the sum of external conditions and influences affecting the life, development and ultimately the survival of an organism”.

Operational Definition – Environment in the present study would subsume various aspects be it ecological, human or physical and understanding of these among the senior secondary school students.

1.6.2. Awareness

Conceptual Definition – According to the dictionary of education edited by Carter V. Good, “awareness is the act of having or showing realization.” Perception or knowledge. It is the sum of all experience that are known to a person at a given time.

Operational Definition – For the present study, total awareness at any given time is defined as over summative feel behavior and condition of living beings.

1.6.3. Environmental Awareness

Conceptual Definition – According to Belgrade Charter “Environmental awareness means the act of having or showing realization, perception or knowledge about the environment and its related problems. It is a total behavior pattern and sensitivity to the environment in its totality and problems related to environment”.

Operational Definition – Awareness programs were introduced in order to check the understanding about the environment among the senior secondary school students. All the 61 items were included to check awareness about environment only.

1.6.4. Attitude

Conceptual Definition – A feeling or opinion about something or someone, or a way of behaving that is caused by this.

Operational Definition – For the present study, attitude has been measured through Taj Environment Attitude Scale.

1.7. Objectives of the Study

1.7.1. To measure the attitude of senior secondary school students towards environment (before applying environmental awareness programs).

1.7.2. To analyze the change in attitude of senior secondary school students towards environment (after applying the environmental awareness programs).

1.8. Hypothesis of the Study

1.8.1. The Environmental awareness program will not bring about a positive change in the attitude of the senior secondary school students.

1.9. Chapterization of the Study

The Dissertation was categorized into 5 parts namely – Introduction, Review of the Literature, Design and Methodology, Data Analysis and Interpretation and Results. While the first chapter laid the foundation of why the Research was undertaken. This chapter gives us an overview of what the dissertation is about. We also come to know about the objectives intended to be achieved in the research process. This chapter is followed by the Review of Literature wherein we come to see the Journals, books,

periodicals, magazines online resources that have been quoted to review earlier works on the similar topics. Review of Literature constitutes an important aspect of the entire dissertation process. This chapter is followed by Research Design and Methodology wherein tools used and manner of data collection is elaborated in detail. In this dissertation, I have used “paired t—test” as a statistical technique. This chapter is followed by the chapter on data analysis and interpretations wherein we discuss the results of our experimental research. In the final chapter, we suggest based on our findings of the Research Problems and also discuss the educational implications of the study.

Two noteworthy sections of the Dissertation involve the structure and the Appendices without which the dissertation seems to be a void.

1.10. Delimitations of the Study

It is generally not possible to study the entire mass of variables associated with a given problem. Every research study is limited in several ways. It cannot be exhaustive and complete in all respects. It has to be delimited in certain aspects in terms of population covered, sample selected, scope of variables studied, the scope of generalization of findings and so on. The present study is an attempt to measure the environmental awareness among students. Measuring environmental awareness in students is a difficult task specially when there is no suitable tool for it.