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Opportunities and Concerns of Environmental Education

ABSTRACT : It is now widely acknowledged that the impact of human activities on environment is significant and will have serious consequences for future generations. Environment education has a significant role in making the youth conscious about their environment, adopting green social behaviour and thus responding to the environment crises. Recognizing the importance and need of environment education, India has initiated several efforts including making the environment education compulsory at all level of education. Today when environmental conditions are changing adversely and all living beings are suffering from the negative consequences of environmental pollution and climate changes, there is a need to reorient the curriculum of environment education for making it more attractive and responsive to the local environmental issues. Moreover, related policies are also needed to be restructured for sensitizing the people, especially school and college level students about the issues related to environment management.

Keywords : Challenges, Opportunities, Concerns, Environmental Education.

INTRODUCTION : Environment education (EE) is a rapidly emerging and dynamic concept of education, which requires a new vision of empowering people about their nature and their role in conservation initiatives. It is now widely acknowledged that the EE is one of the effective conservation tools, which can play an important role in changing the behaviour of individuals. EE establishes a green social behaviour among the citizens, especially youth, by inculcating a greener way of thinking, approach, behaviour and commitment towards the environment.

Environment is there, with all its complexity, for all organisms to be part of, to draw sustenance from and to reorganize and recycle till eternity. Environment is

indivisible and inseparable from life. The crux of the problem is: after all, environment for whom? The answer is: for the living system of which mankind is an integral part. The terms environment and environmental protection have been an item of public discussion for almost 70 years now. Initially the main focus was on solving acute environmental problems such as arose from the use of the plant pesticides (a classical example is the campaign which eventually led to the ban on DDT). In the course of time, however, protagonists of environmental policy have come to realize that we will not be able to secure an acceptable quality of living in the long run by merely dabbling with symptoms. It is rather accepted today that this will require the foresighted protection of all our natural resources and their biotic potential. However, this goal can only be achieved if humanity orients itself by the principle of sustainable development. This insight, too, is gradually becoming common knowledge. Observance of sustainability as an ethical concept dates back to the third millennium BC when in their hymn to earth, the sages of the Athrava Veda chanted, "What of thee I dig out, let that quickly grow over, Let me not hit thy vitals, or thy heart", that one can take from the earth and the atmosphere only so much as one puts back into them. The hymn above conceptualizes thee as nature and refers it to man warning him of the relationship, he must maintain to live in harmony with nature. Lastly, we can say that a global development in accord with the Brundtland Commission's definition of "sustainable development" is in principle very well possible, provided the world population does not outreach the Earth's population capacity and humanity converts its energy and raw material supply to renewable resources and does not think Environment as the Gigantic Sewer otherwise our survival along with all life on earth will be at a stake.

In the simplest term, Environment has been defined "as the sum total of all conditions and influences that affects the development and life of organisms". This is a comprehensive definition as it stresses its totality, and every living organism, from the lowest to the highest, including human being, has its own environment. The objective of the present discussion is to identify priority areas and the way corrective action could lead to sustainability in development. This has to be done in relation to our particular social, cultural and economic milieu.

Historically, we have been serious minded about environment and the basic philosophy has been one of harmony with nature as against western concept of conflict with nature. We followed the latter during the past 150 years or so. Since our independence, considerable progress has been made and today we are among the first ten industrialized nations of the world. Associated with any development, there is always some amount of environmental degradation. A time has come when sustainability in development has to enter in our planning process as one of the basic and permanent objectives. However, sustainable development needs to be properly paraphrased. This paper is aimed at provoking a thought process, discussion and public debate on the subject, rather than talk about it with an air of finality. For human societies to achieve a productive, healthful, and sustainable relationship with the natural world, the public and private sectors must make environmental considerations an integral part of decision making.

The following areas have been identified where priority action is needed. In fact, these would also constitute important steps towards sustainable development itself.

- Population stabilization
- Integrated land use planning
- Healthy cropland and grassland
- Woodland and re-vegetation
- Conservation of biological diversity
- Control of pollution in water and air

- Development of non-polluting renewable energy systems
- Recycling of wastes and residues
- Ecologically compatible human settlements and slum improvement
- Environmental education and awareness
- Updating Environmental Law
- New dimensions to national **security**

CHALLENGES AND OPPORTUNITIES : Even though we achieved success in ensuring all the modalities to implement EE, there is a gap in its effective implementation as a result of which a large portion of the society is not aware about the functional role of ecosystems and its services, harmful impacts of environmental pollution and climate change, etc. Some of the issues attributed to nonimplementation of EE effectively are lack of attitude, commitments and skills towards environment management, lack of environmental training modules and adequate curriculum, lack of preparedness to tackle immediate environmental problem, lack of organizational support, lack of jobs in environment field, increasing rate of developmental projects and economy, lack of measurable results, etc. All these concerns have a restricting effect on spreading awareness and establishing responsible citizens, who can serve the environment.

Besides, formulating policies relating to EE and re-examining existing policies from environment conservation point of view as well as political decisions and actions are also a critical part of EE. Lack of concern and commitment for the environment as well as individual lack of skills to tackle environmental problems due to ineffective environmental courses are some of the reasons behind non-visibility of the impact of EE on the ground. Today, when climatic conditions are changing adversely and all living beings are suffering from the negative impacts of environmental pollution and climate changes, there is a need to inculcate such knowledge and skills, which will play an important role in sensitizing the people about environmental issues. This will facilitate the people to adopt green social responsibility for the protection of environment. Consequently, a plan of action is needed to interest the students and the educators in environment and related issues.

In 2014, the Government of India launched "Swachh Bharat Mission", a nation-wide environment awareness campaign with an aim to accomplish the vision of "Clean India". This mission has successfully achieved its objectives and displayed India's commitments towards a clean, green and healthy India. In fact, "Swachh Bharat Mission" is also a part of environment awareness activity. While the quantitative impact of EE in building environmental leaders is hard to measure, some environmentalists are seeing a huge change in the awareness levels through education while others are not convinced that education is generating anything beyond general nature lovers. As far as legal instruments are concerned, the Ministry of Human Resources Development launched the National Policy on Education in the year 1986, which was amended in 1992, also advocating the implementation of environmental education at all levels of education. In fact, the Ministry of Human Resource Development is also in the process of bringing out the National Education Policy, 2020 which advocates the EE. In order to implement the EE effectively across the country, National Council of Educational Research and Training, which aim to design a curriculum for school education, can take a lead. Besides, the University Grants Commission and All India Council for Technical Education can play an important role in implementing the environmental education in technical and higher education.

Furthermore, the Wildlife (Protection) Act (1972), the Environment (Protection) Act (1986), the Biological Diversity Act (2002), and the National Environment Policy (2006) are some of the legal instruments being implemented by the Ministry of Environment, Forest and

Climate Change, which also highlights the importance of environment conservation. In addition, Ministry of Environment, Forest and Climate Change, through its flagship programmes like National Green Corps (Ecoclub) programme, Green Good Deeds initiative, Green Skill Development, is also developing young professionals to promote green behaviour. Similarly, National Council of Science, Technology and Communication, Prasar Bharati, CSIR - National Institute of Science Communication and Information Resources, etc. also organise various programmes and campaigns on the environmental awareness issues. If we look at the environment related programmes being implemented internationally, there is one such programme namely Global Learning and Observations to Benefit the Environment (GLOBE) programme. This programme provides students with an opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth systems and global environment. As of now, nearly 122 countries are actively participating in the programme.

With changing scenarios of environmental conditions and increase in human population, the importance and urgency of EE has evolved a lot in the last three decades. There is a need to revisit and revise the curriculum of EE. EE needs to be made more attractive and interesting, especially among the school level students by implementing nature conservation aspects. Building the capacity of students and teachers is one of the important components of this education, which has to be ensured by initiating field-orientated learning activities. The training module can include all the important topics like biological diversity, control of pollution (air, water, soil, and noise), waste management, and forest and wildlife conservation. Besides, incorporation of some field learning tools would be of paramount importance, which will facilitate the teachers and students in learning and disseminating the knowledge about the dynamic components of the nature.

Environmental Concerns - Past, Present and Future : The well said aphorism from the Rig Veda “anobhadra: krutvo yanto vishvata:” means: “Let knowledge come to us from all the sides”. Here “all sides” must imply the circumscribing surroundings or the ENVIRONMENT according to our ancient sages. Experiences in ABOUT, FROM and WITH IN the dynamic environment provided the basis for man’s earliest concepts of all sciences, art and social values. Environment has been man’s pre-eminent teacher and so is even today. Mankind would never have got anywhere without this vital knowledge about environmental phenomena. Learning FROM the environment as implied by the aphorism, learning ABOUT the environment and its wondrous ecological fabric and learning FOR the environment for protecting and preserving its resources for sustaining developments are facets of worthwhile environmental concerns to us all from ancient times to present day. Environment is there, with all its complexity, for all organisms to be part of, to draw sustenance from and to reorganize and recycle till eternity.

Environment is indivisible and inseparable from life. Relationship between ENVIRONMENT, BODY and LIFE, the theme of modern science of Ecology, was very well known to the Indian sages of the past. It has been known from the Vedic times that nature and humankind (PRAKRATI and PURUSH) form an inseparable part of the life support system, which has five elements, air, water, land, flora and fauna. These are interconnected, interrelated and interdependent and have co-evolved and are co-opted. Deterioration in one inevitably affects the other 4 elements. If the deterioration is for a short term, and the life support system has enough resilience, it repairs itself and reverts to the original state. However, if deterioration continues, the whole system, including all life is thrown out of gear.

In the present times also the founding fathers of our constitution have enshrined in the

directive principles of state policy, the following duties for the State and the Citizen regarding environment.

ARTICLE 48: "The State shall endeavour to protect and improve the environment and to safeguard the forest and wildlife of the country".

ARTICLE 51: "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have a compassion for living creatures".

Thus, the interest in environment and conservation is not a sentimental one but the rediscovery of a truth well-known to our ancient sages. Still, Indian tradition teaches us that forms of life - human, animal and plant - are so closely interlinked that disturbance in one gives rise to imbalance in the others….. Nature is beautifully balanced. Each little thing has its own place, its duty and special utility. Any disturbance creates a chain reaction which may not be visible for sometimes. As such taking a fragmentary view of life has created global and national problems.

Thus, it seems, as environment is the concern of all, and its effective management is possible on a holistic basis only through partnership with all people. So, can man himself be vital and of good heart and conscious of his responsibility. This should guide our relationship with our planet Earth as shown in the Vedas.

Many world leaders now expect- though they probably dwell on the thought - that nuclear destruction eventually, perhaps soon, will erase human life from this earth. For the first time in history a few men, or perhaps even one man, can destroy the whole human race and perhaps the whole planet. Besides nuclear annihilation mankind could be destroyed from off the face of the globe: chemical and biological warfare, overpopulation and resulting famine, disease epidemics, and above all environmental pollution.

Mankind's failure to understand the environment, thus threatens to destroy the environment, and us along with it. With our air unfit to breathe, our water unfit to drink, several hundred species of animals threatened with extinction and hundreds more already destroyed, plant communities disrupted, we have at last come to face the inevitable fact: we live by nature's laws, and we break them at our peril. At best, the remainder of 20th century will be a traumatic period for mankind. At worst, it will be catastrophic. Human life is sustained by air, water, and food. Today man is polluting his life-sustaining supply of these three necessities at a fast-accelerating rate.

Now many of our cities are plagued with smoke or other kinds of pollution. Air pollution; filling the air with poisonous gases, smoke, smog, fall-out from nuclear explosions, and fluorocarbons from aerosol sprays not only threatens man but renders plant-life sick. Major rivers and lakes in the world are so seriously polluted that the water supply in many places is reaching a crisis stage.

Man has depleted and ruined the soil out of which food must grow. Artificial fertilizers, poisonous sprays, and erosion caused by floods have robbed vegetables, fruits and grains of life-sustaining minerals and vitamins. Food factories have further extracted these vital elements out of grains, rice and sugar, in the greed for profits. Add to these the worldwide revolution in the weather- drought and floods - the great Climate Change resulting in mass starvation in many parts of the world, and widespread epidemics of diseases. During the past 50 years or so in Africa, India and South America alone, weather and environmental damages have caused the loss of over one million square kilometers of agricultural land.

Lastly, if all these fast-accelerating evils do not destroy humanity soon, the experts say

the population explosion will. Thus, we see, Planet Earth is sick, Very sick. The symptoms of this planetary disease are all round - in our air, water and our food as we see. Let us, therefore, consider today the most alarming questions. Is mankind an endangered species? If so, where have we gone wrong, and is there anything which we can do to rectify our error before it is too late?

Here we will consider some of the problems which man has brought upon him-self by failing to understand the world in which he lives and to solve the global pollution problem, a unified global society must now be regarded not as a fiction or an ideal, but as the inevitable reality towards which we must move

Need of Environmental education and the role of teachers:

Before we move on to environmental education, I would like to remind an Old Chinese Proverb which goes on to say:

"If you are thinking one year ahead - plant rice,
If you are thinking ten years ahead - plant trees,

But when you are thinking hundreds of years ahead - educate the people".

So, education plays very important part and this perception has some major elements connected to environment and education. In fact, education needs to be regarded as investment of the highest order which, in time to come, becomes an asset. However, in spite of the substantial inputs in this area, education tends to benefit selected pockets of population, while the rest of the population, remains steeped in superstition and irrationality. We have to make aware large masses of our population to be conscious of the environment.

A better understanding of our environment is indispensable for its rational management because it would enable us to comprehend the environment's resilience to man's action and the maximum potential it may offer for sustained development of mankind. Such an understanding will also enable us to predict better the interrelated efforts of some of the major challenges facing the world today, among which are demographic changes; economic development; availability of food, energy and raw materials; development and utilization of new technology; rates of inflation and availability of investment capital. All these issues have significant impacts on the environment and the environment, in turn, affects developments in those areas. Better understanding of the environment can only come through environmental education, and this is why environmental education is so important and essential at present.

During the last few decades there have been major changes in the world as a whole in our attitudes to and perceptions of environmental problems. These changes can be discerned in both developed and developing countries, but the magnitude of these changes - as to be expected - varies from one country to another. In developed countries, prior to 1970, public awareness of serious environmental deterioration was primarily limited to "shock" events. Thus, the shocking death of some 4,000 people due to famous London smog of 1952 and another 800 deaths in New York in 1963 for similar reasons attracted widespread attention.

Slowly deteriorating environmental conditions - like increases in water and air pollution, lack of land use planning or increasing noise levels - were mostly accepted as the price of progress. As people became wealthier and level of education increased, they also became more aware of environmental issues. Publication of some famous books like Silent Spring by Rachel Carson in 1962 and the Limits to growth by Meadows et al., 1972 not only contributed significantly to the ongoing environmental debate but also in some way intensified it. Irrespective of whether one agreed or disagreed with these, put forward by these and other similar authors, there is no doubt that such events had a profound influence on the prevailing

environmental thinking of the western industrialized countries.

So far as the developing countries are concerned, the overall trend was somewhat similar, even though these countries tend to be less homogeneous than the industrialized nations. As happened during Stockholm Conference on Human Environment, 1972, which stated that "In the developing countries most of the environmental problems are caused by under-development……? Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment". Since the Stockholm Conference, much of the work on the environment-development interrelationship has been carried out by UNEP that has made the world accept the general principle that environment and development are the two sides of the same coin, that is, the development must be sustainable, and in order for development to be sustainable, environmental issues must be explicitly considered. Therefore, "development without destruction" has been a major motto of UNEP.

While prior to Stockholm Conference, the real nature and magnitude of the environmental problems facing many of the developing countries were perceived somewhat vaguely, the situation has become much clearer as more knowledge has become available. Many will now argue that poverty and pollution (environmental degradation) will continue to co-exist, until we can better manage the impacts of a growing population on a limited natural resources base, whose productivity is not increasing commensurately.

What is environmental education? It has to be admitted that like education in any other broad area, there are no precise and universally acceptable definition. The best that can be done is to quote from Recommendation No 1 of the first Intergovernmental Conference on Environmental Education, held at Tiblisi, USSR, in October 1977 (UNESCO, 1980) which goes on to say "A basic aim of environmental education is to succeed in making individuals and communities understand the complex nature of the natural and the built environments resulting from the interaction of their biological, physical, social, economic and cultural aspects, and acquire the knowledge, values, attitudes, and practical skills to participate in a responsible and effective way in anticipating and solving social problems, and the management of the quality of the environment. A further basic aim of environmental education is clearly to show the economic, political and ecological interdependence of the modern world, in which decisions and actions by different countries can have international repercussions. Environmental education should, in this regard, help to develop a sense of responsibility and solidarity among countries and regions as the foundation for a new international order which will guarantee the conservation and improvement of the environment". The Recommendation No 2 suggested some guiding principles for environmental education, which should:

a. Consider the environment in its totality - natural and built, technological and social (economic, political, cultural-historical, moral, aesthetic;
b. Be a continuous lifelong process, beginning at the pre-school level and continuing through all formal and non-formal stages;
c. Be interdisciplinary in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective;
d. Examine major environmental issues from local, national, regional and international points of view so that students receive insights into environmental conditions in other geographical areas;
e. Focus on current and potential environmental situations, while taking into account the historical perspective;

f. Promote the value and necessity of local, national and international co-operation in the prevention and solution of environmental problems;
g. Explicitly consider environmental aspects in plans for development and growth;
h. Enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences;
i. Relate environmental sensitivity, knowledge, problem-solving skills and value clarification to every age, but with special emphasis on environmental sensitivity to the learner's own community in early years;
j. Help learners discover the symptoms and real causes of environmental problems;
k. Emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills;
l. Utilize diverse learning environments and a broad array of educational approaches to teaching/learning about and from the environment with due stress on practical activities and firsthand experience.

While the above aims and guidelines give us some idea about environmental education, it has to be admitted that they are somewhat general and broad, with rather poorly defined boundaries. Accordingly, there are major differences of opinion among experts as to what constitutes environmental education or rather what does not!

It is indeed a major dichotomy in the present world that many people preach one thing, but practice another. Their thinking seems to be "do as I say and not what I do". This in the area of environmental education will just not do! It is important and absolutely essential that the planners and leaders especially teachers should not set examples by practicing what they teach.

CONCLUSION : Though EE has been streamlined in the curriculums of all the education, there is a need to sensitize people, especially school and college level students about the importance of the subject. This can be achieved through both the formal and non-formal education. In order to encourage students about the environmental issues, outdoor learning modules need to be designed, like nature camping, expedition, organization of training programmes and workshops, etc. EE related activities should be conducted on regular basis. EE should be made compulsory in all the year/semester of the under graduate degree courses. Also the young people need to be made aware of the various opportunities which exists as career options for them like Environment Advisors for various companies in respect of Environment Impact Assessment, one can also join international organizations like UNDP, UNEP, WWF, CEE, IUCN, BNHS, WTI etc.

Effective and meaningful environmental education is a challenge we must take seriously if we and future generations want to enjoy the benefits of quality life and natural heritageGiven that, the term "environment" is the second form of term "nature", environment education can't only be considered as a "form of education", but should be considered as a knowledge-based conservation tool for addressing environmental issues. As Nelson Mandela said in 1990, "Education is the most powerful weapon you can use to change the world." Moreover, it is an essential component of education at all levels that enables the individuals to adopt green habits for sustainable social development and preserve a cleaner and greener environment for our future generations.

Historically, we have been serious minded about environment and the basic philosophy has been one of harmony with nature as against western concept of conflict with nature. We followed the latter during the past 150 years or so. Since our independence, considerable progress has been made and today we are among the first ten industrialized nations of the world.

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