

# Role of Universities in Empowerment of Socio-economic Weaker Section for Environmental Protection

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Educational facilities or the economic benefits in India happen to have not reached evenly to all sectors or sections of the society. There have been astonishing successes on some fronts and conspicuous failures in the case of others. A number of far reaching changes could be noted in some of the sections which seeped and percolated into the very ethos of functioning of these sections. Even the act of going to school, in itself continues to be a challenge to traditional inequalities. Knowledge is not important or appropriate for members of the Socio-Economically Weaker Sections. Many ideological convictions have contributed to this mindset, ranging from social prejudice to distorted interpretations. Unfortunately these section of our population is being maligned for many things, like deforestation due to shifting cultivation and consequent loss of top soil and so on.

Environmental problems have attracted the attention of a wide cross-section of people all over the world during the last two decades. People are becoming increasingly conscious of a variety of problems like global warming, ozone layer depletion, acid rain, famines, droughts, floods, scarcity of fuel, firewood and fodder, pollution of air and water and problems from hazardous chemicals and radiation which have adverse effects on the environment. No nation in the world has been spared nor has any citizen been touched.

The recent increase in industrialization and urbanization during the last century has brought extensive environmental pollution problems to the world. The first signs of pollution were observed in water pollution. Later solid waste, air, noise and radioactive pollution began to show their affect on human beings. Environmental problems pose a challenge to humanity which is unprecedented in its scope and complexity. Environmental protection is certainly an important concern. But it can also become a mindset that distracts us from seeing fundamental problems and relationships. This mindset assumes a basic conflict between humanity and nature. It presumes an intrinsically destructive human

economy from which nature must always be shielded.

## Focus of Universities in Environmental Protection

Universities and equivalent institutions of higher education can train the Socio-Economic Weaker Section to have expertise in various fields of research. It is consequently their duty to propagate Environmental Protection literacy and to promote the practice of environmental ethics in their community. Indeed, universities are increasingly called upon to play a leading role in developing a multidisciplinary and ethically-oriented form of education in order to devise solutions for the problems linked to Environmental Protection and sustainable development. They must therefore commit themselves to an on-going process of informing, educating and mobilizing all the relevant parts of the community and society at large, concerning the consequences of ecological degradation, including its impact on global development and the conditions needed to ensure a sustainable and just world.

The main aim of universities is to protect and improve the environment of the weaker sections. Effective protection of the environment requires activity on many wide-ranging different fronts - for example, from acting to limit global environmental threats (such as global warming) to safeguarding individuals from the effects of poor air quality or toxic chemicals. Actions to protect the environment also produce benefits such as housing (through improved energy efficiency of buildings), social progress (through action to combat fuel poverty) and economic growth (through more efficient use of resources, such as re-use, recycling and recovery of waste).

Therefore the purpose and focus of universities is to gauge the current and common practices made by the weaker sections in the community and identify the gaps between these practices and the ideal vision outlined by them. They should form an Environmental

Protection Advisory Committee who can identify problems with regards to environmental education and awareness that are important areas for further research.

### **Importance of Environmental Education for Environmental Protection**

Environmental Education can be used to foster critical thinking among students and other weaker sections of the community, on Environmental Protection. The universities must stress the importance of environmental education and awareness for increasing individual awareness of the need for environmentally sustainable behaviour; to encourage and assist all members of the community to adopt more environmentally sustainable behaviour.

Man's exploitation of the biosphere is now threatening its very existence and delicate balance. Over the last few decades, the pressures on the global environment have become self-evident, leading to a common outcry for sustainable development. In the words of the Brundtland Report, we must learn to care for the needs of the present without compromising the ability of future generations everywhere to meet their own needs. The awareness is there. What is required is a comprehensive strategy for building a sustainable future which is equitable for all human beings, as highlighted by the Rio Conference (UNCED) in 1992. This requires a new frame of mind and new sets of values. Education is critical for promoting such values and improving people's capacity to address environment and development issues. Universities should offer training for decision-makers and teachers working for the weaker sections. They should be oriented towards sustainable development and foster environmentally aware attitudes, skills and behavior patterns, as well as a sense of ethical responsibility.

### **The Role of Universities**

Universities have an important role to play in Environmental Protection. Their focus must be visionary and practical. They should empower the weaker sections and try to highlight the principles that reveal the ultimate potentials of eco-development, and also guide the practical activity that is already taking place in every sector. Universities can also identify imaginative, knowledgeable, committed, articulate, and personable activist-professionals who

are living testaments to the wonderful opportunities for community service through "right livelihood".

The university is a microcosm of the larger community, and the manner in which it carries out its daily activities is an important demonstration of ways to achieve environmentally responsible living beings. By practising what it preaches, the university can engage the weaker sections of community in understanding the issues relating to Environment and have them actively participate in Environmental Protection.

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#### **(i) Formal Education**

There has been much literature on the subject of incorporation of environmental education into the formal education system. The Tbilisi conference summary paper outlines some of the efforts in formal schooling that have been adopted. In universities, special courses, seminars and training courses on environment-related topics have been introduced. Some countries have endeavored to develop environmental education at the university and post-university level for specialists such as engineers, planners and those professionally concerned with the natural or social sciences. The curricula are designed so as to facilitate a cross-disciplinary approach to environmental problems (UNESCO 1980; 36).

There are two existing approaches to interdisciplinary learning in the context of environmental education. One in which issues of the environment are integrated into the existing disciplines and the other is the introduction of environmental studies program in which various disciplines are

brought together and a new curriculum is taught to the students. However, the literature fails to provide methods and data in which the effectiveness of such an approach is evaluated or looked at more closely so that improvements or adjustments, if necessary, can be made.

At the postgraduate level it is necessary to have diversity in course work, which has to aim at making development to sustain itself on a long term basis. The University Education has three major components: Teaching, Research and Extension. Therefore the Universities can work out ways and means to empower the weaker section in these lines as well.

### **(ii) Informal Education**

A problem with environmental education is that it has often been seen as a matter to be dealt with solely in context of formal teaching. In this context, the variables are fairly well known and the ground rules are well established. Some traditional concern to environmental education can be in areas such as 'community-based environmental education', or 'networks and environmental education'. This involvement of the community could bring about improved environmental perception. Although many students do have access to formal education, not all have access to environmental education. Incorporating the informal with formal education can prove to be successful. Both initiatives can be combined by the universities to design, create and build high-tech "ecologically friendly" building. In doing this, the University serves as an information source on campus sustainability to those outside of the community.

### **(iii) Nonformal Education**

Universities can awaken the public consciousness by introducing various non-formal programmes on Environmental Protection strategies. Adult Education, Farmers' training, Environmental Education for weaker section through puppet shows and audio-visuals and science fairs can produce beneficial effects. Using local language information packs, posters, slides and exhibitions are also means by which non-formal education can be organized by the universities in various places.

### **(iv) Outreach and Partnerships**

The Universities, as leaders and innovators in

environmental education, could expand their scope through out-reach programmes for sustainable development and also through partnerships with local environmental organizations. Partnerships will address many of the resource issues raised by participants and outline the benefits of partnerships between higher education institutions and local organizations in the environmental sector. These partnerships, in terms of education, will add to the value and relevance of many courses. Partnerships widen the role of universities in local communities, can facilitate outreach practices.

### **(v) Research**

The university may carry out the following activities for the Socio Economically Weaker Sections:

- i. Convene school deans and environmental practitioners to advance university research, education, and policy development.
- ii. Explore opportunities for joint education and research projects.
- iii. Exchange information on programs and strategies to have more active university involvement in population, environment, and development research and education.
- iv. Work on expanding the involvement of government, industry, and foundations in supporting university efforts in these areas.
- v. Work with the Community on Environment and Development to promote an effort towards a sustainable future.
- vi. Organize Ecodevelopment Camps to promote ecological sound rural development involving youths as they have the advantage of knowing the local situations.

Research on the complex interaction of human activities and the environment - examining strategies, technologies, policies, and institutional behavior - must be greatly expanded. Universities must lead the effort in the rapid development of environmentally sound technologies and the establishment of a new ethos to stabilize population, promote the efficient and sustainable use of energy, water, and other natural resources, repair damage, and prevent pollution and wastes. Universities must increase anticipatory research to identify future threats to a sustainable society, and develop solutions to circumvent these threats.

Research on how the different types and levels of economic development in the community would impact the environment is critical to government and industry policy formation. An open flow of information among all universities in developing countries is crucial to the development of new knowledge, technology, tools, and skills for a sustainable future.

Solutions to all the environmental problems are not readily available. Realising this vital fact, the universities should support research and development activities dealing with the weaker sections of the community. The scientific and technical personnel in institutions of higher learning should be encouraged to undertake specific projects in the area of their specialization for seeking solutions to the problems in various sectors of environment.

#### **(vi) Education and Training**

There is a critical shortage of specialists in environmental management and related fields among the Weaker Sections of the society. Universities must produce environmentally literate specialists in demography, engineering, science, economics, social sciences, health, and management. A huge gap exists in the comprehension by professionals in all fields of how their actions affect the environment and public health. These professionals and other university graduates must be educated to be environmentally literate and responsible citizens. Primary and secondary school teachers must also spread environmental awareness, literacy, and responsibility among their students. Practicing professionals, decision-makers at major institutions, and the general public must be given the training, expertise, and tools to encourage environmentally sustainable actions.

#### **Action by the Universities for Empowering the Weaker Sections in Environmental Protection**

Universities should demonstrate real commitment to the principle and practice of environmental protection and sustainable development for empowering the weaker section of the community.

1. **Environmental ethics:** Universities should promote among teaching staff, students and the public at large sustainable consumption patterns and an ecological lifestyle, while fostering programmes to develop the capacities of the

academic staff to teach environmental literacy.

2. **Education of university employees:** Universities should provide education, training and encouragement to their employees on environmental issues, so that they can pursue their work in an environmentally responsible manner.
3. **Programmes in environmental education:** Universities should incorporate an environmental perspective in all their work and set up environmental education programmes involving teachers and researchers as well as students - all of whom should be exposed to the global challenges of environment and development, irrespective of their field of study.
4. **Interdisciplinary:** Universities should encourage interdisciplinary and collaborative education and research programmes related to sustainable development as part of the institution's central mission. Universities should also seek to overcome competitive instincts between disciplines and departments.
5. **Dissemination of knowledge:** Universities should support efforts to fill in the gaps in the present literature available for students, professionals, decision-makers and the general public by preparing information didactic material, organizing public lectures, and establishing training programmes. They should also be prepared to participate in environmental audits.
6. **Networking:** Universities should promote interdisciplinary networks of environmental experts at the local, national, regional and international levels, with the aim of collaborating on common environmental projects in both research and education. For this, the mobility of students and scholars should be encouraged.
7. **Partnerships:** Universities should take the initiative in forging partnerships with other concerned sectors of society, in order to design and implement coordinated approaches, strategies and action plans.
8. **Continuing education programmes:** Universities should devise environmental educational programmes on these issues for different target groups: e.g. business, governmental agencies, non-governmental organizations, and the media.

9. **Technology transfer:** Universities should contribute to educational programmes designed to transfer educationally sound and innovative technologies and advanced management methods.

### Role of the Vice Chancellor

Understanding the relationship between population, human activities, and the environment, and developing strategies for an environmentally sustainable future are among the most complex issues with which community must deal. Because universities are organized into specialized areas of knowledge and traditional disciplines, it is often difficult to convene the necessary talent for teaching and research on these issues. For example, earth science is approached as if the world is a collection of separate biological and physical systems instead of treating the biosphere as a fully integrated functioning life system. Tenure, curriculum, and degree requirements are largely controlled by faculty in individual schools of study. Quality scholarship is often synonymous with originality in a single discipline, and individual contribution is generally encouraged over team efforts. University Vice Chancellors often have a broad perspective on global problems. They are the only academic leaders capable of converging all the academic disciplines and professional schools on large, complex issues. They must focus their schools' attention on the critical issues by speaking out, acquiring new and mobilizing existing resources, creating incentives and programs for faculty development, and fostering interest in these issues relating to the weaker section.

### Strategies and Actions

Therefore Universities must take action to focus their attention on environment, population, and development issues. They should:

- i. Use every opportunity to raise public, government, foundation, and university awareness by publicly speaking out on the importance of environmental concerns.
- ii. Seek large increases in the funding of interdisciplinary, environmental research. Research funds are often earmarked for traditional disciplines, resulting in the continuing compartmentalization of problems and solutions. The funding available for research on population,

environment, and sustainable development is a tiny fraction of that available for basic science, defense, and aerospace.

- iii. Encourage outstanding scholars from the weaker section who are engaged in research and teaching environmental topics, and help them lead other scholars in this direction.
- iv. Establish programs in all major disciplines to teach about environment, population, and sustainable development in the context of these disciplines.
- v. Work with faculty to change tenure and promotion requirements to reward interdisciplinary work on environment, population, and sustainable development issues.
- vi. Set aside funding and create positions for interdepartmental and interschool faculty who will research and teach population, environment, and sustainable development topics.
- vii. Appoint a special adviser, an environmental programs dean, or faculty group to promote environmental programs within the university.
- viii. Encourage multidisciplinary thinking with the use of internships, and integrating seminars, work study, and case studies.
- ix. Establish a university environmental policy to engage faculty, staff, administration, and students in activities such as energy and water conservation, and recycling. Encourage vendors who supply schools with products and services to act in an environmentally responsible manner when manufacturing their products and delivering their services.
- x. Develop cooperative programs with universities in other countries to promote faculty and student exchanges, collaborative research, and education programs that develop international understanding.
- xi. Establish multidisciplinary and interdisciplinary structures, such as "centers of excellence" for research, education, and policy development within the university.
- xii. Establish partnerships with primary and secondary schools to enhance the capability of their faculty in teaching about population, environment, and sustainable development issues. □