

# Role of Higher Education Institutions in Environmental Conservation and Sustainable Development: A case study of Shivaji University, Maharashtra, India.

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## Abstract:

The ever increasing population and changing lifestyles are making the environmental problems more critical. Higher educational institutions can be the best solution to solve this situation. Higher education can play a crucial role in sustainable development of any nation. As environmental sustainability is becoming an increasingly important issue for the world, the role of higher educational institutions in relation to environmental sustainability is more prevalent. Universities are the apex bodies in higher education system and can provide environmental education through its curricular design, research and collaborative efforts with NGO's working in those areas. They can provide trained manpower and knowledgeable expertise to solve critical environmental problems. They can also act as a good networking system and data collector. Shivaji University is one of the significant higher education institution located in heart of Western Ghats working with the same goal of environmental sustainability through various activities. The paper examines the efforts taken by higher education in environmental development in the areas of creating healthy environment and conservation of resources.

**Key words:** Role of Higher education, Environmental protection, Universities, sustainable development

## Introduction:

The world in 21<sup>st</sup> century is facing many challenges related to environment. On one hand world is developing at alarming rate while on the other hand the destruction of natural resources are going on. Therefore, world's present development path is not sustainable. Efforts to meet the needs of a growing population in an interconnected but unequal and human-dominated world are ignoring the Earth's essential life-support systems (Kofi Annan, 2000). Today, the human society is facing severe environmental problems like climate change, greenhouse effect, energy crisis, depletion of natural resources, biodiversity loss, pollution of air, water, soil, etc. The scope of the problems is from local level to global level. The ever increasing population and changing life styles are increasing the severity of the environmental problems. The time has come to protect the natural environment through precise efforts.

Education is one of the key solution for this situation. It is very important for any individual's success in life. It provides skills that prepare an individual physically, mentally and socially confident to solve many problems in the society. Education is major aspect in development of any modern society. It is generally seen as the foundation of society which brings economic wealth, social prosperity and political stability. In today's fast growing and competitive world, people mostly are not satisfied with their basic education and enter for higher education.

Higher education is the aspect of education that is acquired by students after the completion of their secondary education. Here, the persons are organised for building upon their knowledge and skills which can be applied to solve different problems in human life. Higher educational institutions have the capacity to give quick responses to different societal problems specially related to environment. At the same time sustainable development through higher education provides a pivotal role in nations building. Sustainable development remains barely a significant social, economic or environmental challenge for any country (Wynn Calder, 2003). Though teaching and learning must begin to reflect environmental issues, there is an emerging consensus that institutions must also model sustainable practices. (Erin Redman, 2013). Such education contributes strongly to sustainable development by training and expanding young minds in researching solutions to the environmental challenges. After graduation the students become leaders of tomorrow and get dispersed from the world of higher education into their specific career. In doing so, they take with them the green practices and approaches they were involved with at their institution (Will Toor, 2003).

In the global scenario, the green aspects in higher education emerged in the late 1960s and early 1970s. The first Earth Day in 1970 was a student-based effort. The relationship between education and sustainable development was first recognized on an international level at the 1972 Stockholm Conference on the Human Environment. Principle 19 of the Stockholm Declaration signifies environmental education from grade school to adulthood to "broaden the basis for enlightened opinions and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension."

Many scholars and practitioners are counting on education to lead us towards sustainability. Unfortunately research indicates that our current education system may be doing the opposite (Rowe, 2007; Sterling, 2001; Orr, 1991). The term "education for sustainable development" emerged primarily out of the Rio

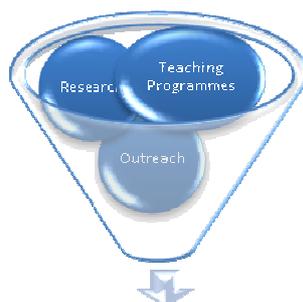
Summit and for many educators is defined more broadly than “environmental education” to include issues of international development, cultural diversity, and social and environmental equity. In 1977, the Intergovernmental Conference on Environmental Education in Tbilisi took place which played a fundamental role in sustainable environmental education. In many countries (especially European, but in some developing countries also) sustainability in higher education is supported by governments and has made deeper values in the disciplines and professions. (Walter., 1999). Decisions of the World Summit in Johannesburg and the Ministerial Conference on the Environment (Kasimov, 2002b) suggest that education for sustainable development is to be considered among the basic priorities for the world community.

### **Role of Universities in Environmental Education:**

As environmental sustainability is becoming an increasingly important issue for the world, the role of institutions of higher education in relation to environmental sustainability initiatives is becoming more and more prevalent. If it is the role of colleges and universities to educate members of society, then they must be actively instrumental in the sustainability movement. (Almut Beringer, 2006). Every university is unique and has its own traditions, culture and geographical area. They are familiar with their surroundings. They can use their existing knowledge and trained man power to address problems and issues concerned at the local level, as well as related to the national and global community. Universities can exchange the information by establishing a strong regional information network. These can promote good neighborly relations and respect for human rights. Universities can lead in promoting environmental equilibrium. They have a right and a duty to indicate where problems exist. They should look for, find and create tools to solve those (Hans, 2000).

Universities can help to establish the sustainable development through following aspects:

1. Teaching programmes.
2. Research.
3. Outreach



### **Major Aspects of Higher Education in Sustainable Development**

#### **1. Teaching Programmes:**

In the teaching programme, the framework of the curricula should cover the necessary information regarding environmental issues. The students should get acquainted with all the skills and information related to environment. The curriculum should motivate the students to participate and solve the environmental problems. Not only formal but informal education is also one of the important part of environmental education. Research in the field of Environmental Education (EE) have shown that teaching and learning outside the classroom as a part of extracurricular activities or of non-formal educational activities provides opportunities to develop environmental awareness (Erdoğan & Uşak, 2009), environmental consciousness (Yerkes & Haras, 1997) and environmental responsibility (Matthews & Riley, 1995) which all in turn increase in environmental attitudes and motivation to take responsible environmental behaviors (Dresner & Gill, 1994). Besides the classroom studies, the young students have the greatest potential to aware the people about the present status of environment through street plays, rallies, exhibitions at the grass root level. Direct nature experiences are well known to develop individuals' environmental awareness and foster related attitudes (Bogner, 2010)

According to Honorable Supreme court directives in 1991, Environmental Studies has become compulsory for all faculties at undergraduate degree level in India. Those students who cannot attend the classroom studies, distance learning is a good option for them. These programmes can also play a crucial role in spreading the message of environment. The teaching programme for environmental awareness includes applied research projects, lecture series; documentary shows celebration of environmental days, competitions, exhibitions, nature visits, nature clubs, seminars and conferences.

#### **2. Research:**

Research is one of the integral part of higher education. It is an investigative parameter of getting new information or looking for new ideas for the development of man and the society. Higher education research is seen all over the world as one of the most powerful instruments known for environmental development,

especially, in the propagation of a healthy environment, sustainability of renewable resources and conservation of non-renewable resources for the benefit of the society and mankind (Ayeeni, 2010) Higher education research has the potential to influence governmental development that would prepare man for a sustainable life. Scientific research generated in higher education institutions has particular relevance for the national science and technology systems and for the local and regional developmental processes. Environmental aspects, especially in the areas of renewable and non-renewable resources, pollution monitoring and control, biodiversity conservation, etc. happen to be one of the important research fields. Higher education institutions have its focus and credibility. Applied environmental projects taken up by the students at degree level and PG level can give actual field experience and improve the quality of research work. Collection of baseline data related to demography, biodiversity, natural resource accounting can be possible through such research projects. Not only Universities but different National level Research Institutes in India like UGC, NEERI, NCL, NIO, IIT, DST, MoEF, DBT, DRDO, etc. are working to solve many environmental problems as well as some of them work as funding agencies to give funds for such projects.

### 3. Outreach:

The purpose of outreach program is to create enduring partnerships between academic institutions and communities in order to build capacity to solve a suitable solution of the problem in society and to enhance the research and teaching capacity of participating colleges and universities. (Kerr.C., 1982). Such activities by higher education institutions play an important role in shaping communities' development. It is necessary for higher education institutions to involve themselves in community outreach-based research to contribute to a strong knowledge-based economy in their country. These activities can lead to raised wages and productivity, allowing countries to make impressive step in enhancing social, economic, scientific, technological and political advancements. Such institutions can increase students' competence and familiarize them with their societies' needs favorable for sustainable development (Thierry C.U., 2012).

Today's students have been identified as perhaps the most environmentally conscious generation. The current generation of students is the future generation of decision makers in business, government and communities. By creating opportunities on campus, both in and out of the classroom, institutions of higher education are generating the "bio-fuel" that will energize the next generation to continue the sustainability movement. (Carlos Balsas, 2003).

ENGO's are non-governmental organisations working in the field of environment. Higher educational institutes as well as NGO's can jointly work together in environmental protection and awareness. The educational institutions can share their knowledge to solve the environmental problem. At the same time the ENGO's can spread the information about the solution to the needed society. Both of them are integral part of developmental process and can act as buffer between local people and governing body. They can assist the environmental authorities to identify the issues earlier and analyze them independently without any political and economic benefit. They can also built a pressure on decision makers. The success of India's environmental programmes depends greatly on the awareness and consciousness made by ENGO's.

#### **Role of Shivaji University in Environmental Protection and sustainable development:**

Shivaji University, established in 1962, is named after the Great Maratha Warrior and founder of the Maratha Empire Chhatrapati Shivaji with area 853.787 acres. It is one of the fundamental institutes working in the field of environment in Western Ghats which is one of the hot spot areas in the world. It is actively participating in solving environmental issues throughout mass environmental education with Colleges and two Post graduate level departments under its jurisdiction. Shivaji University is putting its step forward towards green campus. University has done a green audit to monitor the use of different environmental factors like water consumption, electricity consumption and solid waste management in its campus. University is one of the important wilderness areas in the city which plays very important role in Carbon Sequestration. University is self sufficient in its water needs because of water conservation in two water tanks in the campus. The international level state energy park is being established at University. The major objective behind the establishment of Energy Park is to popularize the non conventional energy sources. This project will be helpful for effective street light in University campus. The central canteen of the University is attached to the vermicomposting site through which the canteen solid waste is converted into good quality of manure. The university practices No Vehicle Day once in a month to save the fossil fuels and to reduce the Carbon footprint.

University has organised many workshops and national International Conferences related to environmental issues and works in collaboration with environmental NGO's like Vigyanprabodhini, DEVRAAI, Nisargmitra, etc. to solve different environmental issues like biodiversity conservation, Panchaganga River Pollution, Plastic Pollution, Plantation Programme, etc. The students have participated in the anti-Dolby movement, plastic ban, Panchaganga river pollution rally, anti idol immersion, etc. through different street plays with ENGO's. Different rallies, workshops, cleanliness drives, bird watching camps are organized in nearby areas This is how as an University department and higher education institution is going to people in all the sectors of society for creating awareness about environment.

## Conclusion

The higher education has the potential to deal with different environmental issues. These institutions can use their infrastructure and expertise in a positive way to achieve sustainable development. In the collaborative work with NGOs, higher education institutes can help to spread the message at grass root level of the society and put pressure on the stakeholders. Higher education can play a crucial role in sustainable development.

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