

Asia Pacific Research Seminar on Environmental Education for Sustainable Development



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Nepal is a land locked mountains country located along the southern slope of the Himalayas. It is a small country with an area of 147181 square kilometers (14.7 million hectares) lying between 80°.4'-88°.12' east and 26°.22'-30°.27' north. It ranges 100 meters in the south to 8848 meters in the north from the sea level.

A standard physiological division of this country is based mainly on an altitudinal variation. Nepal consists of one third of the entire length of the Himalayas where the Mount Everest (8,848 m), the highest peak in the world lies. According to the census of 2001 Nepal has a population of 2,31,51,423 consisting of people of diverse social, cultural and ethnic backgrounds. The census noted 102 social groups, recorded 92 languages out of which more than a dozen including the national language Nepali are in active use among a significant size of the population section. The official language is Nepali.

The country is politically divided into 5 development regions 14 zones, 75 administrative districts. The local level political body is municipality or village development committee. The smallest political unit is known as ward.

Formal Education System

The Nepalese education system comprises five years of primary education (grade 1-5 for 6-10 age groups) three years of lower secondary education (6-8 for 11-13 age groups) two years of secondary education (9-10 for 14- 15 age groups) and two years of higher secondary education (grades 11-12). The structure of tertiary education consists of three years of bachelor degree followed by two years of master degree program.

Educational development and present status

Over the five decades, the educational system in Nepal has successfully concentrated on increasing the access to school level education although the quality of education is also government's prime concern. The following table shows the growth and present status of education in Nepal.

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	Year					
	1976	1981	1991	1996	1999	2001
Literacy rate	-	19	39.6	48	53	54
Total no of schools	-	-	-	22372	25689	25194
Primary sch.	8768	10628	18694	22218	25522	24943
Lower Sec. Schools	2289	2787	4045	5506	7276	7340
Secondary schools	520	918	2079	2903	4082	4113
Total students	907000	1701896	3658083	4568942	5081042	5361362
Total teachers	32146	46288	99127	125505	143263	142183

Sources: Education Statistics 2002

Note: A school running grades 1-10 is listed three times: as primary (grades 1-5) school, as lower secondary (grades 6-8) school and as secondary (grades 9-10) school. That is why total school does not match with the sum total of primary lower secondary and secondary school.

Literacy Rate

	1991	2001
Literacy rate 6+	39.6	54
Literacy rate 15+	33.0	44
Literacy rate 15-24	49.6	74

Source: EFA National Plan of Action 2003

Sustainable Development and Environmental Education

The United Nations general assembly proclaimed the ten year period from 2005 to 2014 as the United Nation's Decade of Education for Sustainable Development. Governments around the world are invited to use the decade to integrate education for sustainable development into their national educational strategies and action plans at all appropriate levels.

The government of Nepal has prepared and approved the Sustainable Development Agenda for Nepal. This agenda aims to guide and influence national level planning and policies up to 2017 and the government is committed to translate the ethos and the letters contained in the agenda. This document presents the sustainable development as "national resolve to pursue happy, healthy and secure lives as citizens who lead a life of honor and dignity in a tolerant, just and democratic nation".

The government set out some goals related to environmental education in the agenda for sustainable development. They are as below:

- Most of the nation's energy is generated from domestic renewable source, including hydro, solar, wind, as well as sustainable harvested and cleanly burned bio-fuel.
- Land use is planned and managed at the local and national level such that resource bases and ecosystem are improved with complementarity between high and low lands that forest biomass grows, that agricultural and forests lands are protected from urban sprawl, and that biodiversity is conserved at the landscape level recognizing threats from habitat fragmentation and loss of forest cover.
- A system of protected areas (including national parks and conservation areas) is maintained and further developed to safeguard the nation's rich biodiversity. Local communities near protected are involved in both management and economic benefit sharing of the area. Domestic scientific expertise on global and regional environmental threats, including climate change is developed to closely inform Nepal's foreign and domestic policy on those as well as to help adequately prepare form adverse consequences.
- Every citizen has adequate availability of forest products to meet his/her basic needs and also has the opportunity to enjoy aesthetic and spiritual experience in nature.

Sustainable Development Agenda for Nepal stresses a major departure from the current education system to ensure happy and healthy society that leads towards a sustainable society.

Sustainable development is still a debated doctrine in spite of its being explained and defined in various international forums including the earth summit. It may mean different things to different people. However, a common understanding underlying the notion is that "humanity must take no more than nature can replenish". Nepali society and their culture have a long tradition of respecting this notion, especially in the harvesting of forest resources.

However the disparity among people and their relations in terms of economic development, consumption patterns, and environmental pollution hinders sustainable development of non-industrialized countries. Widespread poverty, hunger, diseases and illiteracy among people have contributed to cause environmental degradation and the loss of the earth's biological diversity. The threshold to sustainable development is better to be sought in the process of educating the society and imparting knowledge and awareness to the present generation. The type of education to address the problem of sustainable development would need to integrate three main components; environment, society and economy.

Environment as resource for development would need effective conservation efforts.

Nepal has set aside over 18 % of its territory as protected area to conserve rare and threatened biodiversity. Empowerment of people through community forestry program has illustrated environmental revivals of degraded area. Economy of 80% people largely depends upon agriculture.

The Nepal Biodiversity Strategy 2002 and the Agricultural Prospective Plan 1995 seek to follow a developmental model that is sustainable. But the path of educational development has not yet taken a course to contribute towards sustainable development. The national conservation Strategy implementation Project (1989-1996) under the aegis of the National Planning Commission and the World Conservation Union-IUCN for the first time identified "environment education" as a priority area to support the goals and objectives of the national Conservation Strategy.

Environmental Education in School Education

Environmental problems can not be confined within a country but spill across its border even develop into a problem affecting the region and the entire earth. Nepal is no exception to the environmental problems like greenhouse effect, deforestation, soil degradation and desertification, atmospheric pollution, reduction in genetic diversity etc. The problem is more serious in Nepal because of the high population growth rate and the worsening situation of poverty.

The environmental education recognizes the values and clarifies the concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among human his/her culture and biological surroundings. Environmental education also entails practice in decision making and self formulation of code of behavior about issues concerning environmental quality.

The goal of environmental education is to develop a citizen aware of concerned about total environment and its associated problems and man should have the knowledge, attitude, motivation, commitment and skills to work together or individually towards the problems. To solve the environmental problems, it is imperative that appreciation, respect and understanding of the delicate sun-soil water air organism complex be foster at the grass root level.

Bearing these facts His Majesty's Government has introduced incorporated environmental education in social studies in an integrated way in primary level. There is compulsory subject in lower secondary and secondary level education as well. Environment related various topics and issues are integrated with other subjects like Nepali language, Social studies, Health education and General Science etc.

Basic issues like pollution and contamination of land, water and air, conservation of biological diversity, degradation of land and forest resources, natural hazards associated with the monsoon and mountain ecosystem, and global environmental concerns like ozone depletion, global warming and climate change are the themes for the environmental education. Besides it also deals upon population pressure and heritage conservation.

School children are given opportunity to deepen their understanding of the environment and energy issue and develop respect for the environment. They are encouraged to develop practical skills and abilities to take actions voluntarily on the conservation of the environment and make it better. Thus, great emphasis is placed on problem solving and hands-on learning approaches.

Similarly, non-formal education packages are prepared for various training program in agriculture, forestry, tourism and so on. Public awareness, programs are also conducted with various partners and non-governmental Organizations. The informal environmental education programs to general public has been started by various Non-Governmental Organizations and Government Organizations through various means such as the radio, television, exhibitions, seminars, study tours, training camps, posters, magazines, newspapers etc.

A Good Practice in School

School based environmental education program has been implemented in 16 different districts through the formation of Eco Club in the country since 1994. There are currently 228 Clubs throughout the country. The objectives of Eco club are:

- to raise conservation awareness among the students, teachers and youths
- to encourage them to participate in the conservation of natural and cultural environment at local and national levels
- to mobilize those students, teachers and youths to raise conservation awareness in the communities
- to encourage students to share their knowledge, concepts, skills among their peers in the country and abroad and
- to enhance students networking for the cause of environmental conservation, peace and harmony.

The Eco Club members carry out various curricular and extra curricular activities to enhance their knowledge on environment and its conservation namely study tour, plantation, clean up campaigns, awareness campaign in the locality, recycling and reuse of waste materials, various competitions like essay, quiz, poetry, sports, songs, etc.

Various environmental awareness programs like community mobile education and extension, audio/visual program, campaigns, board with conservation messages and street dramas are organized at local level to create awareness on conservation issues among the local communities.

On one hand, the school based eco clubs have been instrumental in disseminating strong message of Conservation on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) and species conservation across the country and abroad. The clubs have become a good medium of peer learning and knowing each other at the participant level. The clubs have created synergy among for enhanced cooperation for conservation.

Teacher Training Program

Before the change in school level curriculum some years ago, there was no existence of environmental education as a separate subject. Therefore, most of the school level teachers who have been teaching in primary lower secondary and secondary level had not studied environment education. To provide them content knowledge and teaching learning methodology on environmental education, teacher training is the most appropriate way.

In order to improve the teaching learning situation in the country, teacher training programs have been given prominence. Although, the government has had some success in setting up a national teacher training scheme, a large portion of the teacher population is still untrained. With a view to catering for school teachers and addressing their needs, some teacher training schemes have been launched through which teachers are being trained. National Center for Educational Development (NCED) is the apex institution for teacher training. Under its guidance and program following institutions conduct the teacher training program.

No.	Name of Institution	Length of Training
2	Primary Teacher Training Center (PTTC)	Five months
3	Department of Education (DOE)	Short Term
4	Curriculum Development Center (CDC)	Short Term
5	Secondary Education Center (SEC)	Short Term
6	Distance Education Center (DEC)	Five months

There are two modes of training program in the country:

- Face to face mode and
- Distance mode

DEC broadcasts its training program through radio. On the other hand there are nine PTTCs throughout the country and the trainee teachers go there to receive training from various districts of the country. Both the institutions assess the trainee through exam at the end of the program and announce them pass or fail. The teachers who succeed are considered trained. And other remaining institutions provide short term refreshment training. The NCED co-ordinates these training programs.

All these training institutions have been running training for primary lower secondary and secondary level teachers in which environmental education is also included. Mainly in training packages environmental issues such as population growth, pollution, environmental degradation, conservation of biodiversity are included and knowledge skills and attitude on these important aspects to teacher are given in the training.

Community Participation in Environment Education

Social and human development should go along with economic development and sustainable environment. This means social development, economic development and environmental management should go ahead in an integrated approach. For this, community involvement is an inevitable. Following activities are being done with the involvement of local community:-

- Conducting health and sanitation awareness programme, and toilet construction
- Running non-formal adult literacy class, often focused on women in the community and usually linked with practical training
- Construction of irrigation ponds to retain water from monsoon for the dry season
- Green enterprise development, such as commercial plantations to produce bamboo, grass, valuable cash crops that also serve to protect vulnerable micro-watersheds
- Formation of forest user groups and providing them responsibility to preserve their own forest
- Classes on environmental education in the community level
- School management Committee (SMC) and Parents Teachers Association (PTA) are also involved in preservation and protection of environment in their surroundings.

Challenges for Education for Sustainable Development

Sustainability is not easy concept to follow. It involves economic, social, cultural and environmental issues. The

government, various INGOs NGOs, and Civic Organizations are doing a lot in environmental issues in the country. However, on the path of sustainable development there may be so many challenges which should be faced. They can be summarized as below:-

- Teachers lack adequate knowledge and skills on conservation and sustainable development. To train teacher in formal sector and local communities in non-formal sector requires more time as the term "sustainable development" is not common and well-understood by the communities. Some aspect of environment is provided in the national curriculum, but the approach is not coherent and does not cover the wider range of sustainable development.
- Education for Sustainable Development has not been clearly reflected in the formal education system. Local efforts and initiatives in isolated areas may require more time and resources for promotion in school.
- Most schools lack the sufficient resources and materials on conservation and sustainable development
- School in local levels do not have sufficient budget to carry out desired activities
- Developing local capacities and demonstrate sustainable development principles in action through an integrated approach, incorporating gender sensitive social, economic and environment linkages is also a challenge.
- Poverty is one of the serious threats to the environment.
- People are less aware of conserving the environment of their surrounding.
- Insufficient reward system to the people who works in the field of environment education

Conclusion

Environment as the resource for development would need effective conservation efforts. Development becomes sustainable when people develop the sense of ownership and fulfill their needs without destroying the resource base. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs is the motto of developmental policy of the government of Nepal.

The need of education to improve agricultural productivity, to improve sustainable harvest of forest and vegetation seasons, to reduce population growth rate, to enhance environmental protection, to reduce ecological hazards and to raise the standard of living is widely acknowledged in Nepal. Environmental education is one of the important subjects which is being run in formal and non-formal education sector in the country to make the people aware of nature and skillful to use the natural products.

Although, government has formulated and implemented so many policies and programs, there are various challenges on the way of achieving the goals of sustainable development. On this difficult path slowly and steady Nepal will win the race.

Thank you!