

**Journal** of  
**INSTITUTE OF HUMAN RESOURCE ADVANCEMENT**  
*University of Colombo*  
*Volume.7 Issue.2 December 2020*



**INSTITUTE OF HUMAN RESOURCE ADVANCEMENT**  
*University of Colombo*

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# Evaluation of environmental education as a strategy for sustainable development in Sri Lanka

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## **Abstract**

*The human and environmental relationship has a boundless integration, due to its interdependency. Environmental resources are utilized by human beings to meet their daily needs in the context of consumption and development. This process has a negative impact on the environment and human health. Predominantly environmental-related issues are induced by human activities. However, these issues could be minimized by way of maintaining a balance between development and utilization of resources, fulfilling present needs without compromising the needs of future generations as correctly elaborated in the Brundtland Commission Report (1987). Accordingly, the objective of this paper is to evaluate the contribution of environmental education and awareness in terms of sustainable development to adapt the general public to be environmentally conscious. The extracted data and information only from secondary sources have been sorted and analyzed, following the qualitative approach; while constructing environmental education as a tool for productive sustainable development approach. This study found that the Central Environmental Authority (CEA), is a major institution that extends the many environmental education and awareness program to the various target group, such as school students, teachers, Grama Niladharies, Samurdhi Niladharies, and*

*Development Officers. In addition, other government and non-government organizations provide similar services to the general public to safeguard the environment. This study recommends, having a collective mechanism to promote environmental education and awareness to the public with the participation of relevant stakeholders.*

**Keywords:** Interdependency, impacts, environment, education, sustainable development.

## **1. Introduction**

The human and environmental relationship has a boundless integration, which cannot be detached from one to another, due to its interdependency. Nature was gifted to mankind to fulfill their livelihoods without endangering its natural process. In the context of utilizing nature for maximum yield with minimum damage/risk, environmental education and awareness play a major role in terms of sustainable development. Subsequently, most of the environmental-related issues are induced by human activities by way of developments, alterations, or renewal of resources. The most effective way of mitigating and managing such recurring issues is connecting all stakeholders with the environment and stimulate its value and importance among them. More viable tool in transforming them as more environmentally conscious citizens is environmental education and awareness. Hence, the term “sustainability” also demands the improvement and quality of human life within the carrying capacity of the supporting ecosystem. People around the world recognize that current economic development trends are not sustainable and that public awareness, education, and training are key to moving society toward sustainability (UK Essays, 2018). By considering the essentiality of education for sustainable development, the United Nations general assembly adopted a resolution proclaiming that

from 2005 to 2014 year of the period as to constitute the decade of education for sustainable development (Wheeler, and Bijur, 2000)). Therefore, multiple education programs through various training and workshops have been initiated by the government as per their goal for social progress in Sri Lanka too. At present, almost all the countries in the world are subject to environmental pollution and it is essential to train students in all categories such as school, college and university by incorporating environment as section/part of the stream of arts, commerce, mathematics or science.

## **2. Objectives**

The objectives of this study are as follows.

1. To evaluate the contribution of environmental education and awareness in terms of sustainable development to adapt the general public towards the environmentally conscious.
2. To recommend possible solutions to implement productive environmental education and awareness mechanism to transform the public more environmentally conscious in terms of sustainable development.

## **3. Conceptual Framework**

Susann (2007) describes a growth that allows to respect the limits of environmental resources, preserve the genetic diversity, and make optimum use of energy and raw materials. In summary, sustainable development stands for a social model to improve the economic and social living conditions of individuals without destroying the natural basis of life. Education and educational processes play a central role in this future-oriented development. Especially, environmental education is a key component of sustainable development. Due to the large scale of this process, Agenda 21 (UNESCO-EPD, 1997) recommends

“reorienting the” Education for Sustainable Development. Thus, environmental education for sustainable Development deals with economic and social conditions and considers these in its interrelationship with environmental questions. It ensures that “future generations can deal with the processes of globalization, can intervene in a controlling way and can prevent faulty developments or disasters” (Susann, 2007).

*“Education, including formal education, public awareness-raising and training is seen as a process by which people and societies can realize their full potential. 4 of 18 Education is an indispensable prerequisite for the promotion of sustainable development and the better empowerment of people to deal with environmental and development issues”*(UNESCO, 1975).

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### **3.1. Sustainable development**

The concept of “sustainable development” has multiple nature of debates, associated with its process and operations, since it has many dimensions and many interpretations with many definitions by scholars from different disciplinary and professional backgrounds. In addition, the terms “sustainable development, sustainable society, sustainable futures, sustainable

living, sustainable world, sustainable waste management and many other similar terms” are appeared in most of the literature and texts in relation to the environment, development, and education and such similar other disciplines (Sirinanda, 2019). However, the Brundtland Report (1987) of the World Commission on Environment and Development (WCED) is the prime source for all these terms, which characterized sustainable development as “development that meets the needs of the present without compromising the ability of the future generation to meet their own needs”. One of the turning points of sustainable development was the United Nation’s Conference on “Human and Environment” in Stockholm in 1972 and thereafter Brundtland Report in 1987. This term was further popularized after the Rio-Summit on environment and development in 1992, which approved the action program, Agenda 21, under which world governments agreed to promote sustainable development nationally and internationally as a common goal or shared goal (Wheeler and Bijur, 2000). However, the existing literature evidenced that the roots of this concept may be traced back to 1960s as reflected in the monumental works: *Silent Spring* (Carson, 1962), *Population Bomb* (Ehrlich, 1968), *Limits to Growth* (Meadows et al.,1972), *A Blueprint for Survival* (Ward and Dubos 1983) and *Only One Earth* (Ward and Dubos, 1972).

### **3.2. Environmental education**

Environmental education plays a major role in connecting people with the environment, which was promoted locally, regionally, nationally and internationally with a view to enhance the people’s knowledge, awareness and understanding on interactive relationships between human beings and their environments. This has further emphasized the need of multidisciplinary research on the processes of nature-human relations. In return, this has called for new approaches and paradigms in the context

of general education vice versa environmental education (Ward and Dubos 1983). After 29 years from Stockholm Conference on Environment and Development in Rio-De-Janeiro, a high priority was paid to Agenda-21 and prepare an action item to attract the international community on the environmental consciousness and to place a strong emphasis on the role and relevance of environmental education (UNESCO-EPD, 1997). All the above literature revealed that there is a linear relationship between environmental education and environmental protection in terms of its sustainability.

### **3.3. Education for sustainable development**

The concept of education for sustainable development implies a holistic approach to environmental education, as highlighted in the Tbilisi Declaration (UNESCO, 1975). The role of education in the above would be basically to promote the concept of personal and shared responsibility and help individuals with the capacity and skills to bring vision, commitment, and partnership in issues pertaining to environment and development. The World Summit on Sustainable Development, in Johannesburg, and the UN declaration of 2005-2014 as the UN decade of Sustainable Development Education (UNSDDE) was a turning point in education for sustainable development at the international level. Hence, education about sustainability in essence is about learning to make and understand the interconnections and interactions between the value of the environment and developments.

### **3.4. Environmental education for sustainable development**

At Johannesburg, UNESCO (1975) explicitly recognized the critical role that formal and higher education play in providing opportunities for social learning and change towards sustainable development. Their World Summit on Sustainable Development (WSSD) document 'Environmental Education



for Sustainability: From Rio to Johannesburg' (WCED, 1987) called for socially critical forms of learning, which could help us transform the world we live in to achieve an improved environment and quality of life. This process will serve to establish sensitivity to environmental problems to raise the level of awareness and to generate commitment by all stakeholders. This is not possible by an individual and it is a process of change to enhance both current and future potentials to meet human needs and aspirations of future generations as depicted in Brundtland Report (WCED, 1987). This process change would persuade by way of education, institutional development, and law enforcement since it would promote the concept of personal and shared responsibility and help individuals with the capacity and skills to establish commitment and partnership in any issues pertaining to environment and development. A few major points, extracted from the Brundtland Report (WCED, 1987) as action items in the context of environmental education are given below.

- Changes in values and attitudes towards the environment and development.
- Education should provide direction and motivation in forming new values that would stress individual and joint responsibility towards the environment and towards nurturing harmony between humanity and the environment.
- Education should provide comprehensive knowledge encompassing and cutting across the social and natural sciences and humanities thus providing interaction between natural and human resources and between development and environment.
- Environmental education should be included and should run throughout the other disciplines of the formal education curriculum at all levels.

#### **4. Methods and Materials**

The secondary data were predominantly used for this analysis and followed a qualitative approach. The collected data from articles, books, published and unpublished reports from CEA, and multiple research articles from Google Scholar (<https://scholar.google.com>) etc. have been sorted and reorganized with a view of highlighting the contribution of environmental education in the phase of sustainable development. Approximately 50 source documents have been referred and 18 were cited in this research paper. All citations and due references were given in the TEXT and reference list as appropriate. The researcher has paid her considerations in terms of the importance of environmental education and its correlation with developments and also provides researcher's own opinions applying the philosophy of interpretivism. The outcome of this study is much more helpful for long-term decision-making purposes.

#### **5. Understating of the existing status of environmental education**

According to Gayford (1987), environmental education is a multidisciplinary subject, which has three components viz. education about the environment, education through the environment and education for the environment. Accordingly, education about the environment is practiced in Sri Lanka, emphasizing knowledge about natural systems and the ecological, economic and political factors that influence any decisions on the environment together with their general education system. Similarly, education through the environment refers to students centered education system on the environment, which is also currently in practice as stated above. The students share their experiences about the environment, emphasizing real situation, relevance and practical experience into the learning process. The most lacking area in Sri Lanka is the behavioral

change of the public towards the environment; which refers to the education for the environment and it is an important segment of sustainable development.

Central Environmental Authorities (CEA), many government and non-government organizations in Sri Lanka are emphasizing the education of environment from grass hood to top-level to keep the concept “Sustainable Development (SD)” in the center point of all developments activities since it is a more vital concept in the modern world. However; the traders, developers, investors and most of the time government do not bother about the environment; since more priority was given to economic yield, maximum profit, personal benefits or the existence of individual/political agenda. Therefore, educating human from their early ages regarding fragile environments will be useful to preserve and secure our rich ecology in the future. Environment education does not mean that man has to fight against anti-environmental activities and an excessive amount of emissions of carbon, but it teaches the human being to love and care for the environment since the environment provides a suitable room for us to live on this planet. Fulfilling both today’s and future needs are one to one contrasting and challenging task since it is directly connected to human, human activities, attitude and perceptions. This cannot be stopped or wiped from our system, but can be managed, minimizing its risk at a middle level with the participation of relevant stakeholders and following the “consistency management approach”. It is pertinent to state that environmental education is not simply a program that teaches about the natural world and how ecosystems function, but it is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness of man, his culture and his biophysical surroundings (IUCN, 1970).

## 6. Results and Discussion

Natural resources such as water bodies, forests, deserts, wildlife, atmosphere, birds, oases, beaches are created for mankind. The well-being of mankind, animals, birds and marine life depends on the balance of this environment. Changes in this environment pose a threat and danger not only to the environment but also to the life of the organism. Providing proper environmental education to humankind from the primary level will help the world to become a better place to be survived. Hence, Sri Lanka enjoys remarkable progress in terms of basic education indicators, compared to the many other developing countries in the world (Kamala, 2014). The country's literacy rate is 91.71% in 2018, according to the report of UNESCO (1975). Hence, the people in Sri Lanka much more educated and thoughtful. The general education in Sri Lanka provides 13 years in three circles, which included environmental education as a subject, which causes for the understanding ability of the general public.

**Table-1: Sri Lanka's education circles**

Details	Grades	Age in years
Primary	1-5	5-10
Junior Secondary	6-9	11-14
Senior Secondary	10-11	15-16
Collegiate	12-13	17-18
University level	Undergraduate	19-25
	Postgraduate	< 25 years

*Source: Ministry of Education, (2007).*

The study found that 72% of the literature endorsed the importance of environmental education and awareness in terms of sustainable development since it is more cheapest and viable tool to change people's mindsets. 80% of environmental education and awareness program is conducted by the CEA,

which was established in 1980 under the act No 47 to take care of the environment. It extends environmental conservation initiatives. Similarly, the Ministry of Environment, Ministry of Education, Ministry of Higher Education, Pilisara project, private institutions and non-Government organizations conduct multiple environmental education and awareness programs to the general public in different levels with the intention of sustainable environmental protection. Further, there are so many environment-related studies and courses being conducted in schools and universities; however, the concept of sustainable development is not yet taught as a separate subject. However, this has been incorporated within the whole range of subjects, especially in environment activities from grades 1-5, environmental studies (Grade-6), social studies, science and Technology (Grades 7-11), Biology, Agriculture and Geography (Grades 12-13) etc. In the Universities, Undergraduate students engage in environmental activities on special days; such as earth day, environment day and ozone day etc. Most of the Universities conduct environment and sustainable development-related courses and delivering lectures, connecting with various subjects; such as ecology, geography, economic geography, environment management, especially in the Arts and Science disciplines.

Environmental education and awareness division of CEA, directly and indirectly, contribute to upgrading the status of the environment in various ways as depicted below.

- Formulate Environmental Awareness and Promotion Strategy for the Ministry of Environment supports for its implementation and carryout periodic review to evaluate its strength and weaknesses.

- Create environmental education and awareness at the national level in relation to the environment and natural resources policy reforms and other major environmental initiatives.
- Commemoration of environmentally important national and international days to highlight the importance of the environment.
- Develop a mechanism to get stakeholder participation in environmental protection.
- Publicity programs on ministerial activities through electronic and printed media.
- Respond to the environment and natural resources related to public issues and provide viable solutions as appropriate.

Further, CEA conducts multiple programmes to school students, such as Environmental Pioneer Program , Badge Promotion Scheme, Environmental Camps, Eco-Club/ Primary program, Pre-school program , Environmental song etc., targeting various groups.

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- Student programs: Pre-school program, Program for primary students (Grade 1 to 5) and Program for secondary students (Grade 6 to 13).
- Youth environmental program for school leavers.
- Media programs: Print media, Environmental newsletter, Textbooks on the environment, Educational material, Posters, Electronic media, Radio programs, Messages on television, Environmental films, documentary programs, distribution of CDs, and frequently updated information on website.
- Information dissemination through Information Centre, located at CEA.
- Other awareness and education programs for different target groups, such as non-government organizations, community-based organizations, village environmental

societies, Teachers, Grama Niladaris, Farmers, housewives, etc., Tertiary education level (University students), Environmental campaigns on environmental events, Campaigns on environmental issues, Implementation of eco-projects, Environmental competitions and Exhibitions.

In addition to the above, higher education institutes progressively recognize that they have a vital role to play regarding environmental issues. This is the reason why universities are referred to as change agents that need to develop curriculum to enhance undergraduates' and postgraduate knowledge and skills on sustainability.

The above factors show that there are numerous facilities and support to disseminate environmental knowledge are available in Sri Lanka in order to emphasize the community, to be evolved in environment protection activities. The government sector institutions and private firms contribute to achieve these objectives. M/S Kare clean (Pvt) Ltd and Abans group involves in maintaining the aesthetic beauty of the area designated to them, displaying posters and placing trash collectors with multiple slogans to safeguard the environment in Colombo Municipality area. However, more awareness programs and education on sustainable development and environmental protection is required for the general public to make them environmentally conscious. There is no proper linkage in between the sustainable pillars or the pillars of sustainability. There should be an equal connectivity, among the Social, Environmental and Economical phenomena in development. If one lacks than the other; then there will be a large gap that could not be filled by anything else. Therefore, the government should consider on development projects, which can be compromised and concentrated on these three aspects accordingly.



The lack of compromisation of relevant stakeholders in the policymaking and implementation level will negatively impact the sustainability of the environment. There are so many policies, rules and regulations that have been implemented in the past years. However, most of them are only in the written form and not in practice. Therefore, many failures can be encountered in the development activities. Most of the people are not aware about the proposed rules and easily violate them. Hence, more awareness programs are required on existing laws and processes is required and thereafter, strict implementation of existing laws, rules, and regulations are more vital to eradicate the environmental issues. If we diagnose the root cause for the failures and drawbacks of sustainable development in Sri Lanka, there are always some politically exposed person or reputed parties inducement are appended. Degradation of ecologically and environmentally preserved areas, such as Yala, Sinharaja and Wilpaththu are classic example for this.

## **7. Conclusion and Recommendations**

A change in the mindset of the people is more essential in order to achieve a successful growth of the country. There are too many programs conducted by government and non-government organizations as well as private sectors to provide proper awareness to the people regarding environmental protection in Sri Lanka. However, the many terrestrial, aquatic and biophysical environment exploitations and depletion are recurrent in the country. The lack of integrated management system and comprised involvement of all stakeholders at a center point are major causes for the failure of sustainable development initiatives in Sri Lanka.

Therefore, it is suggested to carry out productive knowledge sharing programs with the public, through an integrated management system to uplift the understanding of the public,

regarding environmental protection. To avoid the obstacles of building up an environment-conscious society, it is required to strictly implement the existing rules and regulations without any partiality. Further, the non-government organization's environmental pioneer activities should be encouraged. The utmost objective of environmental education is to empower the each every citizen of this nation towards environmentally friendly from top to bottom and should be taken an oath from his/her conscious to protect and love the environment. Environmental education itself cannot be established or created a pro-environmental concern on the people's mindset, rather than the changing peoples' attitude in accordance with time and experience. According to UNESCO's recent documents, sustainable development is the "ultimate goal of the Man-environment relationship"; thus, the whole educational process should be "reshaped for sustainable development." In view of this, CEA and the ministry of education and the ministry of higher education has a great responsibility.

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