



# SCHOOL BASED ENVIRONMENTAL EDUCATION PROGRAMMES IN THE SCENARIO OF ASSAM, INDIA: KEY TO SUSTAINABLE DEVELOPMENT

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Article DOI: <https://doi.org/10.36713/epra13051>

DOI No: 10.36713/epra13051

## ABSTRACT

The present world is facing serious environmental issues, such as climate change, ozone layer depletion, global warming etc. which create threats to the entire ecosystem. In this connection, Environmental Education has been emerged as measuring tool to such environmental issues which has in turn established Environmental Education as the need of the hour. The sole purpose of Environmental Education is to attain Sustainable development. Considering this, the Government of India started promoting Environmental Education with various initiatives in the formal system of education. In this direction, the Government of Assam has also initiated School Based Environmental Education Programme. The present paper is an attempt to highlight the background of initiating the elevation of Environmental Education in India to attain sustainable development for the 21<sup>st</sup> century. In this paper, the authors have tried to explore various school based Environmental Education programmes undertaken by Government schools with special reference to the State of Assam, India. In exploring these programmes, the syllabi and academic calendar prepared by SCERT, Assam, Board of Secondary Education, Assam and Assam Higher Secondary Education Council have been taken as basis. Also, this paper will provide insight into the endeavour towards the school based environmental education programmes under Eco-Clubs in Assam, India. In the conclusion, suggestions are put forwarded for furthering sustainability through environmental education.

**KEYWORDS:** Environmental Education, Sustainable Development, Formal Environmental Education Programmes, Non-formal Environmental Education Programme, National Green Corps, School Eco Clubs.

## 1. INTRODUCTION

Sustainable development of the entire bionetwork is predominantly reliant on men and environment relationship. The environment always influences people's life and ensures the fulfilment of their various needs. The human civilization has gathered all the resources from the natural environment. But, while utilising the natural environment for satisfying present day needs, people should not forget about the adverse impact of their activity on environmental protection and preservation. In the recent time, people themselves have become a reason for environmental catastrophe. As such the present world is facing serious environmental issues, such as climate change, ozone layer depletion, global warming etc. which create threats to the whole bionetwork. In this connection, Environmental Education has been emerged as the need of the hour because it plays as a measuring tool to such environmental issues.

Environmental Education is that education process which allows individuals to explore environmental problems, develop the capacities to solve the problems and take necessary action to improve the environment. It creates a deeper understanding of individuals towards environmental issues and enable them to

be equipped with the skills. Environmental Education primarily empowers people in terms of -

- Environmental awareness, sensitivity, knowledge to address environmental challenges.
- Correct attitudes and enthusiasm to uphold environmental excellence.
- Capability to recognize and resolve environmental challenges and involvement in events that lead to the resolution of ecological challenges.

According to UNESCO, "Environmental Education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action." This definition has established Environmental Education as a strong tool to achieve sustainable development.

The growing concern about the impact of human action and behaviour on the natural environment has led to the emergence



of the concept of sustainable development. The World Commission on Environment and Development, 1987 demarcated the idea of sustainable development. It stated that sustainable development meets the requirements of the present without compromising the ability of forthcoming generations so that their desires can be gratified. This definition acknowledges that while development may be necessary to meet human needs and improve the quality of life, it must happen without reducing the capacity of the natural environment to meet present and future needs. The sustainable development movement has grown and campaigned on the basis that sustainability protects both the interests of future generations and the earth's capacity to regenerate.

Environmental Education for Sustainable Development is a formal commitment promoted by UN in order to ensure that all countries could be able to attain sustainable development. Environmental Education for Sustainable Development is the response of the UNESCO's education sector to the urgent and severe issues that the entire globe is currently facing. UNESCO states that the ecosystem is in danger because of human activity. It believes that through a holistic approach the environmental issues and challenges can be mitigated. Environmental Education for Sustainable Development for 2030 education programme of UNESCO aims to bring about the personal and societal transformation that is necessary to change course.

Environmental Education for Sustainable Development aims at giving the students all knowledge, skills, attitudes along with values through the medium of education for making them socially responsible global citizens. The ultimate goal of Environmental Education for Sustainable Development is to shape a sustainable future. The exposure to active Environmental Education for Sustainable Development teaching strategies helps students to gain more environmental knowledge, behaviour, attitude and skills. (Sarma, M., 2017). The importance of global collaboration for achieving the purposes and goals of Environmental Education for Sustainable Development was highlighted in the International Conference on Environmental Education held in the year 2004 at Centre for Environmental Education in Ahmadabad.

In this regard, the Government of India has shown its great concern towards environmental issues. Considering the miserable realities related to environmental degradation; certain Environmental Education programmes are introduced for students at every level of education i. e., Primary Level, Secondary Level and Higher Education Level to make them aware of their surrounding environment and achieving sustainable development.

This paper highlights the background of initiating the elevation of Environmental Education in India to attain sustainable development for the 21<sup>st</sup> century. As education is recognized as the key to sustainable development, an attempt is made in this paper to explore various school based Environmental Education programmes undertaken by Government schools with special reference to the State of Assam, India. In exploring these

programmes, the syllabi and academic calendar prepared by SCERT, Assam, Board of Secondary Education, Assam and Assam Higher Secondary Education Council have been taken as basis. Also, the authors have endeavoured to highlight the school based environmental education programmes under Eco-Clubs in Assam. This study is qualitative in nature based on exploratory and descriptive research method.

## 2. BACKGROUND OF INITIATING THE ELEVATION OF ENVIRONMENTAL EDUCATION IN INDIA

Environmental education has been prioritized to achieve sustainable development in the last few decades. In order to achieve the goals of sustainable development, Government of India has undertaken various initiatives for promoting Environmental Education. In the context of India, through the 42nd Amendment into the Constitution in the year 1976; the Government of India had incorporated environmental concern into its policy and prospects. As such; in policy statements, plans and strategies, the environmental issues have occupied significant place with the establishment of a full-fledged Ministry of Environment and Forests in 1980. This was later renamed as Ministry of Environment, Forest and Climate Change.

Government of India has also recommended the Ministry of Human Resource Development to integrate environmental concerns into all aspects and all levels of education; because education is the strong means to ensure sustainable development.

For school education in India, the government decided to introduce policies on Environmental Education. In this regard, the National Policy of Education (NPE) 1986 reshaped the status of Environmental Education in school education system. The National Policy of Education, 1986 emphasised on Environmental Education as essential aspect of the curricula of school education at all levels, realizing the urgency for understanding and creating awareness regarding environmental issues.

Also, the protection of natural and social environment has been included by National Curriculum Framework for School Education, 2000 in the general objectives of school education. In the year 2001, the Supreme Court of India directed University Grant Commission to introduce Environmental Education as a basic course at every level in higher education. As of today, the universities introduced a common course for undergraduate students across all disciplines including arts, science, commerce, engineering, medical and agricultural sciences. The Ministry of Environment, Forests and Climate Change interacts actively with the University Grants Commission, National Council of Educational Research and Training and the Ministry of Human Resource Development for introducing and expanding environmental concepts, themes, issues etc. in the curricula of schools and colleges. The Ministry offered all the states for technical and financial help in strengthening environmental education in the curriculum.



As per the direction of the Supreme Court of India, initiatives have been undertaken in India for incorporating the environment related contents in terms of concepts, themes and issues in the school syllabus from 2004-05. The National Curricular Framework 2005 has also emphasized on incorporating integrated approach to environmental education. As a follow-up of National Curriculum Framework 2005, the National Council of Educational Research and Training and State Council of Educational Research and Training at the state level have developed the syllabi and textbooks for all levels of school education.

Moreover, the Ministry of Environment, Forest and Climate Change organizes a large number of Environmental Education programmes at different levels which involves students, teachers, researchers etc. It has established Environmental Information System Centres across different states and cities to facilitate collection, analysis and dissemination of information on various environmental themes and issues including environmental education at the national level. The major responsibilities of Environmental Information System Centres comprise building up a good collection of books, reports and journals in the particular subject area of environment, establishment of linkages with all information sources in the particular subject area of environment, responding to user's queries. Furthermore, the Ministry of Environment, Forest and Climate Change has been funding towards research in various ways. The grant-in-aid projects and other funds are allocated for many research institutions and organizations working in different fields of studies under the broad realm of environment protection and management. The research programmes comprise of environmental research programme, forestry research, wildlife research, etc., to protect the environment.

National Education Policy, 2020 stresses upon appropriate integration of environmental awareness including water and resource conservation and sensitivity towards its conservation and sustainable development in school curricula. This policy has specially emphasised upon introduction of environmental education as a contemporary subject at relevant stages of education.

### 3. SCHOOL BASED ENVIRONMENTAL EDUCATION PROGRAMMES IN ASSAM, INDIA

The school based Environmental Education Programmes can be classified as Formal and Non-formal Environmental Education Programmes. Both Formal and Non-formal Environmental Education Programmes intend to provide participatory and experiential learning to the young minds to build environmental awareness. In this regard, it is noteworthy to mention that the Govt. of Assam has constituted a committee as per *Notification No.ASE.298/2020/Pt/2* for providing recommendations on preparing a uniform academic calendar for Elementary, Secondary and Higher Secondary or Senior Secondary level. Accordingly, SCERT, Assam (From Ka-shreni to Class VIII), Board of Secondary Education, Assam (Class IX & X) and Assam Higher Secondary Education Council (Class XI & XII) have prepared uniform Academic Calendar from 2021 onwards.

#### 3.1 Formal Environmental Education Programmes

The programmes of Formal Environmental Education are implemented at school level by integrating and including environment related topics like resources- water, mineral, energy etc, forest and wild life, Biodiversity, Agriculture in terms of chapters in to the curriculum. The following table shows different formal environmental education programmes of at various levels of education in Government schools of Assam, India.

**Table-1 showing Formal Environmental Education Programmes in School Education.**

LEVELS OF SCHOOL EDUCATION	Environmental Education Programmes
<b>Primary Education Level</b>	<ul style="list-style-type: none"> <li>Inclusion of environmental concepts into the Chapters of Mathematics and Language</li> <li>Inclusion of text book on Environmental Studies instead of separate subjects like Science &amp; Social Science</li> </ul>
<b>Upper Primary Education Level</b>	<ul style="list-style-type: none"> <li>Integration of the concept of Environmental Education in the textbooks through Science and Social Science.</li> <li>Inclusion of the environment related themes and issues in textbooks of Science and Social Sciences</li> </ul>
<b>Secondary Education Level</b>	<ul style="list-style-type: none"> <li>Adoption of "Infusion Model +Project"</li> <li>Incorporation and inclusion of the concept of Environmental Education in the textbooks through Science and Social Science to link the concept with real life situation.</li> <li>Preparation of report on visit to a Hilly Area with the purpose of observing Topography, Flora and Fauna etc.</li> <li>Preparation of report on visit to a Polluted Site with the purpose of observing cause and effect of pollution.</li> </ul>



	<ul style="list-style-type: none"> <li>• Preparation of report on Ecosystem of a local river, stream or pond with the purpose of observing Topography, Biotic Components, Factors Affecting Ecosystem, activities of Local people.</li> <li>• Preparation of project on environmental issues like-deforestation, landslide, forest fire, floods, pollutions as part of Social Science Subject.</li> </ul>
<b>Higher/Senior Secondary Education Level</b>	<ul style="list-style-type: none"> <li>• Inclusion of Environmental Education as compulsory subject for Arts, Science and Commerce streams in HS first year only.</li> <li>• Integration of Environmental Education with various subjects like Geography, Sociology, Political Science, Economics Physics, Chemistry, and Biology in the curriculum.</li> <li>• Inclusion of environmental field study in the subject of Geography</li> </ul>

(Source: Academic Calendar, SCERT, Board of Secondary Education, Assam and Assam Higher Secondary Education Council)

### 3.2 Non-Formal Environmental Education Programmes

Non-formal environmental education programmes comprise all the programmes and activities apart from the course contents. At the school education level; throughout the entire academic year based on Academic Calendar, the Government schools undertake different programmes with a focus to create

awareness on environmental conservation and protection as a part of non-formal environmental education programme. The following table shows different activities under non-formal environmental education programmes at various levels of education in Government schools of Assam, India.

**Table-2 showing different activities under Non-Formal Environmental Education Programmes.**

Sl.NO	Observance Day	Activities		
		Elementary Education Level	Secondary Education Level	Higher Secondary Education Level
1.	<b>Observance of World Water Day</b> (22 <sup>nd</sup> March)	Awareness programme regarding importance of conserving and managing fresh water resources.  Engaging students in preparing Posters, Slogans etc. on conservation and uses of water to be displayed inside and outside the school campus.	Explanation of the significance of the day  Awareness programme regarding importance of conserving and managing fresh water resources.  Preparation of befitting posters, art work etc.	Awareness programme about fresh drinking water, conservation of water etc.  Engaging students in preparing befitting posters, art work etc.
2.	<b>Observance of Earth Day</b> (22 <sup>nd</sup> April)	Awareness programmes on various issues like prevention of Plastic Pollution and Global Warming, Security of Birds and Public health, measures to reduce air pollution etc.  Engaging students to draw posters, write slogans, poems, stories on the above-mentioned issues to be displayed inside and outside the school campus.	Explaining the significance of the day in the morning assembly  Awareness programme for appreciating the beauty of the earth .  Awareness programme for preserving and conserving the environment	Awareness programme for appreciating the beauty of the earth .  Awareness programme for preserving and conserving the environment .



3.	<b>Observance of World Environment</b> (Day 5 <sup>th</sup> June)	Highlighting the significance of the day and enlightening the students about the necessity of trees and plants for ecological balance.  Organising events such as- essay writing, composing of poems, extempore speech on conservation of the environment and reduction of environmental pollution to create awareness on maintaining a balance between the environment and the ecosystem.	Plantation of saplings  Students' participation in Quiz, Debate, Extempore Speech.  Organizing Special talk by Environmental activists.	Plantation of saplings  Students' participation in Quiz, competition on Debate, Extempore Speech among the students.  Special talk by Environmental activists.
4.	<b>Observance of World Disaster Day</b> (13 <sup>th</sup> October)	Awareness programme on the measures to reduce damages caused by Natural and man-made Disasters.  Demonstration of ways and means to be taken before and after the disaster with the help of Disaster management Authority.	Discussion on the techniques to reduce the consequences of Natural and Man-made disaster.  Highlighting the measures of disaster management.	Discussion on the techniques to reduce the consequences of Natural and Man-made disaster.  Highlighting the measures of disaster management.
5.	<b>World population Day, (11<sup>th</sup> July)</b>	Not observed at Elementary Level as per Academic Calendar	Competitions on Essay writing, Debate, Quiz, Extempore Speech etc.  Preparation of posters, art work to mark world population day.	Essay writing on world population, Discussion, posters preparation

(Source: Academic Calendar, SCERT, Board of Secondary Education, Assam and Assam Higher Secondary Education Council)

#### 4. SCHOOL BASED ENVIRONMENTAL EDUCATION PROGRAMMES UNDER ECO-CLUBS IN ASSAM

In India, the Ministry of Environment, Forests and Climate Change has promoted the idea of Eco Clubs in Government schools by the through National Green Corps Programme. The National Green Corps Programme was launched in 2001-02 which aims at inspiring and motivating school students to participate in various environmental conservation and environmental sustainability.

In Assam, the National Green Corps Programmes have been implementing by the Environment Division of Assam Science, Technology and Environment Council since 2001-2002 as State Nodal Agency of Eco Clubs comprising of ME, MV, High & Higher Secondary Schools. Under this programme, eco-clubs

are suggested to be formed by the Government schools at Elementary, Secondary and Higher or Senior Secondary level. Accordingly, in Assam all total 8316 Government schools have formed Eco Clubs in order to encourage students to involve in various environment related activities for environmental sustainability.

Eco Clubs in schools empower students to learn to live sustainably. It also enables students to explore environmental concepts and actions beyond the confines of a syllabus or curriculum.

Under the aegis of this Sate Nodal Agency, the schools are advised to organise the following activities-

**Table-3 showing activities to be undertaken by Eco Clubs in school under National Green Corps Programme.**

1	Conducting lectures and popular talks, seminars, debates on environmental issues in the school.
2	Conducting field visits to ecologically significant sites including polluted and degraded sites wildlife parks.
3	Conducting various activities for environmental awareness like rallies, marches, human chains, street theatre etc. at public places.
4	Taking up events within and outside the school campus for plantation, cleanliness etc.
5	Adopt at least one natural water body by each Eco Club for regular cleaning and maintenance.
6	Nurturing kitchen garden along with maintaining vermin-composting pits, constructing water-harvesting structures in school and practicing paper recycling.
7	Preparing inventories for pollution causes and collaborating with the concerned agencies.
8	Organizing awareness events for individual hygiene by developing habits like washing hands before meal.
9	Sensitizing about the maintenance of public places like parks, gardens both within and outside the school campus.
10	Mobilizing actions against practices which are ecologically harmful like garbage disposal in unauthorized places, unsafe disposal of hospital waste etc.
11	Undertaking case studies, compile lists of ecologically friendly products and community initiatives which have impacted the environment.
12	Creating database on land use pattern, species diversity, medicinal plants, etc. to help planned conservation efforts.
13	Testing soil, water and air quality and study their impact on health.
14	Learning to make natural dyes and herbal cosmetics.
15	Volunteer to help or guide visitors in Zoos, Botanical Gardens, National Parks and Public Gardens.
16	Initiating and maintaining a mini orchidarium, seed bank, arboretum, etc. in school.
17	Demonstrating or promoting eco-friendly practices like non-chemical pest management, stall-feeding of animals to protect pastureland from over-grazing, use of energy- efficient devices or use of renewable energy for meeting local needs.

(Source: GUIDELINES, National Green Corps (NGC), State Nodal Agency (SNA) Assam Science Technology and Environment Council)

At present in Assam, the following activities are undertaken in the Government schools under School Eco Clubs-

- Setting up of fruits and vegetable gardens.
- Awareness programmes and projects on (i) Environment Protection, (ii) Conservation of Water Energy, (iii) Climate Protection, (iv) Disaster preparedness
- Health awareness programmes/camp
- Creation of models
- Community service through Cleanliness Drive.

(Source: Academic Calendar, Department of School Education, SCERT, Govt. of Assam, 2023-24)

## 5. CONCLUSION

In this paper, it is observed that the Indian government has taken commendable initiatives to promote sustainable development through environmental education. Considering the initiatives of Government of India, the Government of Assam has taken up steps for incorporating formal and non-formal Environmental Education Programmes in schools by redesigning uniform academic calendar from Elementary to Higher/Senior Secondary schools. It is evident that various Environmental Education Programmes have been undertaken at different levels of school education through integrating environmental themes, concept, issues etc. in the curricula. Apart from this, environmental awareness among students is creating through organising various activities outside the classroom. In this connection, the school Eco Clubs are

rendering tremendous effort towards imparting environmental education. But it is found that no grade /marks are counted in the final evaluation of the students for their participation in Environmental Education related activities. Due to this reason the non-formal environmental education programmes are not taken seriously by the students in some schools. Considering this situation, the evaluation system should upgrade its mechanism. It is also felt that intensive teacher training and orientation programme on environmental education should be organised on regular basis which would help Environmental Education to get its right direction in school education. Such training programmes or orientation programmes would aid in providing experiential learning on Environmental Education. Right co-ordination between State Education Department and Non-Governmental Organisations can facilitate Environmental Education in schools. Also, it is come to notice that the school Eco Clubs in the government schools in Assam have provided very few experiential environment related activities. But, the Environment Division of Assam Science, Technology and Environment Council have suggested 17 activities to be conducted under Nation Green Corps. In this connection it is suggested that the school Eco Clubs should provide experiential learning by conducting maximum varied environment related activities.

## 6. ACKNOWLEDGEMENT

We offer sincere gratitude to Mrs. Tilottama Rabha and Md. Ashraf Alom for helping us to know the ongoing programmes under Eco-Clubs in schools of Assam



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