

A Study of Good Practices on **Greening of the Schools**

**A Report
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Preface

In view of global concern the United Nations launched the Decade of Education for Sustainable Development (DESD) in 2005 and even the Sustainable Development Goals (SDG)-2015, which required the related concerns to be inculcated through school education, it needs to be recognised that the elementary stage plays crucial part in an individual's life. As per the National Policy on Education-1986 and the Programme of Action-1992, environmental education has been a priority area in all the curriculum development programmes at the national level and various initiatives were taken up to address its concerns through curricular and co-curricular interventions. The landmark judgment of the Supreme Court of India (2002) made it obligatory for the States and UTs to comply with the implementation of environmental aspects through education, wherein the States adopted the strategies of infusion, integration or making it as a separate subject area.

In order to accomplish SDGs, a synergistic approach towards accomplishment of the different goals is needed instead of viewing each one in isolation. Although quality education is identified to be goal 4 but it can be a key to accomplish the other goals. Using a 'whole school' approach to impart holistic learning to the students could be one such step towards quality attainment in education especially school education. This approach demands that the students' experiences may not be confined to the classroom and are a part of the learning in the entire school, community and the surroundings. This helps in linking learning to real life, as the activities require application of knowledge and skills in real situations. Such an education places issues and concerns on sustainability at the heart of the 'whole school' policy planning and practice. The Whole School Development Plan (WSDP) under SSA as per its 2011 framework envisions child-friendly schools, responsive towards the needs of all children by ensuring safe, secure, clean and hygienic environment for all children with optimum resource utilization through environmentally sustainable practices.

Keeping in view the concerns mentioned above the department of elementary education, NCERT worked extensively in this area since last few years and organized workshops at the national and regional levels where opportunities were provided to different stakeholders to access and share their views and experiences on ESD. The department also developed a Resource Book on greening the Elementary schools, which includes innovative ideas, and strategies for achieving the objective of ESD in the light of the RTE Act 2009 and the SSA objectives.

In continuation of this, a research study entitled 'A Study of Good Practices on Greening of the Schools' undertaken by Dr. Kavita Sharma, Associate Professor, DEE, NCERT, is a step further, which will help different stakeholders understand the strength and gaps on ESD and plan effective strategies to realise it on the ground. We hope that the findings and suggestions will help not only the two schools where case studies have been conducted but also all other states identify and plug the loopholes to implement ESD in their schools effectively.

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(Anup Rajput)

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Acronyms

BaLA	Building as Learning Aid
CEE	Centre for Environment Education
CFL	Compact Fluorescent Lamp
CSE	Centre for Science and Environment
CWSN	Children with Special Needs
DESD	Decade of Education for Sustainable Development
DST	Department of Science and Technology
EE	Environmental Education
EESS	Environmental Education in the School System
ESD	Education for Sustainable Development
EVS	Environmental Studies
FGD	Focus Group Discussion
MDM	Mid Day Meal
MoEF&CC	Ministry of Environment, Forest and Climate Change
MHRD	Ministry of Human Resource Development
NCERT	National Council of Educational Research and Training
NCF	National Curriculum Framework
NCFSE	National Curriculum Framework for School Education
NCSTC	National Council of Science and Technology Communication
NGO	Non-Governmental Organisation
NMNH	National Museum of Natural History

NPE	National Policy on Education
POA	Programme of Action
PTA	Parent Teacher Association
RTE	Right to Education
SDG	Sustainable Development Goals
SMC	School Management Committee
SCERT	State Council of Educational Research and Training
SPO	State Project Office
UT	Union Territory

Chapter 1

An Overview

Chapter 1: An Overview

1.1 Introduction

The Official Agenda for Sustainable Development adopted on 25 September 2015 has 17 Sustainable Development Goals (SDG), which are to be accomplished by 2030. A very important and central to all these are the goal of quality education. Although a synergistic approach to all of them is needed yet quality education, the Goal 4 is the key to achieving the rest. The Decade of Education for Sustainable Development (DESD) launched by the United Nations in 2005 also aimed at integrating the principles, values and practices for nurturing sustainable development. This required infusing appropriate processes in the school curricula. Article 51A of the Constitution has made it a ‘fundamental duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife’. Various education commissions, the National Policy on Education-1986 and Programme of Action-1992, have reiterated the growing need to address the environmental concerns. In view of UNDESD-2005, the curriculum development at the national level took cognizance and Education for Sustainable Development (ESD) was the core of the curriculum for each subject area developed by NCERT. The concerns raised in the RTE Act-2009 for all round development of children through education are also in line with the objectives of ESD.

Consequently, Elementary Education (EE) has been one of the priority areas of concern in all the curriculum development programmes at the national level and various initiatives were taken up to address its concerns through curricular and co-curricular interventions. The landmark judgment of the Honorable Supreme Court (2003) made it obligatory for the States and UTs in India to comply with the implementation of environment aspects through education from primary to higher stages wherein the strategies of making it as a separate subject area of infusion and integration were adopted by the States and UTs.

A key objective of the DESD is to foster quality teaching learning that goes beyond the formal curriculum to a holistic ‘whole school approach’ where the students’ experiences are not

confined to the classroom but are part of the learning in the school and the community. It calls for a reorientation of the thinking and practices of formal education— including curriculum, teaching-learning approaches and assessment and adopting sustainable principles at all levels of planning, decision-making and implementation in a school.

1.2 Background

In order to comply with the judgment of the Honorable Supreme Court, different agencies at the national and state level took various initiatives. A number of governmental and non-governmental agencies under the Ministry of Human Resource Development (MHRD), Ministry of Environment and Forestry and Climate Change (MoEF&CC), Department of Science and Technology (DST), Government of India engage in various environment education programmes. These programmes pertain to both curricular and co-curricular interventions in school education. Some of these are:

- ‘Scheme of the Environmental Orientation to School Education’ launched by MHRD in 1988;
- Establishment of institutes offering pre and in-service courses at different levels by MoEF&CC;
- Establishment of the National Museum of Natural History (NMNH) and its regional centers under MoEF&CC;
- Environmental Education in the School System (EESS), a sub-component of the India Environmental Management Capacity-Building Project was undertaken by MoEF&CC and supported by the World Bank, with the Centre for Environment Education (CEE) as the consultant;
- National Green Corps initiative of CEE to establish Eco clubs in each district of the country; and
- Organisation of Children’s Science Congress at the State and National levels every year by the National Council of Science and Technology Communication (NCSTC), Department of Science and Technology (DST).

Many Non-Governmental Organisations (NGOs) in different parts of the country are also actively engaged in EE.

1.3 Status of EE in the Curriculum at the National and State Level

The National Curriculum Framework (NCF) for School Education (NCFSE), 2000 and NCF-2005 recommended EE as one of the concerns core to be integrated into the curriculum. An infusion approach was used to weave the environmental concerns into all curricular areas at all levels. In the NCERT curriculum, the teaching of language and mathematics has been woven around the children's immediate environment in Classes I-II. In classes III-V, separate textbooks for environmental studies have been provided. At higher school levels (upper primary to higher secondary) concerns are infused across different curricular areas, especially science and social studies. At the primary stage, in most States/ UTs integrated textbooks on environmental studies (EVS) are being used. In some States environmental concepts have been integrated into language and Mathematics, while in some other EVS has been bifurcated as 'Science' and 'Social Science' for which separate textbooks or separate sections in one textbook have been prescribed. By and large, the textbooks of science and the social sciences in the most States/ UTs include environmental concerns. Some states prescribe separate textbooks for environmental education and separate period's allocations are recommended to teach EE.

Many studies have shown that the textual material and the classroom teaching-learning restrict only to creating knowledge and awareness and do not get reflected in the attitude and the actions of the students. The responsibility to transact EE also lies primarily with the science teachers who use traditional approaches of 'chalk and talk'. The projects, if any, carried out by students are very mechanical and students end up preparing a report which is evaluated using marks /grades. NCF 2005 suggested that teaching-learning of the environmental aspect should go beyond the classroom boundaries and give children the opportunities to connect knowledge with the real life and issues prevalent in the surroundings. The Sarva Shiksha Abhiyan (SSA) framework 2011, proceed RTE Act 2009, recommends using whole school approach wherein the entire school habitat is used as a resource for teaching learning. The Education for Sustainable Development, however, demands protecting the ecosystem and all its components. Therefore, the approach to the teaching and learning needs to take care of the human resource. It should include concern for children health (physical and emotional for them, entire school community and neighborhood). Such type of education is recognized as ESD and it requires the teaching and learning principles of sustainable development wherein, each living being has the right to live in

peaceful coexistence. Such education demands the schools to be a Green School, that provides optimum utilisation of different resources to enable children, be sensitive and responsive to the environmental issue

1.4 What is a Green School?

The Green School is a school guided by the principles of environmental sustainability. It seeks to create an environment to fully utilize all resources and opportunities inside and outside the school to sensitize teachers and students for environmental sustainability through active involvement of the community. This is not a one-time phenomenon but demands an on-going, continuous and synergistic effort of all stakeholders towards improving the environment of the school and its surroundings.

Schools can play a pivotal role and be the cradle for the development of not only the knowledge and understanding, but also create the foundation of environmental ethics among students. It is well-known fact that skills, habits, attitudes, and values are inculcated from the early years in an individual's life. All these efforts are augmented if we have a sense of belonging towards the school and its surroundings.

The school environment, therefore, should encourage, support and nurture students' growing capacities as learners through its green environment, curriculum, and teaching and learning process. This will allow them to connect with their surroundings and attend to their health and safety need besides motivating them to learn and imbibe a sense of belongingness, sensitivity towards the school, society and eventually our planet. The Green School has clean, healthy, protective and green surroundings. It also:

- promotes both the physical and the psychosocial health of learners and others in school.
- ensures a healthy (provision of health services such as nutritional supplementation and counseling), hygienic (safe drinking water, neat and clean classrooms, playground and parks, etc.) and safe learning environment, with healthy good practices (e.g. a school free of drugs, corporal punishment, and harassment); and

- brings students closer to nature as far as possible and involves them in taking care of it.

1.4.1 Some Green School Programmes in India

The efforts made by different organisations for addressing the environmental component through school education have restricted to the textbooks. The teachers transacting them in the classrooms generally limit it to only creating the awareness. The responsibility to do so mainly lies with the science teachers. Programmes of various organisations having the focus on the greening of schools such as ‘Paryavaran Mitra’ initiated by the CEE and ‘Gobar Times Awards’ by CSE are encouraging, but students from secondary and senior secondary levels are mostly benefitted by it. The students are asked to do activities/projects related to ESD in some separate periods or at the weekends/ holidays. Awards are also given to the best entries. The materials developed in the form of manual or Resource Books are mainly meant for the teachers.

About the Resource Book ‘Towards a Green School’

The new paradigm of education as proposed by the Position Paper on National Focus Group on Habitat and Learning (2006), NCERT, advises to expose children to the real world to enable them to analyse, evaluate and draw inferences about problems and concerns related to the environment and take suitable action to facilitate and participate in the pursuit of sustainable development. The Whole School Development Plan (WSDP) under SSA envisions child-friendly schools, responsive towards the needs of all children by ensuring safe, secure, clean and hygienic environment for all children with optimum resource utilisation through environmentally sustainable practices. In view of the enormous physical, social and cultural diversity across the country and rationalizing these in the Indian perspective, NCERT has developed a Resource Book on ESD for Elementary Schools which includes innovative ideas and strategies for achieving the objectives of ESD in the light of SSA and the RTE Act, 2009. The Resource Book suggests ways to transform the schools through practices of ESD in order to enable the children to grow in an environment that helps imbibe awareness, sensitivity and the necessary skills to be environmentally responsible citizens of mother earth. The document has four sections wherein the first section will help you to get an insight of ESD, ‘Greening’ and ‘whole school’ approach as per national and international outlook. The second section helps you understand ESD in the context of curriculum, whereas the third section gives different strategies to transact a Green Curriculum. It includes various case studies with examples of schools in realities that have done a lot in demonstrating practices for ESD. Right from the classroom to school corridors and other open spaces, it includes examples of learning opportunities provided by common school activities in and beyond school to build child-friendly and environmentally meaningful ethos with a physically safe, psychologically enabling and emotionally secure environment for children.

1.5 NCERT Initiatives

In order to address these gaps and make Education for Sustainable Development at the core of the school curriculum and seek the involvement of each and every stakeholder in making the school environment green, the need for the development of suitable material was felt. The NCERT organised a National workshop in 2011 in which representatives of more than 20 States and UTs participated and shared the efforts on environment education going on in their States/UTs. Recognizing this, the department had developed a Resource Book on ESD entitled ‘Towards a Green School’ which is in consonance with the SSA framework 2011 and the RTE Act-2009 through deep consultation with the States and UTs through national workshops during last few years. It has been disseminated to the States through MHRD, MoEF&CC, and to the various organisations such as SCERTs, SPOs (SSA), and offices of the National Green Corps across the country through face-to-face as well as distance mode. Capacity building programmes for 20 States have also been organised. During the regional workshops, different States also shared a broad view of their status of greening in schools. Some examples of innovative practices in this area were shared.

1.6 Rationale of the Study

We are aware that different organisations are running their programmes in the area of environment education and giving awards to the best performers, this study attempted towards collecting such good practices going on in different States and UTs, select the most innovative ones amongst them, to carry out deeper studies to understand the green processes /strategies. The case studies of such innovative practices on the wider dissemination of their strengths can help others to adopt/adapt/ replicate them for implementation in schools across different States/UTs. Observations on gaps can also help them avoid/overcome these for further improvement of different initiatives going on/ to be planned. In view of this the present study was undertaken.

1.7 Objectives of the Study

The broad objectives of the present study are:

1. to identify good practices on greening of schools under ESD; and

2. to study the green practices followed in the identified schools w.r.t the whole school approach.

In brief, the study is aimed at the compilation of good practices on the greening of schools in the States and UTs, as may be possible and selecting a few cases where further, deeper analysis could be done based on the principles of green school (criteria to be developed). The findings will throw light on the strengths that can be replicated and issues that can be taken off in the planning and implementation of such programmes.

Chapter 2

Methods

Chapter 2: Methods

2.1 Methods

The study on Green School was aimed to collect good practices on greening and sustainable development going on in different schools of the States and UTs, analyse them and disseminate the findings with a view to improving the existing educational practices. The present chapter describes the method employed, instruments used and procedure adopted for data collection and analysis of data. The limitations of the study are also given in this chapter.

2.2 Design of the Study

The study is based on case study method. The green school practices received from different States and UTs were analysed in the light of the green school indicators based on the resource book developed by the NCERT entitled ‘Towards A Green School’.

Initially, the SCERTs/ SIEs and State Project Offices of SSA were requested to communicate with the schools in their jurisdiction the objective of the study and to send write-ups about their work/ activities concerning greening and sustainable development to the investigator. A format was also shared with States/ UTs to enable the schools to send the information in an organised manner. In response to the request 83 schools responded from eight States (See Annexure I). The schools sent write-ups, reports along with some pictures of the activities mentioned in the reports. Some schools also sent scanned copies of newspaper clippings.

The write-ups, pictures and reports were analysed in view of the indicators of green school described in chapter 1 to prepare summaries of the activities conducted in each of the schools. These analyses were recorded as observations/ comments by the reviewers. The summaries and analysis on the greening activities of the schools are given in Annexure II.

The study also intended to conduct the case study of a few schools that claimed to follow the practices of a green school under ESD. Using the indicators of green school, as the main criteria, the good practices reported by the 83 schools were analysed to identify the schools, which portrayed different aspects of greening in tune with it. After careful analysis, only two schools, namely the Government Senior Sr. School, Hee-Yangthang, Sikkim and the Bharat Mata Public School, Bilaspur, Chhattisgarh were shortlisted to study in depth the green practices practiced in these schools, through case studies.

2.3 Tools for the Study

The study on Green School was qualitative in nature and carried out by adopting the case studies method and since case studies required the collection of a variety of data from multiple stakeholders in a systematic manner. The following instruments were used for collecting data during the study:

- School Observation Template
- Interview Schedule for the Principal
- Focus Group Discussion Templates for,
 1. Teachers
 2. Students
 3. School Management Committee / Parent Teacher Association.
 - 4.

The Principal Investigator developed the tools, which were further discussed and validated in expert group workshops. The tools were also field-trialed by the research team in a government school in Delhi and subsequently finalised.

2.4 Data Sources and Instruments

2.4.1 School Observation Template

The template had two sections. Section I contained eight items and aimed at seeking information on the general profile of the school and the region of its location. Other relevant information like the number of students (boys, girls, CWSN etc.), the number of teachers, support staff, teacher-

student ratio, total area of the school, the number of classrooms, the number of blocks, the socio-cultural background of the students etc., were sought using different items in this section.

Section II consisted of six sub-sections and is focused to draw specific information about different components on greening. A brief description of each sub-section is given below:

Sub-section ‘A’ dealt primarily with the infrastructural aspects of the school building and its maintenance. It included six items on safety aspects related to disasters, accidents, timely fixing/repair, provision for the differently abled and the integrating the elements of BaLA and its potential and actual use.

Sub-section ‘B’ consisted of the aspects related to the healthy and clean environment in the classroom, such as the availability of sufficient light (preferably natural), ventilation, cleanliness, seating space, maintaining the appropriate posture and visibility of the blackboard, appropriate storage, facility for the students and teachers, and disturbance from unwanted noise.

Sub-section ‘C’ contained three main items, which relate to the survey of the common spaces such as corridors, verandas, terraces, staircases, playground and toilets of the school.

Sub-section ‘D’ catered to collecting information related to conservation. In the section, the main focus was to draw information on practices related to the availability, management and conservation of water, energy, waste and plantation inside and outside the school compound.

Sub-section ‘E’ contained items to collect information related to common school activities. This included four items focusing on school assembly, festivals and special occasions, Mid-Day Meal, and safety aspects. Mid-Day Meal, a major component covers aspects like hygiene, nutrition, cooking infrastructure and distribution of meals and health and monitoring of MDM. Besides, it required observation of the health checkup services (if any). Item No. 23 targeted on the physical and emotional safety of children, and also dealt with the relationship of the school authorities with parents, SMC and community at large for their participation in school activities, and

Finally, sub-section ‘F’ dealt with the Teaching Learning aspects. The key focus of this section was to widen the understanding of the pedagogy of the environmental aspects through the

curriculum, classroom and other activities of the school and how it was being practised by different teachers.

2.4.2 Interview Schedule for Principal

The interview schedule for the Principal consisted of ten items and was used to take his/her opinion on the inception, implementation and sustenance of the environmental initiatives in the school. Besides, the schedule also looked for the challenges faced and strategies for the improvement and advancement of greening initiatives in the school.

2.4.3 Templates on Focus Group Discussion

Three Focus Group Discussion (FGD) Templates were prepared for the study.

(i) Teachers

The first section of the FGD template for teachers was designed to seek general information pertaining to their qualification, subjects taught and experience in teaching. The subsequent section was used to explore specific information related to their understanding, association and contribution towards the greening activities undertaken in the school besides the pedagogical practices used by them to involve all students including CWSN and the community. Specific information related to the celebration of festivals/events in an eco-friendly manner, establishing a good relationship with different stakeholders especially students. The FGD also took care to collect the suggestions of the teachers to overcome the challenges faced by them in terms of greening initiatives in the school.

(ii) Students

The FGD template for students contained nine items and intended to dig out perceptions and attitude of the students towards the eco-friendly activities going on in their school. Probes were also used to find out the extent of their involvement and encouragement to participate in such activities. The FGD also helped in obtaining feedback and suggestions on overcoming the challenges faced by them.

(iii) SMC/ PTA

This FGD template containing ten items was designed to collect qualitative information related to awareness, attitude and contribution of the SMC/ PTA of the schools towards suggesting, implementation and sustenance of the ESD initiatives.

The schools were also requested to share documents which could be in the form of picture, reports, and newspapers/magazines/audio/video clippings as evidence of the activities conducted at their school. The collected documents were further reviewed by the research team. Table 1 shows the documents that were made available to the research team by the respective schools. The provided documents were crucial evidence of the data. The schools also permitted us to click photographs of the situations to complement the observations.

Table 1 :- List of Documents

Sl.No.	Documents	Hee-Yangthang School, Sikkim	Bharat Mata Public School, Chhattisgarh
1.	School album	(•)	(•)
2.	School magazine	(×)	(•)
3.	Pictures of different functions and events	(•)	(•)
4.	School calendar	(×)	(•)
5.	Health checkup / records	(×)	(×)
6.	Newspaper clippings,	(•)	(•)
7.	Any award/certificates/ accolades won by the school for green practices	(•)	(•)
8.	Write up/projects done by students	(•)	(•)
9.	Water bills (if any)	(×)	(×)
	Electricity bills (if any)	(×)	(×)
10.	Any other (relevant ones)	(×)	(×)
11.	Report cards	(•)	(•)

The documents provided are tick marked (•). For those marked (x), the schools expressed their inability to share the information.

2.4.4 Web Links

Various documents of the schools concerning their activities were also available online. Web search was made to locate the concerned documents and to collect other useful information related to the two schools for their work done in the area, awards won and recognition received.

2.4.5 Data collection and Data analysis

The Principal investigator along with other members (a faculty and junior project fellow) visited the respective schools for a period of four to five days during November 2015 and January 2016. The visits were organised with the prior written consent of the concerned State and the school authorities. On the first day, a meeting was held with the principal and some teachers of the schools to explain the purpose of the visit. The school authorities were specifically advised not to disturb the usual conduct of the school and make any special arrangements during the visit of the study team. The research team went every day to the school and stayed there during the school timings. An official from the SPO/SCERT of the respective States also accompanied the team and provided necessary support. The FGDs for the SMC and teachers were conducted after the school hours. The FGD for the students was carried out after their examination got over in the case of Bharat Mata School and for the students of Hee-Yangthang School it was done during the assembly time. All the FGDs and discussions conducted were audio recorded with the consent of the participants.

The field notes of the school observations made during the school hours were recorded in a diary on the same day in the evening. These were substantiated with the pictures clicked during observations. In addition, the schools were requested to share documents concerning school activities. As mentioned, Table 1 gives the evidence that were shared.

All the data organised systematically in different folder was digitally transferred to a computer. The audio recordings were transcribed manually. These were classified into categories mentioned under School Observation Schedule Template. The information obtained thus helped

in the triangulation of data. The analysis of the other evidence including pictures, newspaper clippings, Internet references, school calendar, report cards, and timetable etc., was further used to substantiate the information obtained through observation, interview and FGDs. The entire process was used to develop the case studies reports in a narrative form. Chapter 3 gives in detail the findings of the study.

2.5 Limitations of the Study

The study needs to be seen in the light of the following limitations.

- The visits to the schools for the case study were pre-planned and the schools were informed in advanced about the period and the duration of the visits. This could have led the schools to make special preparations for the presentation of their work during the observation and discussion.
- Time limitation could have affected the study, as some of the aspects could have been deeply observed/probed only if the visit period could be extended to a longer duration. Alternatively, there could have been 2-3 visits at different times.
- Bharat Mata School authorities did not allow conducting the FGD of the Parent Teacher Association members/ other parents/community members on the pretext that no substantiate involvement and contribution of the parents existed in the school. Being a private school, SMC did not exist there.

Chapter 3

Data Analysis

Chapter 3: Data Analysis

3.1 Status of greening in schools of different states

This chapter presents a summary of the findings of data collected on greening activities from 83 schools from eight States. The findings and the analysis of the in-depth case studies of Bharat Mata School, Bilaspur, Chhattisgarh and Government Senior Secondary School, Hee-Yangthang, Sikkim is also shared in the chapter.

The State-wise number of schools that sent their reports is given in Table 2.

Table 2 :- State-wise details of Schools

Sl.No.	States	No. of Schools
1	Chhattisgarh	21
2	West Bengal	03
3	Haryana	01
4	Uttar Pradesh	04
5	Gujarat	03
6	Punjab	37
7	Sikkim	01
8	Karnataka	13
		Total: 83

The write-ups on green school activities received from the 83 schools were initially analysed to understand their perceptions, efforts and initiatives on greening under ESD and their inclusion/integration with the teaching-learning process.

Key findings of the reports sent by the schools

A majority of the schools reported, ‘Plantation, gardening and maintenance’ as the major activities of ESD in their respective school. The main activities under gardening included growing vegetables, flowers and medicinal plants. Many of the schools also reported organisation of different awareness activities like rallies, nukkad-natak (street plays), development and display of posters/slogans, and cultural programmes/ competitions during the celebration of special days and weeks such as environmental day, ozone day, biodiversity day, wetland day and climate change week etc. Few schools also organized ‘Cleanliness’ drives. Some schools cited in their write-ups the need for action to improve the mid-day meal. However, they were restricted to growing seasonal vegetables for MDM in the school campus. Very small responses were received on the adoption of appropriate strategies for storage of food-grains, maintaining hygiene and food quality and the use of smokeless Chullah in the school. Overall, it was observed that MDM in schools continues to face problems related to availability of proper cooking infrastructure and serving space, raising serious questions related to cleanliness and hygiene in these schools. In addition, some other points in different schools were related to;

- Un organised sitting area / space for students
- Students sitting on floor using durries (mat), which may lead to postural problems.
- No purification facilities for drinking water.
- No mention of cleanliness drive related activities.
- No separate toilets for boys and girls.
- Practice of Building as Learning Aid (BaLA).
- Creation of water body containing lotus plantation and fish rearing as a step towards the greening of surroundings.
- Increase in enrolment and the regularity of the students due to development of the green area.
- Constituted Audit teams of children for air, water, land, and energy, covered and open space to maintain and sustain the practices.
- Use of water testing kit to check the quality of water.
- Providing push taps to stop wastage of water.

- Use of CFL lamps to reduce electricity consumption.
- One school mentioned of greening goals itself. One goal included no Plastic bags, zero waste in the tiffin box, waste management in school and preparation of compost by degradable waste. Another set of goals was to control carbon emission and reduce noise pollution in front of the school and develop internal discipline among the students. The school reported winning awards at different forums for working on this project.

Case Study-1

3.2 Case Study of Bharat Mata Senior Sec. School, Bilaspur, Chhattisgarh

3.2.1 General Profile of Chhattisgarh and Bharat Mata School

The state of Chhattisgarh came into existence in 2000. Earlier it was a part of the present state of Madhya Pradesh. As the High Court of Chhattisgarh is located in Bilaspur, the city is also popularly known as the ‘Law Capital of Chhattisgarh’. The city of Bilaspur is located in the north-eastern region of Chhattisgarh. Situated on the banks of the rain-fed Arpa River, the city enjoys a pleasant climate during winters (minimum temperature 10°C). However, summers are very hot and dry, with maximum temperature going up to 45+°C.

The Bharat Mata Senior Sec. School, henceforth Bharat Mata School, is an unaided and co-educational school. It is situated in the heart of Bilaspur city and lies close (2 km) to the Railway Station, Bilaspur. It was established on January 7, 1970, at the railway settlement, Bilaspur. The total school compound is approximately 2 acres. The school has strengths of 1368 students (785 boys and 583 girls) and 52 teachers. The children in the school come from diverse social and economic backgrounds (low to middle-income group), caste and religion. Majority of the parents/guardians of the children are literate and mostly belongs to the business class. The school runs in two shifts. During the first shift (7am- 12:30 pm), English medium students from class VI to XII attends the classes. In the second shift (1:00 pm to 5: 30 pm) Hindi medium students from classes VI to XII attends the classes. The school has 22 classrooms. There are also three separate science labs (Physics, Chemistry, and Biology). For the senior secondary students, but the secondary students also use the same labs. The Church runs the management and a Father (priest) appointed by the Church looks into the daily functioning of the school. The Father can be

transferred to other schools managed by the Bharat Mata Vidhya Sangh. Subject and the stage wise distribution are given in Table 3.

Table 3 :- Details of the Staff and the Students

Stage	No. of Students	No. of Teachers	Subject wise distribution	Support Staff Designation and nature of work
Senior Secondary	Boys:118 Girls78 Total: 196	Male: 04 Female: 06	Physics: 01, Chem:01, Bio:01 Accounts02, Maths01, Computers etc.04	02 lab assistants 04 peon 02 official staff
Secondary	Boys 112 Girls 90 Total:202	Male 03 Female 07	Eng: 01, Hindi 01 Sanskrit 01, Math 01, Science 02, Social science 01, Computer etc. 02	02 lab assistants 04 peon 02 official staff
Upper Primary	Boys 187 Girls 137 Total 324	Male 04 Female 09	Eng: 01, Hindi 01, Sanskrit 01, Math 02, Science 02, Social Science 01, Computer, EVS, Phy.Education:05	02 lab assistants 04 peon 02 official staff
Primary	Boys 336 Girls 250 Total 586	Male 7 Female 10 Total: 17	The teachers teach all subjects	Peon 04 Office staff 02
Pre Primary	Boys 32 Girls 28 Total:60	Male 00 Female 02 Total:02		Care taker 02

According to the data given in Table 3, the teacher-pupil ratio in both secondary and senior secondary level is approximately 1:20, 1:25 for upper primary, 1:34 for primary, and 1:30 for Pre- primary. During the study the observers felt that, the teacher-pupil ratio is higher, at all levels except the upper primary.

The school receives Rs. 2500/- as an annual grant for various environmental activities to be conducted by the Eco club, from the Ministry of Environment and Forests. The school mentions

that the grant has been received since 2006. During 2015, it amounted to Rs. 25000/- . The school claims to have conducted the following activities. The details, duration and the funds (received and consumed) for each of the activities shared by the school authorities are provided in Table 4.

Table no. 4 :-Sources of Funds & Expenditures

Year	Amount	Year	Activities conducted	Duration	No. of students involved (class/ Stage)	No. of teachers involved (subjects teaching)	Expenditure	Any award/ Accolades (Details)
2006	2,500/-	1000/ Lab fund	Celebration of World Water Day and World Environmental Day, Orientation workshop and Training	108 hrs. approx.	75	02	3500/-	NIL
2007	2500/-	NIL	Project: Dissolution of Traffic chaos, Observation of Environmental days	128 hrs approx.	125	05	2500/-	National Winner-Volvo Adventure Award at Sweden.
2008	2500/-	Nil	Project: No stagnation No Mosquitoes, Observation of Environmental Days	128 Hrs.	150-175	05	2500/-	National Winner Volvo Adventure Award at Sweden.
2009	2500/-	Nil	ECO quiz, Celebration of Environmental Days, Preparation of School garden	108 hrs.	150	05	2500/-	Best Eco Club of the State (by CEE)

2010	2500/-	Nil	Community Awareness Programme: Street Play, Rallies, Waste management,	108 hrs.	50	01	2500/-	Best Eco Club of the State (By CEE)
2011	2500/-	Nil	Greenway of clean living, Kitchen garden concept at school	4 month (118 hrs)	50+20	04	2500/-	Paryavaranam -itra Award at cop-11.
2012	2500/-	Nil	Green Transport, Pledge for the life.	128 hrs	325 (ix to xii)	05	2500/-	Best Eco Club of the State, Global Winner of Your idea Your Initiative at Paris(France)
2013	2500/-	7,000/-	Biodiversity conservation based project at community: Each one teach one.	4 month	50	01	9500/-	Project Earth Award. Winner by Wipro
2014	2500/-	10000/-	Biological Removal of Water Hyacinth, Water management at school	6 month		02	12500/-	Best Eco Club of the State (by CEE)
2015	2500/-	10000/	• Making the perfect soak pit • From waste to Best	10 days	50	02	12500/-	Green city Award by

		-	<ul style="list-style-type: none"> • Water Testing Kits by Students • Making water purification device (“Earthian Pot”) 	4 week 3 month	20 50			earth Day Network.
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3.2.2 Analysis of the Green Aspects and Findings

School Building and Safety Aspects



Pic 1



Pic 2

Bharat Mata School is a pucca building made of concrete and located on the main road of the Railway Colony, Bilaspur. The school compound consists of three main blocks and a playground. Out of the three blocks two are of double storied (pic.1 & 2). The terrace of these two blocks had boundary walls. In the case of the third block, the boundary wall existed only on two sides. All the hinges and bolts of the doors and windows were in the working condition. It was observed that many window panes were broken and the retrofitting/repair work was not managed very well. According to the Principal of the school, the present infrastructure condition is due to lack of funds. The school has a library, however, it lacks adequate space and furniture for students to sit comfortably and read. The size of the library was also found to be inappropriate keeping in view the strength of students. The library also lacked other basic infrastructures (like space for keeping books and other reading materials). In addition, the library

room was poorly ventilated and had very little natural light. To us, it appeared more like a storeroom. It was also observed that, books and other reading material were kept inside iron trunks.

2. BaLA and its use in Teaching Learning

Teachers and staff were not familiar with the concept of the Building as Learning Aid neither the walls nor of the classrooms, corridors and the display boards contained any meaningful learning material for children.

On being asked, the students and the teachers shared, “Kyon Ki school double shift mein chalta hai and the students from the afternoon shift were not very responsible, therefore the display and the decoration, if any done by their students was often found damaged.”

Although, during the FGD with students, some students were apprehensive for the involvement of some students from the English medium school might in destructive/dilapidation activities. However, during the period of our observation, we did not find any such activity of indiscipline by the children from either of the shifts.

3. Provisions for Differently-abled

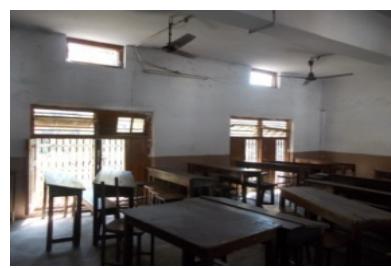
There were no infrastructure adaptations for the differently- abled as no such students were enrolled in the school. The Principal and even the staff could not provide any satisfactory reason for the same. They mentioned that there were no such children in the school.

4. Light and Ventilation:

In each of the classrooms there were three to four windows and one door. The doors of the classrooms opened in the corridors (pic.3). Two windows were on the opposite side of the door



Pic 3



Pic 4



Pic 5

and a third one on the same side of the door wall (pic.4). The height and size of the windows were appropriate according to the size of the classrooms.

The windows were covered with the wire mesh (pic.5) but few windows were found broken and unfixed. In place of broken window panes, wooden sheets were fixed. Consequently, natural light was blocked whenever the windows were closed. When inquired, the teachers tried to justify that glass panes are breakable whereas wooden sheets are durable. The classrooms with the open windows received natural light whereas those rooms where the windows were shut did not.

On being asked the reason as to why the windows were closed on the ground floor of one of the blocks (in spite of the weather being pleasant during the visit of the research team), the students informed, “to prevent the foul smell emanating from the garbage kept behind the block, we have closed the windows

In other classrooms, an adequate amount of light was available to the students sitting in the rows beside the open windows. However, students sitting in the middle and back rows received very less natural light (pic.7). The classrooms were painted in light colour but the walls were not so clean and appeared dull. Some of the blackboards were not in a good condition and matter, written by the teachers was hardly legible (pic.8). The poor visibility was also due to poor lighting.



Pic 6



Pic 7



Pic 8

Each classroom had two tube lights fixed on the walls with the doors and windows whereas the laboratories had four light points each containing a pair of tubes and the set placed in a hanging position as shown in the (pic.9). In a few classrooms only a tube light was found fixed on the top

of the blackboard. Any CFLs or LEDs were not installed in the school. All the tube lights fixed were of 40 watts each.

The ventilators, touching the roof in each room, were located right above the windows and the doors. They needed cleaning.

During the observation in winters, the classrooms were not so cold but according to the students, it was difficult to sit in the classrooms during the summer as the temperature used to cross 47 degrees Celsius. The ground floors, they said, were comfortable to sit during peak summer as direct sunlight was not entering into any of the rooms due to the high boundary walls behind the classrooms. There were four fans in each classroom (pic. 10) and all were in good working condition.



Pic 9



Pic 10

Noise

The school faced the **vehicle** noise partially because it was located on a main and busy road. However, the students seemed to be used to it and did not express many problems. The investigator was informed that the Eco club of the school took up a project in 2007 to address the traffic problem at the beginning and end of a shift time and also to find a solution of the parking problem. The school received recognition for this project and the school was given a Volvo Adventure Award in Sweden in 2007. However, the efforts did not seem to be sustained.

Storage Facilities and Seating Arrangement

In the classrooms, wooden shelves as shown in the picture existed; however, they were found empty everywhere (pic.11). On the contrary, the students mentioned the need for proper storage



Pic 11



Pic 12



Pic 13

facilities for their books or bags. The teachers were provided separate lockers placed in the corridors near the principal's office (pic.12, 13).

Children sat on wooden benches of varied sizes and at times we found them uncomfortable for different age groups/ need of the students. Some of the desks were too high for the short stature students. Some were meant for single seating, whereas others were designed for triple occupancy (pic.14). The middle students seated on the latter did face obstruction from her/his peers. There was no back support to the benches.

7. Toilets

There were three separate toilets, one each for girls, boys and the staff. The toilets were conveniently located for the students. In the toilets for students, some open chambers (pic.15) were constructed for urination. The senior girls said that they never used them and only younger children use them sometimes. The toilets were clean and a dustbin was kept in the girls' toilet (pic.17).



Pic 15



Pic 16

There was no soap or Dettol for hand wash. Four small open dustbins were kept inside the toilets (pic.18). The cleaner informed that all toilets were cleaned twice a day, once before the school starts and once after the lunchtime. The bolts were fixed at an appropriate level to help young children use them with a ease.



Pic 17



Pic 18

Water

The water supplied in school was obtained from a common tank meant for the railway colony. The teachers and the students opined that it was sufficient for all purposes; be it drinking, cleaning, watering plants (Pic.19) and for the toilets. The water from the community tank was stored in separate underground and overhead tanks. When enquired about the quality of this water, the principal was not aware that its quality had ever been checked, however, the Eco club in-charge provided us with a report. According to him the quality of water was checked using a water testing kit purchased/provided by the company Wipro and The school had won the ‘Wipro Earthian Pot’ award this year. The report showed a high amount of hardness ~480ppm (mg/litre) in all the samples tested and surprisingly, the school considered it fit for drinking. The report did not show



Pic 19



Pic 20

any other contamination. When asked for the reason for students bringing water in bottles from their homes, the principal replied that it was their choice and added that some parents did not consider the water quality fit for drinking. According to him, some students bring hot/cold water in their bottles from home. One support staff mentioned that he used to

clean the tank once in a month along with other helpers. The principal confirmed to his statement. The leakage of water from the tank was visible. On being probed, for the consumption of water in school per day/month, everyone (principal, staff and students) were completely oblivious about it. Further, when asked about the water bill, the Principal showed ignorance for the same and said they did not have any water bill. Mr Panu, the Eco-Club in charge and the Physics teacher, on further enquiry, sent us a manually calculated report of the water consumption, which had anomalies, as it did not seem to be prepared on a scientific database. The school made no initiative with regard to rainwater harvesting so far. When enquired about any projects on water safety and conservation, etc. being carried out by the students, the physics teacher shared that only the Eco-Club students carried out such projects. Those mentioned by him were-

- **2008-** Five Students from the Eco-Club cleared the clogged drain at the entrance of the school by removing garbage and stagnant water to prevent the growth/ breeding of mosquitoes. The project received the first prize at the National level under Volvo Adventure Project 2008.
- **2010-** Distribution of the strips (a single strip cost Rs. 25/-) from water testing kit among villagers and testing their water samples for the pH value. Fifty students from the Eco-Club were involved. The school claimed that it spent an amount of Rs. 9,250/- and approximately 125 hrs during the project (three months).
- **2011-Making of Soak Pit-** Mr Panu worked in collaboration with an NGO-'Rain Catcher', which had expertise in creating soak pits. Five to six Eco-Club students worked for a day and created a soak pit in a pool of stagnant rainwater by using waste material under the supervision of Mr Rajendra Singh, a renowned water conservationist and Magsaysay award winner. The total cost occurred for making the soak pit was Rs. 200/- only.

- **2012- Water Disinfection Apparatus-** The Eco-Club in-charge assembled an apparatus, which used an ultraviolet (UV) lamp for disinfecting water. According to him, it costs Rs. 800/- and could be run on electricity from three different sources: 220V, AC domestic supply, 12 V Car battery or cycle dynamos. He claimed that the Water Disinfection Apparatus was particularly useful in rural areas.
- **2014- Biological removal of Water Hyacinth:** The Eco-Club of the school, with the help of a local biologist, dropped a **Weevil Neochetina Eichhornia** into a check dam (pic.21) filled with water hyacinth. They claimed that the dam was free from the weevil (pic.22) in two months. The school documented the entire process of the project and submitted for the World Environment Day Contest. The project was awarded the regional winner for the innovative project under Programme Earth 2011.



Pic 21



Pic 22



Pic 23

To the research team, the students and the Eco-Club in-charge informed that they also put the weevil in a section of river Area near the school, as well, during Nov-Dec 2015. However, on accompanying the students at the site the team found that it was still full of the weed and only a small patch of water could be seen (pic.23). The students informed that they were monitoring the process and would send the progress to the team. On enquiring that if the school obtained any permission from the city/district authorities to add the weevil in the public water bodies, Mr Panu informed that they did not do so.

During the focus group interaction with the students on the nature of projects and feasibility in terms of time and energy for their involvement in different projects, the students shared that only Panu Sir guided and motivated them.

According to the students, “All the projects are suggested by Panu Sir only.” Some class VII children for a project on source of water in school shared that, “Panu sir provided all information. He told them that water was supplied from the railway tank. He also told the number of water taps installed in the school. Further, he explained them the process of water supply with a diagram drawn on blackboard. They simply noted the information (57 water taps and lay out of the water pipeline) in their notebooks.”

When we asked about the water consumption, they told us that once, the tank once was filled, and it lasted for two days. After every two days it was required to fill the tank again. Mr. Panu told that the Eco club students (class X and XI) checked the pH of the water for hardness using the Wipro Kit. However, it was found that the students were only performing as per the instructions mentioned on the kit, but were not aware of the science/chemistry behind. The Eco club in-charge said that the activity requires them to carry out the procedure only and not understand the chemistry behind.

Electricity

As mentioned earlier, each classroom had two tube lights whereas the labs had four sets with each set containing two tube lights. Each tube light was of 40-watt power. When asked about the replacement of a fused/broken tube light with CFL/LED, the staff said that were replaced with only tube lights only. On being asked that when students go out of the school for games and other activities, did they turn off the lights and fans, Principal replied that students did not turn off the lights as they are not supposed to touch the light points. However, sometimes if the peons remembered to switch them off then they did otherwise those remained on. The school had two centralised switch points (pic.24, 25) which were located in the corridor. Each switchboard was connected



Pic 24



Pic 25

with two tube lights and four fans of the classrooms. There were centralised light points in the school. The authorities justified their action that it helped avoid breakage/mischief by the students.

When asked about the electricity consumed in the school, it was informed that it amounts to Rs. 1.45-1.5 lakh (approx.) annually. However, the copy of the bill was not shared. The school had not conducted any activity/project on electricity consumption or conservation and the students affirmed it.

10. CLEANLINESS AND WASTE MANAGEMENT

Cleanliness in and around the school

The school compound and playground of the school was clean and litter free (pic.26). However, the same was not observed in the surroundings of the school. The entry had an open drain (pic.27) and it was clogged with dirty water. It appeared to be a potential site for mosquito breeding, although the sweeper told that she cleaned the nullah (drain) regularly.

Towards the end of the passage of the boys' cycle parking area the garbage was found dumped (pic.27&28). Children had to shut the windows in the adjacent classrooms due to the foul smell. The corridor and the classroom floors were very clean. The students informed that the school and all the classrooms were cleaned by the support staff twice every day, once in the morning and later before the afternoon shift commenced. However, we did not witness this during the days of our visit and neither did we observe students from any of the shifts littering around. Observing the hanging cobwebs (pic.29) on the walls, roofs and even on the ventilators, one could easily conclude that they were not cleaned frequently. The students shared that they cleaned the school only on some occasional days like Gandhi Jayanti, Republic day, etc.



Pic 26



Pic 27



Pic 28

The plaster of some classroom walls was broken. One could see graffiti in abundance on the walls and the furniture. The students and the teachers again accused the Hindi medium children of the same. Only three dustbins (pic.30) were kept in the corridors and none existed in the classrooms. Moreover, the dustbins were made up of iron mesh and only dry waste could be put into them. Some of the dustbins were broken at the bottom. No segregation of waste was carried out. According to the senior students, the waste collected was thrown in the big dustbin (pic.31) placed opposite and outside the school premises by the municipality, and it was burnt and destroyed. The cleaner also affirmed to this, but added that sometimes the municipality collected the garbage.



Pic 29



Pic 30



Pic 31



Pic 32

The students described some projects on waste management taken up by them.

- **2012-50** eco-club students surveyed about 100 households and collected data (pic.32) for their waste disposal habits and advised them to use two separate dustbins for the biodegradable and non-biodegradable waste. They spent 108 hours on this project. Because of this initiative the school was awarded Best Eco Club of the State by CEE.

Eco-Club students informed that they are doing the waste management project at their respective homes, by helping their mothers segregate biodegradable and non-degradable waste and by maintaining a kitchen garden at home.



Pic 33

One of the students said, “I am doing the project on compost at Panu sir’s house. I do it after school hours. Sir has made four compost pits at his home in four months with the help of cattle dung and earthworms.”

i) 2014 –A clean way of living a Green Life- Around 20- 25 students of the school organised a campaign for a period of four months through rallies, drama and competitions in the community to create awareness against the use of poly bags and for doing plantation in the nearby area. They collected 267 kg of plastic and polyethene waste from the school and the neighborhood till date. They were able to do plantation in an area of 138.04 Sq. meters in the school. The initiative won them the ‘Paryavran Mitra’ award at COP 11.

http://www.ceeindia.org/cee/ceenario_archive/ceenario57-new.html

ii) 2015- About 20 students from the secondary and senior secondary classes made paper bags from old newspapers and distributed them among the shopkeepers in the neighborhood. After supplying the paper bags for three to four months, they convinced 17 shopkeepers to become polyethylene free shop.

iii) 2015- A part of the drive launched under ParyavaranMitra project of the CEE, the eco club students participated for cleaning the area at Bilaspur railway station (Pic.33). The eco club in-charge led the students of Bharat Mata School. Although the school claimed, the project continued for about four months but the students confirmed that they contributed in the project work for few days only. The efforts of the school need to be appreciated. However, it requires being mentioned that the research team did not find the spot litter free as claimed during the visit (Pic.34).

Students and the staff shared that around 25-30 students from the school participated in a fashion show (Pic.35) organised by the Indian Youth for Climate Networking, in 2010, in which they wore dresses made from wastepaper.



Pic 34



Pic 35



Pic 36

Various evidence indicated that all these activities were a part of the projects/drives initiated by the CEE in which only a few students (maximum 50-60) from the eco club of the Bharat Mata School participated under the leadership of Mr. Panu, being the in charge of the club.

Plantation

Most of the area in the school was concretized, only a small portion of the total compound was developed as a school garden. Although the school claimed to have done projects for maintaining the school garden (Pic.36) and won the prestigious Volvo Adventure Award in 2011, the efforts done after winning the award were not found to be sustainable. Picture 37 shows the condition of the school garden at the time when the school won the award and when the research team visited the school.

The school had only two trees on the entire campus. Although, the Eco club students planted saplings in the school on Van Mahotsav Day, every year, post plantation, no adequate care seemed to be given to the saplings. The areas where the saplings were planted were full of weeds and bushes (pic.38).



Pic 37



Pic 38



Pic 39

According to one of the class VIII eco club student, “We planted saplings in the name of our grandparents who are no more now and time to time students were told to measure the growth of those plants and maintain them. The project report submitted for the Volvo Award 2011 reveals the mention of three compost pits in the school campus; however, no such pits existed at the time of visit to the school. On enquiring about it, the students informed that the compost pits did not exist in the school but they had created at their places.

Common Places

- **Play and Socialisation: School Assembly**

The Bharat Mata School had a large assembly area (pic.39). However, the investigator did not see any assembly going on during the days of the visit. On being inquired, the Principal, staff and students informed that the assembly was not held during the examination time. Further, they mentioned that every day it took place from 7 to 7:30am wherein during the first ten minutes; students sang prayers followed by a twenty minute drill of physical exercise. There was not much variation from this routine activity.

On being probed for any festival celebrations, the students told that only Christmas celebrations were carried out every year and one of their teachers disguised as Santa Claus distributed chocolates and cakes among the students. There was no role of parents/community in the festival celebrations. They also informed that they also celebrated the Van Mahotshav day and did plantation in the school.

The children used to take their lunch in the assembly compound and playground. Since the floors at both of these places were cemented it could hamper/hurt children during free play. Some part of the playground was occupied by the cycles (pic.40) of the students. On the basketball court (pic.41), construction material was kept. The teachers justified that on account of the examination going on students did not use the basketball court, hence the material was kept there. Students mentioned that they play the basketball, badminton, football, etc. in the playground, although no specific badminton or football courts were available. The students mentioned the absence of any games periods. However, the timetable reflected one period for games per class per week. The school hours need to be increased, but the double shift makes it difficult. It was only during the recess time (20 min) that the students were able to engage in some socialization. This was restricted due to the absence of any sheds/shady trees in the school campus especially during summers and the monsoons when going out would have been difficult.



Pic 40



Pic 41



Pic 42

- **Mid-day Meal**

The middle and the higher secondary section were governed by a private management, therefore, were not covered under the Central/State Govt.'s MDM scheme. However, the junior school, situated nearby was a government aided one; so, MDM was served to primary children from the Central/State funds. For the senior students, a canteen existed in the school, which had remained closed for a few years. A majority of the students from the middle and the higher classes used to bring their own lunch from home. When asked, how they managed if they didn't bring the lunch boxes, the students informed that, in such cases, they shared the food with friends.



Pic 43



Pic 44

A central kitchen of Bilaspur served MDM to the primary students. At the ring of the bell, students from classes I to V were allowed to go out and were provided MDM in a sequential order. Each student picked up a plate and stood in the queue to take his/her share. The research team observed three helpers distributing dal, rice and vegetable (pic.44). Neither soap was provided nor any of the students washed hands before taking meals. They were not even asked to do so. The helpers too did not wear any apron or headgear as per the MDM norms. No durries/mattress were laid to enable children sit and enjoy the meals. Some students were eating food brought from home (pic.45).On asking, they said that they did not like the meal (MDM) provided. The helpers provided one or two scoops of dal and rice as per a child's requirement; giving a lesser amount to the younger children. They mentioned that the students did get a helping if they wished so, but none of the students were observed doing so. After finishing, the students washed their dishes themselves (pic.46).

Regarding health check up, the Principal informed that there was no such facility in the school. No health cards of the students were observed in the school.



Pic 45



Pic 46



Pic 47

Physical and Emotional Safety

Since the school terrace did not have proper boundary walls children were not allowed to go to the terrace, but at the same time, the entry to the terrace was not locked. There were two staircases in the school, but keeping in view the strength of the children the width of the steps should have been more to allow safe passage of children during peak hours, i.e. recess and when the school begins and it is over. Regarding any



Pic 48

disaster management, no display of any evacuation plan, and awareness about any emergencies/ first aid was observed on the school walls and the display boards. No mock drills for the emergency/disaster management for the school children were ever conducted by the authorities and the Principal also confirmed it. He mentioned that subject teachers were providing such awareness wherever the related information is given in their textbooks. The first aid kit was with a teacher and it contained only Savlon, Dettol, some painkillers, and bandage only. Students admitted subjecting to punishment that included both verbal and physical. They said that the Principal and the teachers sometimes hit them with a stick, slapped and gave them other punishment such as holding the ears, turning out of the classroom. Sometimes the school even suspended the mischievous children. The investigator observed a few students made to hold their ears and stand outside the classroom (pic.47).

Community Participation

The CEE organised various activities in the State of Chhattisgarh, for making the community more aware of the environmental issues. The Bharat Mata School participated actively such programmes. Some of the programmes the students from the school are given in brief below;

- **World Earth Day-** The school has organised a series of activities on the Earth Day like painting competition (pic.48&49). A total of 145 students from various schools participated in the competition. This was followed by a sticker campaign at Nehru Chowk where the paintings were displayed. On 21 April 2015, the team conducted a cycle rally with 20 members travelling for 32 KM over 6 hours to provide awareness about the importance of cycling. On the 22nd of April, the team did a door-to-door campaign and interacted with people explaining the importance of earth day.



Pic 49



Pic 50

- **Pledge for Life (Action Project for Biodiversity Conservation)-** The school organized a campaign ‘pledge for life’ to spread the awareness about the role and importance of safeguarding the biodiversity (pic.50). It was done in two phases. In the first phase the team members executed awareness programme by going to different schools. During the second phase, members spread awareness about the biodiversity. As part of the campaign under World Earth day, Ozone day, etc., they covered the different districts of Chhattisgarh.



Pic 51

- **Culture & Heritage-** On the occasion of the festival of Diwali (October 2013), the Nature Bodies CEE, conducted a campaign: ‘Moving towards a Greener and Cleaner Festival’. The students made Rangolis and spread message on environment protection in different forms.

Van Mahotsava 2015-The school along with some neighboring schools of namely New Bal VidyaNiketan, Girls Middle School, Andhra Samaj School and Primary School Balrampur etc., was a part of the plantation campaign entitled, ‘One Tree For Your Own Life’ of Paryavaran Mitra. The participants from the school planted saplings at school, home or the surroundings.

Earth Hour 2011- Five to six Eco club students of the school participated in the 27 km cycle rally (pic.52) and in a trekking program in the valley of Amarkantak, Madhya Pradesh, India in an event organised by the CEE.



Pic 52



Pic 53

Teaching Learning under ESD

The interaction with different stakeholders in the school and the timetable reflected that the school worked for six days a week with Saturday as a half day. On the first five days, the school worked for 4 hrs 20 minutes (approx.) whereas on Saturday it is scheduled from 11 am to 2 pm (3 hrs.). When enquired about assembly time, the students informed that it was conducted between 7.15 am to 7.30 am and the first period of the school starts at 7.30 am. Each period was of 40 minutes duration. As per the timetable, one period to teach Environmental Studies (EVS) as a separate subject from 6 to 12 was mandatory. All the five science teachers from upper primary to senior secondary level were allotted an EVS period and the school prescribed separate textbooks for this subject. The evidence of the students’ work/projects, interaction with teachers and students revealed that mostly it was a teacher-dominated activity using chalk and blackboard and which was true for teaching other subjects. Only the Eco-Club in charge involved selected students (50-60) in different activities of the club organised in and beyond the school. The awards won and the entries submitted on behalf of the school for different contests from time to time were for the projects done with/by him only. The teachers’ interview also revealed the same, as the science teachers were found neither aware nor very keen to work for field-based projects.

They shared hesitatingly, “It was a time taking activity and we need to devote time even after school hours. Since the household duties also occupy and leave little spare time for such field-based activities, therefore, we

restrict ourselves to the subject teaching in the classrooms. Only Mr. Panu organised/participated in all such events and we are neither asked nor do we volunteer for any such events.”

The principal, students and the staff admitted that it was impossible to pursue the work without Mr. Panu. The dependence appeared to be so obvious that when the research team was invited for data collection, then Mr. Panu was to go for some urgent work. He delayed it by a day so that the team could be briefed about the Eco club activities of the school and claimed that no one else could have done the job in his absence.

An important observation was that only a few students (50-60 only from all classes at 6 -12) were part of the Eco club who took part in various activities related to it. Surprisingly, all students of the eco club were not taught EVS by Mr. Panu. A deeper enquiry into the criteria for selecting students for the Eco club revealed that Mr. Panu and other teacher involved mainly bright students who could contribute to a field based activities in addition to managing the studies. The eco club students shared that they willingly participated in different events/activities organised in the city by the environmental agencies along with their in-charge teacher. The parents also do not object and most of the time these are organised at the weekends or during vacations. On being probed about the non-participation of the rest of the students, the Eco club students mentioned that others did not take interest as they considered other curricular areas more important. When asked about as to how they knew that the projects were eco-friendly, they mentioned that Panu sir explained to them. Also, they informed that the projects carry 40 marks and 10% of these marks were added to their final result. However, the same could not be confirmed from the achievement/learning progress mentioned in the report cards.

Further, students' participation in different Eco projects at the school level or those sponsored by the Centre for Environmental Education (CEE) or any other agencies was arranged by the Eco club in-charge who was the coordinator of the Eco club from the Bharat Mata School. In some of the projects, the students worked at his residence. Some students shared that;

“We made an aquarium with the help of the Panu sir at his home because if kept in the school, second shift students would have damaged it. They are not supportive. They make the classrooms very dirty. *Unhone benches per bhi likh likh karkharab kiya hai.*” Another student shared, “we enjoy the field based projects allotted by Panu Sir. Other teachers give projects for the writing work only.”

The principal also did not mention involving other teachers. He himself did not have much idea about the work done during the previous years as he joined the school recently. He said that he relied completely on Mr. Panu and goes by his advice. The students did not have adequate access to additional/supplementary reference reading material. The library did not have the appropriate and adequate infrastructure to allow students to sit and read anything. It appeared more like a storeroom where books, magazines and other material such as banners, etc., were kept packed in trunks or locked in the almirahs. No catalogue or display of the books was observed in the library.

On asking as to what they think of their school being eco-friendly, the students replied that it was not an eco-friendly school. They came out with the following suggestions to make their school greener.

- The school garden should be maintained well and students should be involved in it.
- There is a strong need to make students aware of the role of students in maintaining the school garden.
- Large space in the school should be there.
- A large area of the school floor is cemented so because of that, they are not able to plant many trees on the school campus.
- Benches should be placed in the proper manner.
- There is a leakage problem on the rooftop.
- CCTVs should be there in the classrooms.

What kind of challenges have you faced? Students shared that community participation is not there in the school activities.

Syllabus Analysis

The science teachers who also taught EVS affirmed to this and they said, “there are environmental chapters which can be clubbed with science. Some topics can be merged with physics, chemistry or biology. EVS should not be a separate subject, as students do not take it seriously, because even for board exam EVS, Computers, General Knowledge and Drawing are supplementary subjects. Final grades are not dependent on them.”

Another teacher said, “I am teaching EVS to commerce stream students. I find that students take less interest in the EVS because all the issues are related to the science.”

However, on being probed for the difference between EVS and Science, the teachers did not have much idea. According to one teacher, “In EVS practical are more important than theory.” The teachers shared that only a few students, who took an interest, were involved in the Eco club activities. When asked why the eco projects were conducted only with the senior students, the Principal and the Eco club in-charge responded that mainly Secondary and Sr. Sec. students were involved and mentioned it was difficult and beyond the understanding of younger students, especially for the primary and upper primary students.

On being asked about the collaboration with the parents, the teachers and the principal shared that parents did not have many roles in different school activities. They did not take the interest in school activities as mostly they are from business backgrounds. The teachers mentioned that a challenge for the non-participation of students in different activities was their weak English, though the school instructed the teachers to communicate/ teach only in English.

Regarding the Eco-Club activities, the teachers recalled that the Eco-Club activities were being carried out since 2000. On the contrary, Mr. Panu mentioned that it was started from 2006 and also shared the list of activities along with the reports. The teacher shared that only Mr. Panu was involved in the eco-club projects, whereas all the other science teachers were supposed to help with the organisation of the school science exhibition and other curricular experiments in the laboratories.

They expressed their inability to carry out field activities because of the paucity of time due to the double shift of the school. They mentioned that the duration of the school and even the time period allotted for handling classes were not sufficient to do any other field based activities outside the classroom. The teachers also said that since regular classes were held for six days a week, it was very difficult to devote additional time on the weekends. On probing that how Mr. Panu managed to spare time for such activities, they shared that he was doing most of the projects at his residence/place.

Case study 2

Case Study of Govt. Sr. Sec. School, Hee-Yangthang, West Sikkim

General Profile of the School

The Govt. Sr. Sec. School, Hee-Yangthang is situated in the lap of Shangri-La Range in 03 Maneybong Dentam Constituency, Gyalshing, West Sikkim, which is in the far western flank of Sikkim. The name of the school is adopted from the name of the village which is Hee Yangthang. The word ‘Hee’ means ‘flat’, ‘Ang’ means ‘came around’ and ‘Thang’ means ‘fertile land’. Many people in the society remember Lt. R. B. Subba for the establishment of Hee-Yangthang School. With the strong support of other senior citizens of this locality, they formed the School Committee/Governing body and set up the school in 1938 which was over by the Government of Sikkim in 1941 and was then upgraded from class III to class VIII and in 1969 it was further upgraded to Secondary and to Senior Secondary level in 1991.

The school occupies an area of about more than five acres (1.5700 Hectares) and is situated in the heart of Hee Gaon. There are 824 children enrolled in the school out of which girls are more in number i.e. 423 whereas the boys are 401. School timing is 9.15 AM to 3.45 PM. There are 26 classrooms, 3 labs (separate for physics, chemistry and biology for the senior secondary students and the secondary students also use the same lab). Following are the details of the teaching and the non teaching staff employed in the school.

Table 5:-Details of Teachers

Sl. No.	Post Held	Number of teachers
1.	Primary Teacher	12
2.	Graduate Teacher	13
3.	Post Graduate Teacher	14
4.	Vocational & computer IT teachers	08
5.	Non teaching staff	10
6.	Support staff	06
TOTAL		63

The teacher pupil ratio in Sr. secondary, secondary and primary is 1:38, 1:20 and 1:4 respectively.

Sl.No	Name of Award	Award Details	Photograph
1.	State green school award 2015 under green school programme	Organized by Envis sikkim, Bagged second position in 2015 Participating again for the second time.	
2.	Paryavaran Mitra Puruskar	“Paryavaran Mitra Puruskar” in 2016 organised by CEE under ministry of environment, forest and climate change, govt. Of India and the award were received by the school representatives at Ahmadabad, Gujarat.	
3.	Successful community involvement in school development	Best performing school in “successful community involvement in school development” during the 69 th constituency level independence day celebration 2015.	

Analysis of the Green Aspects and Findings

School Building and Safety Aspects

Being in a hilly terrain one side of the school was on the higher platform (pic.53) and the other side had a deep slope. The road towards the entrance to the school was the very uneven and had a deep slope on one side (pic.54). It appeared very unsafe for the students and required construction of the hand rails. The school had a pucca building made of concrete. The school had four blocks forming a rectangle shape to the building with a compound in between. Two blocks were double storied and well constructed as compared to the other two. The compound was used for school assembly (pic.55). One of these had a basement and the terrace of this block was left open for further construction. This side faced the open sloppy end of the hill and was unsafe for the



pic 54



pic 55

students as there was no boundary wall on the side. The terrace of this block had uncut iron rods (pic.56) and the width of the staircases was appropriate but hand rails were missing. The Principal informed that some community member have contributed to the school infrastructure. On inquiring about the building being



pic 56

earthquake resistant as the area is highly earthquake prone, the principal and the teachers informed that the school did not suffer any damage during mild shocks and also no damage even during the major earthquake that occurred in Sikkim (**year---**). The study team also experienced earthquake tremors thrice during the stay at Hee-Yangthang. The school is a two storey building



pic 57

having enough open space. As it is situated on hill slop, a major earthquake may adversely affect it. During mild earthquake, the students easily come out of the classrooms in the open space. However, the students from the rooms of second level may not reach the open space easily and promptly. There might be some causality during evacuation. The building is very old. There was no display of any evacuation plan or written instruction to deal with emergency in case of any natural calamity or fire. Two flyovers were constructed with thin help that provided additional escape routes during earthquake or any such emergency. The canteen is situated outside the school premise. The team did not notice any first aid room in the school. However, students said that the science teacher provides first aid if required. Principal informed that disaster management people had come to school to guide the students to orient them for dealing with any emergency situations. Overall, it was noticed that there is a need for taking some safety initiatives by the school.

BaLA and its use in Teaching Learning

There were slogans written on the walls or building related to the moral values and environmental concerns for awareness purpose. Although the slogans were related to different topics like cleanliness (pic.57) for example ‘Clean India means shining Indians’, ‘Change the way the world see us by cleaning the surroundings’, ‘Cleanliness is the next to Godliness’ etc. However the concept of the Building as Learning Aid (BaLA) was not used in the school. Neither the teachers nor the Principal were aware of this. Besides this no part of the building was used for learning in any ways.



Pic 58



Pic 59

Retrofitting/ Repair work

It was observed that few window panes were broken. The lower part of the window panes were covered with green colour (pic.59). Electrical points of the classrooms were in working condition. Windows panes of some windows were broken. However, Hinges/bolts were found in working condition.



pic 60

Differently-abled Children in the School

It was informed that the school had only one differently-abled student in the 12th class. The student had some problem in his legs, but he walks by himself without any external aid. The Principal and the SMC members informed that they did not have any other child with disability in their locality. They owed it to the good climatic conditions of that area. But they said that more differently-abled children can be found in other schools. The principal said that the building can accommodate children with special needs however, no special facilities such as ramps, drinking water, lab, toilets, furniture etc. for the differently-abled students were visible

Cleanliness and Maintenance of School Compound

The school campus was neat and clean and it was free from the litter. The classrooms (pic.76) were also clean. The senior students during discussion said that even the young children did not throw waste material here and there. In case, anyone does, other students picked up it and put it in the waste bin. Students said in discussion that they helped Safai Karamcharis in cleaning the school campus during the SUPW periods. The school playground towards down side (pic.61) was little far from the school campus. But it could be seen from the terrace of one blocks of the school building. It also appeared to be clean. The SMC members informed that the NSS/NCC students were involved in ‘Shramdaan’ activities conducted in the school. Other students also sometimes helped them in cleaning activities.



pic 61



pic 62



Pic 63

Lights (Natural and Artificial)

Most of the classrooms did not have sufficient natural light (pic.62). Most of the classroom had two windows and one door. The window panes were very old and were not very clean. Lower portion of the window panes were green coloured

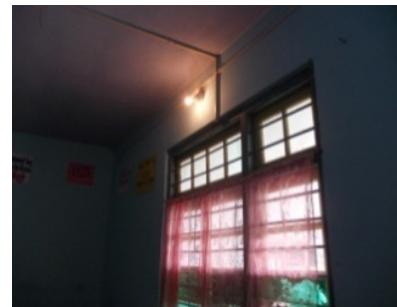
because of which partly stopped natural light to enter into the classrooms (pic.63). In some rooms the students decorated Some classrooms had windows covered with the curtains (pic.64) which the students brought from their homes Students said that this made them feel homely in the classrooms. The classrooms had CFL light (pic.65) but of low intensity. The Principal and the students admitted that the light was not adequate in the classrooms.



Pic 64



Pic 65



Pic 66

Ventilation/ Cross Ventilation

All the rooms in the school had one door, and mostly two windows on its opposite sides with attached ventilators (pic.66). Ventilators were observed the opposite side the windows of window in some classrooms. There appeared to be no problem of cross ventilation as the school was situated in pure natural climate.



Pic 67

Cleanliness of Classrooms

The classrooms were found to be clean and tidy (pic.67). Students informed that they cleaned their classrooms themselves and for this purpose they follow a cleaning schedule. When asked, the SMC members mentioned that even the parents did not have any objections to it. On the contrary, they opined that it is matter of pride and helps inculcate the habit of cleanliness among the children. The school building was very old and in some places, the plaster was broken (pic.68). But all efforts were done by the school management to maintain it. The classrooms were painted in



Pic 68



Pic 69

different colours which was as per the choice of the students in consultation with the class teacher (pic.69), students and the principal said that each student contributed Rs. 10/- for the whitewash of the classrooms voluntarily and this helped develop ownership among them. Dustbins were kept in the corridors and not in the classrooms. The rooms were clean which indicated that the students were in the habit of keeping their place clean (pic.70, 71). Students and the staff affirmed that they took care of the school property and did not indulge in any dilapidation. Student told us that they did not write on the benches. Most of the classrooms were well decorated with charts, pictures and slogans. The decoration of the classrooms was primarily done by the students. The Principal informed that, the teachers cleaned their toilets themselves too. Teachers contributed some amount on yearly basis for buying toilet cleaning materials.



Pic 70



Pic 71



Pic 72

Optimum Temperature

The climate of Sikkim remains cold/ pleasant throughout the year. The back side of one of the school's blocks had sloppy terrain. One side of some rooms was by the side of the hillock, which blocked the entry of the sunlight in the rooms and the rooms were cold during winters. The school was surrounded with lots of greenery (pic.72). The children were well adapted to the local climatic conditions.



pic 73

Noise free environment

The school was situated on the slope of a hill surrounded by natural vegetation and cardamom plantation and was far away from the main road. The overall environment of the school was calm, quite and noise free.

Seating Arrangement

The classrooms had wooden benches (pic.73) and desks, suited to the cold climate condition of the area. However, some plastic chairs were provided in the pre-primary classrooms (pic.74). The benches and desks for the primary and secondary/senior secondary students were of the same size and the furniture was old therefore it appeared that the primary students were slightly uncomfortable (pic.75, 76).

The benches either did not have any back support nor had support of iron road. Some classrooms were of small size and therefore were crowded. The furniture placed in these rooms restricted the movements of students.



pic 74



pic 75



pic 76



pic 77

Storage Facilities

There were no storage facilities for the students/ teachers in the classrooms. However, the labs and the staffroom had cupboards. Only the pre-primary and class I had a wooden cupboards for keeping the books of children (pic.77). Some almirahs existed in the staff room but whether individual teacher had such facility was doubtful.



pic 78

Common Space

(a) Corridors/ Verandah

The corridors/ verandah were very neat and clean and free from litter. However graffiti was apparent on the classroom and corridors walls and furniture. The walls of the verandah were used



pic 79

to display messages/quotes related to cleanliness, environment conservation and thoughts of great persons (pic.78). The verandah was decorated with flowerpots. (pic.79)

(b)Play ground

The school playground (pic.80) was little far from the school. The ground had a boundary of sticks but had it was uneven and needed to be smoothened to allow the children to enjoy free play without injury on falling. It was used mainly for playing by the students of higher classes only. The students of the primary classes were using the pucca assembly ground surrounded by school blocks as playground. Students informed that facility for playing football, badminton, volleyball, table tennis, chess etc. was available in the school.



pic 80



pic 81



pic 82



pic 83



pic 84

(c)Toilets

There were separate toilets, one each for girls and boys in the school. The girls' toilet existed within the school block but the boys' toilet was located on the periphery with entrance facing the outer side. The Principal and teachers informed that the boys' toilet was constructed with the fund provided under RMSA scheme (pic.82). It was not constructed properly as per the amount spent, but the Principal shared that the construction work was expensive due to the difficult terrain. There were no proper water facility (pic.83). Although water was available in the toilets; there was no flush facility in the toilets (pic.84). Students used water from a bucket using a mug, kept in the toilet (pic.84). Washbasins were fixed outside the toilet. The condition of girls' toilet was better than that of the boys' toilet. Soaps were available in toilets (pic. 85). However, dustbins were not available in toilets.

One of the SMC member expressed that the school needed more toilets as the strength of students was gradually increasing.



pic 85



pic 86



pic 87

Water Sources and its Management

The natural water coming out of hills and rocks through streams and springs was stored in three large tanks (pic.87) and used for drinking and all other purposes. The school did not pay any water bill as they stored the flowing rainwater in the overhead tanks which met the water requirement of the school through pipelines and taps. The water tanks were covered and the Principal informed that the tanks were cleaned periodically. He also informed that quantity of water was adequate for drinking and various other purposes including irrigation in the school garden. The students during FGD shared that each child and the community members contributed towards construction of the tanks. An open cemented water tank was placed (pic.88) on the ground which was filled with extra water overflowing from the covered main storage tanks situated at a higher level. Water of this tank was used for drip irrigation in the cardamom garden, kitchen garden and the herbal garden (pic. 89). A green house maintained in the school. During visit, no leakage of water was found through pipes or taps. The rain water was also collected in this tank through a pipe. The waste water from the kitchen and the toilets which contained detergent and soap was not under recycling process. Enough water was available of for the garden,



pic 87



pic 88



pic 89



pic 90

kitchen, and toilets. Water taps were observed to be properly closed (pic.90).

Some projects that were running in the school-

- Grey water management**

To reuse the grey water for irrigation purpose a Grey Water Treatment System was set up by the school (pic.91). The treatment cum-filtration unit consisted of layers of gravel, sand, mud, charcoal and brick pieces and pebbles. To cleanse the water of soapy matter aquatic plants were planted. The grey water was treated into a usable form as it passed through the sedimentation tanks, filtration and treatment tanks.



pic 92



pic 93



pic 94

- The Green House and Drip Irrigation**

The school had taken some initiatives to grow organic vegetables within the school premises for self reliance for the past few years. To grow organic vegetables in the school a green house was constructed. The school cultivated organic vegetables inside this Green House, perennially (pic.93). The vegetables grown in the green house were being used in the preparation of Mid Day Meal and Hostel Meals.

Protection of water source

A nearby natural water source supplying water to almost all households in Hee school area was protected by the school with construction and maintenance of temple. The school constructed a temple with the help of community to protect the source.

Electricity

There appeared to be the regular supply of electricity in the school. All rooms were fitted with CFL (pic.94), and bulbs. However, the bulbs were of low power due to which the light/ illumination in rooms was not sufficient (pic.95). Saving of electricity at this cost was, perhaps, not desirable. Judicious use of electricity like using it only when required



Pic.95

and switching off after use must be a preferable option. No such practice indicating over consumption of electricity was noticed in the school. However, it was noticed that in some rooms bulbs were not switched off when no one was there in the classrooms. Principal informed that the school took efforts to make the community aware of the importance and ways of conservation of electricity. For this purpose, groups of students and teachers made visits to village and talked with the people. Such visits were made on holidays.



Pic.96

- Energy Conservation**

School had implemented and decided on the following energy saving policy in the school:

An energetic and conscious group of students had formed an ‘Energy Watch Group’ which took their energy conserving policy to the community. They surveyed, collected information and created awareness. The school also organized awareness programme on conserving energy from time to time in the school.

- Energy Conserving Water Heating Mechanism**



pic 97

In order to use the heat energy dissipated from the firewood burnt in midday meal kitchen fireplace (pic.96)

the school devised a developed a simple water heating mechanism. An assembly of interconnected metal pipes was laid on the fireplace base. The water from the taps near the kitchen was supplied through the pipes spread around the chullah and it becomes hot whenever firewood is burnt to cook food. This warm water was used by children to wash hands and their dishes.

Waste Management

Some waste management practices shared by the school are following.

- Reuse of the waste bins**

The principal shared that he even asked children to bring waste boxes/canisters and these were used as pots for plantation. (pic.97).

- Composting facility**

School had developed an area for vermin-compost facility using earthworms. It was located behind the school auditorium. The waste was deposited into the pit was decomposed by earthworms and the manure thus prepared was used for flowers and saplings.

- Recycling and Reuse**

School had a paper recycling and reusing facility. The collected waste paper was converted into paper toys, decoration pieces, carpets (pic.115,116). The system was operated with the combined effort of the students and the expert teachers. The half used copies of the students were not thrown away; instead given to the students of the smaller grades so they could reuse it. With this recycling and reusing system



pic 98



pic 99



pic 100

the children were educated regarding the need and the importance of conserving nature and resources.

The school claimed of adopting a waste management system. A few large size dustbins were placed in the corridor (pic.100) and on the open terrace (pic.101), however no separate dustbins were used for the biodegradable and non-biodegradable material in the school. The staff used to segregate it into bio-degradable and non bio-degradable and dump it into separate corner, where separate pits for degradable (compost) and non biodegradable waste (pics.102, 103) were created. It was reported that some of the waste material (non-biodegradable) was being utilized by, students for making items like cushion and decoration pieces. It helped in the development of students' craft skills. Students during discussion informed that they made minimum use of the plastic bags. They were not found waste material in the classrooms or outside.

During discussion, they said that they kept the waste materials in their pockets or bags and throw it in dustbins later. When asked if young children of primary classes throw paper pieces or other waste here and there, students informed that sometimes they do but the senior or mature students picked it up and threw in dustbins or at proper places. The Principal -informed that the school also practiced vermin- composting.



pic 101



Pic 102



pic 103



pic 104

Plantation Activities

The school claimed the following activities under plantation.

- **Cardamom plantation:**

Cardamom is the major cash crop of Hee village. It serves as a major source of income which is generated by selling the sapling and ground fruits of cardamom. A huge segment of land, under the school property was left barren since many decades without any refund. With a view to uplift the economy of the school, the school planted more than 10000 (ten thousand) cardamom sapling in the unused land of the school. The income generated from cardamom cultivation will be used for various works in the school.



Pic 105



Pic 106



Pic 107



Pic 108

- **Herbal garden and orchids:**

The orchid farming and herbal garden on the wall was the another innovative concept and idea to sustain the environment and Biodiversity. A huge wall was constructed almost in every major institution and was being used just as a protection against soil erosion and landslides.

- **Bee keeping**

The school mentioned initiating a bee keeping (pic.70) activity which however, could not be sustained.

- **Mushroom cultivation**

The school also shared Mushroom culture being practiced in the school.

As school was situated on a hill surrounded with lots of greenery as it has utilized the available space on its back side on the slope, within the school premises, for the plantation of cardamom saplings (pic.108). The students and teachers informed that in recent years students brought cardamom saplings from their home for plantation in the school. Students and SMC members

said that parents had contributed the same happily. They also contributed manure for the school garden. The new saplings of cardamom were sold and the earning was used in different activities of the school. In addition to a green house the school had a kitchen and a herbal garden (pic.110) and botanical garden. The garden was divided in different houses (pic.109) and students took care of the plants allotted to their respective houses. Students and teachers were given the option to voluntarily work the cause during holidays weekends and holidays. The school also had eco club for the students of secondary and senior secondary classes. The school was full of flower pots placed in various places such as entrance, and verandah. The flower added to the beauty of the school. Principal informed that the forest department also supported to the green practices adopted by the school.



Pic 109



Pic 110



Pic 111

Common School (Activities: Assembly sessions)

Every Saturday golden assembly was conducted in which student took part in various activities like quiz competition poem recitation, painting, drama, and gardening. They took part in different activities according to their interest. The teacher said that the student engaged in themselves in craft activities during their free time. They also prepared some product at home (pic.112) and brought them to the school. They utilized waste materials for this purpose. The school conducted two assembly sessions in a day – one in the morning and one in the evening (after final bell). In addition to the routine opening it with Saraswati Vandna and ending



Pic 112



Pic 113

with the National Anthem, the school used the assembly time for special announcement and instructions. Sometimes evening attendance was also taken to check the presence of the students. The Golden Assembly had mainly the house activities where an SMC, PTA or Community member gave talks on a topic to enlighten the students on the social, moral and ethical values.

- **Midday Meal**

In view of governments scheme of Mid Day Meal the school provided Mid Day Meal to all students of elementary stage. The meal was cooked in the kitchen, built down the hill in the school premise (pic 113.). Kitchen in the fact was a hall (big room) where meal was cooked as well as served. Firewood is used for cooking the meal, which is not environment friendly. However, there was enough ventilation. The teacher said, that “firewood was used for cooking the meal because in the past no gas agency was available in the village. However, now a gas agency has come up and LPG would be used for cooking in near future”. Meal was being served to some students at the time of visit of the research team. Some long tables were available in the kitchen for the students to place their plates. There was no adequate space to arrange chairs or benches (pic.114). The lady cook and the teacher informed that the MDM was tasted by a teacher, before it was served to the students. The available students, who were taking meal in the kitchen, said that tasty meal is served to them. However they expressed that they would be very happy if food of their choice would be prepared like *Momos*. We observed that potatoes and rice were being served on the day of the visit however, the students and the cook cum helpers said that green vegetables, eggs, meat and sweet dish (kheer) were also served to students occasionally the students in general, appreciated the Midday Meal served. The plates and the spoons were provided by the school.

The students used to rinse their plates after eating which were then dipped in hot water and cleaned with soap.



pic 114



Pic 115



pic 116



pic 117

Another striking feature regarding Mid Day Meal was that the waste and left out food was given to a villager for feeding his four pigs. Fifty percent of the amount of selling the pigs was transferred to the school accounts. The principal informed that recently the school received Rs. 24,000/- from the sale of two pigs which were reared at the school.

When asked, about the School Health Programme, the principal informed that it was organised once a year. A register is maintained in the regard. It was informed that the students were also given Hepatitis B vaccine.

Though students and SMC members appeared satisfied with the MDM practices in the school, it was felt by the study team that there was scope for some improvement. The cooking place should have been separate from the dining hall. Use of firewood needed to be replaced by LPG. Availability of large space where large number of students could sit and enjoy MDM together was needed to order develop desirable values among students. There was a separate store for storing food grains. The rice was packed up in the jute bags. The containers to store food grains were not available. Some rice was also lying on the floor. The storage system of the food grain did not appear to be very safe and needed improvement. The cook informed that iodised salt was used for cooking the meal. During discussion it emerged that there was active participation of mothers and community in cooking and serving meal. During discussion the SMC members expressed their interest in the issues of MDM. They were satisfied with the MDM distribution in the school. However it was suggested that government should increase the quality/quantity of MDM per child. They were aware about the real state of affairs of MDM process in the school and the students were aware about these facilities.

As a matter of fact that whole activity and the process of MDM in the school could become a means to learn several things for the students. This aspect was discussed with the principal by the study team.



pic 118



pic 119

Community Participation

The community members had been involved in most of the school initiatives. The gap between the school and community had been bridged and there was free flow of information. The local community participated enthusiastically in all the school programmes. The innovative initiative and practices taken up by the school also significantly contributed in making the community a better place. This symbiotic relationship had strengthened the efforts of both the school and community. The school had a strong support from the SMC members. They were engaged and closely monitoring different activities of the school. It was evident from the fact that almost all the members were present in the school during the period of the field visit by the study team and they were quite appreciative and satisfied with the leadership of the Principal and the support of the staff.

• **Community Energy Watch Group**

Surveying and Collection of energy utilization report from community, collection of energy conservation practices in community, spreading awareness on energy management and conservation, educating the community on energy friendly techniques and motivating the community to conserve energy.



pic 120

• **Floriculture**

School maintained a green environment by keeping flowers of different varieties. Students are trained and imparted knowledge on floriculture and environment concerns.



pic 121

• **Environmental programmes and plantation**

School had been actively involved in spreading the awareness of environment and biodiversity conservation and other related activities effectively since many

decades. Further, the school had cultivated a tradition of always mixing a generous chunk of environmental awareness work in all programmes organized by it. The *International Tourism Day* celebrated by the school advocated the use of tumblers made from bamboo and leaves plates and a wide array of exhibits



pic 122

boasting of household items made from natural and organic matter. The Disaster Risk Reduction Day Programme in the school was beautified by an informative Power Point Presentation by B.D.O, Dentam highlighting waste management.

Environmental friendly practices and biodiversity protection

The school had developed and brought into action some innovative, environmentally friendly initiatives. The school had reduced the number of vehicles used by the students and staff of the school. The joy of walking was promoted and celebrated. Teachers coming to school from far places had been introduced to the idea and benefits of carpooling. Most of the students and teachers used to come to school on foot.

All the bulbs in the school had been replaced with CFLs and it was planned plan to replace the CFLs with LED in future.



pic 123



pic 124

Teaching Learning Aspects

One of the teachers said that they did not say to the students to prepare craft in the school. They informed us that the students did that in their free time which they get after SA-1. Social Useful Productive Works (SUPW) activities were the part of the examination. Students used to prepare their products at home and bring them to the school. Teachers considered the products as their project work, which students had to show to their respective subject teachers. Such activities helped them to teach them how to use the waste products and recycle. Teacher said that first; they used to ask to the students about their interest and then accordingly gave them the assignment related with crafts. Teachers said that primary class students used to make handicraft and brought it to the school from their home. Their parents and the community also helped them in preparing the handicrafts. Community had been involved in all the school activities. The involvement of the villagers, students and parents had also gradually increased.

Teaching Learning under ESD

The environmental component was taken care of in an integrated manner with the school textbooks. The teachers teaching different curricular areas were supposed to take care of it. Mainly it was infused into the science textbooks but the teachers were not aware of how different action based projects could be undertaken. The various innovative activities were due to the efforts of the school principal who from the geography background could understand and had interest in the various environmental projects. The SMC and the school support staff also shared that it was possible due to the good leadership of the principal Mr. Rai. One support staff said, “The principal carries plants, fertilisers for the school in his car and also works on Saturday/Sunday and even during holidays.” When asked whether teachers ever took students out for educational studies or they always sat in the class. Students replied that they studied inside the classes only and they go outside only for the house activities and play.

Physical and Emotional Safety

The research team interacted with the SMC and the Principal of the school and on enquiring, whether any programme was done on adolescence education especially for the girls, the Principal said that for the girls, the female teachers do the counseling and the boys seek guidance on such issues from the male teachers. However, the teachers were not trained professionally to handle it. He also shared that on PTAs also such issues are openly discussed. Some of the SMC members shared that they along with the help from the community checked the problem of smoking and bunking among students. One of them said, “*Hum ne school ke surrounding me jitni shops thee usme hum alcohol and cigarette band krwaate thei or dekhte hein ki koi bacha na ja paaye* and we also see to it that students don’t get much time to spend on those shops.” Another one shared, “Smoking things are not kept in the shops near school. We used to patrol on streets and if any student found roaming outside the school during school hours, we always informed to the school staff, and spoke personally to the students as well regarding it.”

Further, when asked if any child has ever complained about teachers’ misbehavior to which the SMC members replied, “If teacher gave physical punishment to the students, then we personally

come to the school to discuss the issue with the concerned teacher, the principal and the parents of that child.

We asked them what kind of the problems they had came across. He said that if a one student did not come to school regularly or bunk the classes he did not punish him. He did the counseling of the student, took him in front of the God and made him realise his mistake. The Principal informed that they had anti alcohol groups in the society and with their help a camp was organised in the previous year. A team of their alumni also worked against alcohol problems. One of the SMC members said that alcohol addiction which used to be prevalent was not seen now in their locality. On asking the reason for it, he shared that the society as a whole helped to curb the problem. The political support from the elected members was also immense. “Our MLA also organised various activities like marathon, etc. to create awareness for it.” The Joint Director, SSA also said that many problems like alcohol and smoking were there in the society. She informed that physical education teacher, science teacher, class teacher and senior teachers were there in the counseling committee. There are 7 to 8 teachers in the counseling committee. She added that the discipline committees constituted earlier are now converted into counseling committee for the students. The Principal said that, area MLA also did the counseling of the students. How does the counseling committee worked in the school? On this the principal said that if they found any child out of the track then they did not complain directly to the parents. First they give the counseling and not punishment. They were strict regarding this. The students, however, did not rule out corporal punishment provided in the school, and said that that the mischievous students were punished. One of the students said that sometimes teachers scolded us and sent them outside the classroom and instructed us to study from there. On being asked about what punishment the students get for coming late, student replied that they did not get any punishment. The principal only asked reasons for coming late, then after apologising, he permitted them to attend the class. One of the students said that sometimes the Principal gave them physical punishment (slap) and when asked to the students “Stick toh nahi padti na”, the students said “Padti h kabhi kabhi...padha nahi hota ya shetani krte hai.”

Chapter 4

Findings, Conclusions and Recommendations

Chapter 4: Findings, Conclusions and Recommendations

The study was undertaken to understand the nature of 'green practices' in schools across the country and carry out in depth study of the schools that exhibited exceptional work in this area. Only two such schools, namely the Govt. Sr. Sec School, Hee-Yangthang and Bharat Mata School, Bilaspur were selected to conduct an intense case study out of 83 schools, which sent write-ups about the green activities initiated or organised in their schools. This chapter includes findings, conclusion suggestions and recommendations for improvement in ESD. The first section gives the key findings based on the evidences collected using different tools, the conclusion and suggestions specific to each case, followed by the recommendations and roadmap for further work in the area of ESD in schools.

4.1 Key Findings, Conclusion and Suggestions

4.1.1 Govt. Senior Sec School, Hee-Yangthang

i)Findings

- The students, teachers and the staff were guided and felt satisfied with the leadership of the principal. They were also highly charged and motivated by the principal to contribute to the best of their abilities in making the school a better place for all.
- The careful choice of devoted SMC members also played a big role in strengthening the bond between the school and the community.
- The school received an annual grant of Rs. 12,000/- from MoEF through CEE for the eco-club activities. The financial contribution by a few teachers and SMC members is worth mentioning.
- The students and parents too did not hesitate in making contributions even if it was in cash (Rs. 10-20/-) for whitewashing the classrooms, construction of water storage tanks or donating saplings for plantation in the school campus.
- Cardamom plantation was the main occupation of the inhabitants of the village and the parents and the students donated them to the school.

- A cardamom garden was created in the unused land of the school. Besides this other projects such as water harvesting drip irrigation, herbal garden, and establishment of greenhouse were major innovations of the school under ESD. Some efforts to initiate bee farming were also under implementation.
- Involvement of the community effectively through SMC in dealing with social problems of smoking, alcoholism and truancy prevalent among the senior students was noteworthy.
- Although the school was established long back yet there was not much improvement in the infrastructure and the facilities available. Lack of funds was a major reason cited by the authorities.
- The school stakeholders, however, were trying to address it by generating funds on their own. Different activities such as the sale of cardamom and its saplings, providing kitchen waste to pig-keeper and earning by rearing and sale of pigs etc. were some novel steps.
- No steps to check the ventilation, maintenance of optimum temperature, adequate space, and storage facilities, appropriate seating arrangement, sufficient light in classrooms etc. were taken. Although, some aspects were beyond the control of school management yet with simple steps the situation could be improved.
- The participation of students and teachers was more on a voluntary basis. The students involved in various ESD activities were mostly from the secondary and senior secondary stages.
- Involvement of all students and teachers was not there and many of the teachers believed the ESD activities to be the responsibility of only science teachers to be executed only by senior students.
- The ESD activities were in isolation from the curriculum and other teachers were mostly concerned with the regular teaching learning but the efforts of the principal and a few teachers were tremendous.
- The waste management system was in the initial stage and needed better planning. The school also needs to work on the hygiene aspect especially the toilets as they were not in good condition and the provision of dustbins was also not adequate.

- The building of the school was not in very good shape. Although the students were made aware to tackle earthquake situation but more opportunities related to the dos and don'ts, during and post disaster need to be made a part of the regular curriculum.
- The manner in which the school works by engaging the parents, community and the SMC to address social and adolescent problems is overwhelming, however, more emphasis is required for addressing the emotional safety of children. The students did admit to being subjected to corporal punishment and some students believed that it was required for them if they commit mistakes.
- Under MDM implementation, the school lacked on storage of the grains, maintaining a separate kitchen and dining hall, adequate space for dining and provision of meals as per the nutrition norms to the students. However, using the heat of the fuel while cooking MDM for warming water to help children wash hands and their plates with warm water in cold weather was a very innovative step.

ii) Conclusion

The school deserves appreciation for the remarkable accomplishment despite being located in a remote area. The achievement becomes more special as it breaks the general myth about Govt. schools not being innovative and devoted to students as compared to their private counterparts. The entire school fraternity deserves credit for the successful green initiatives and in particular, the principal for his leadership and encouragement to bring all the stakeholders of the school in sustaining green initiatives in the school. The careful choice of devoted SMC members also played a big role in strengthening the bond between the school and the community. The effective bonding between school and the community through constructive role of the SMC members did help in dealing with various psychosocial problems prevalent among students.

The projects initiated under ESD were very much context specific and need based as per the requirements of the terrain, climatic conditions and the socio-cultural milieu of the place. The school did not depend entirely on the government resources but the contribution of community, parents, SMC and the teachers, not only in cash and kind, but in the planning and execution of various initiatives under ESD is creditable. The initiatives under ESD helped school reduce the

carbon footprint besides improving the economic aspects for the school welfare, thus contributing towards the sustainable development.

iii) Suggestions:

Some suggestions that will help the school improve and take their ESD programme forward are given below.

- The school needs to pay more attention to the physical safety aspects as some unsafe areas exist due to wear and tear of the building and construction activity in the school. Besides steps to improve the light, ventilation, appropriate seating and working arrangement for students in classrooms and labs in addition to maintenance of the toilets need to be adopted.
- The state authorities also need to help in making the school buildings disaster resistant, as the region is highly earthquake prone.
- Attempts need to be made to integrate the ESD activities with the curriculum and encourage and build the capacity of all teachers to do the same.
- Teachers need to be sensitized and oriented to adopt counseling and other strategies of positive discipline techniques to ensure the emotional safety of students.
- The MDM practices need improvement with regard to storage facilities, constructing a separate kitchen and dining space, providing meals as per the nutrition norms, adequate seating space to students for taking meals. Coordination of the state authorities is required for the same.
- More steps should be taken to adopt a whole school approach where participation of all the stakeholders i.e. students, staff, parents and community is ensured.

4.1.2 Bharat Mata School, Chhattisgarh

i) Findings

- It is appreciable that the school received accolades on participation at some national and international contests in the area of environmental activities under the leadership of the eco club in charge, the physics teacher, of the school.

- The school primarily has been a participant in the greening activities (designed, initiated and funded by other agencies), under the leadership of the in-charge of the school eco club, which included a representation of around 40-60 students from classes 8-12.
- The enthusiasm of the eco-club in-charge is praiseworthy as he was managing all the activities almost single handedly with some administrative and moral support from the school and its staff.
- The school receives an amount of Rs. 12,000/- under the project ‘Paryavaran Mitra’ from CEE under MoEF. In addition, the school management claimed that, the school authorities also spent an extra amount from the school's fund; however, no evidence for such claims was shared with the research team.
- A majority of the activities under ESD that helped the school get nominated or to win awards were initiated solely by the existing eco-club in charge. No other teacher from the school was involved in any manner.
- The school allows only the academically bright students, to be members of the eco-club who participate in the execution of the programme and follow the instructions of the eco-club in charge. No efforts of the students could be witnessed in identifying, planning and devising strategies for the environmental problems in surroundings.
- The school organised or participated in different projects on ESD which covered themes related to air pollution, conservation of water and forest and creating awareness through rallies, poster, painting competitions. Some more projects such as removing weeds from the public water sources, creating soak pit, plantation, and conducting water testing in villages using the available kit. However, in majority of these projects the school only participated.
- The role of other stakeholders (parents, teaching and non-teaching staff) was very limited towards the ESD projects. The extent of encouragement from the school management to participate and engage them in such activities was observed to be very low. This led to limiting the participation to only a few students, teachers and staff.
- Although it is appreciable that the school conducted environmental awareness drives in the neighborhood, yet there appeared to be a lack of linkage between the classroom learning and that from the projects under ESD. For example, on probing about the water

testing, conservation and availability of water in school, the students at even the senior secondary level were unable to relate although it was a part of their curriculum.

- There were poor linkages between the ESD related projects in the school and improving the overall school environment. No major efforts were also seen on conservation and efficient utilization of resources (electricity, water, soil, human resources). Adequate attention was not paid to the improvement of the school infrastructure and environment for different components under ESD at the school.
- The activities under ESD in the school lacked efficient planning and monitoring. There was no consistency for the projects undertaken. Within a year different projects were taken up e.g. an abrupt shift from noise pollution to water pollution to cleaning garbage, etc.
- The entire efforts did not seem to be sustainable and well planned with a long-term vision. Also the projects that won the school awards or nominations in different contests were either discontinued or were in a poor state with the passage of time. Observations during the field study revealed that once the period of a project was over, the issue (s) taken up was discontinued leaving a momentary change.
- The school undertook different projects in the neighborhood in different parts of Bilaspur and also earned a name in the field for the same, but adequate attention was not paid to the school infrastructure and its environment, its maintenance, improving physical and psycho-social health of the learners and for other components under ESD. For example, even the few initiatives such as plantation and waste management launched in school could not be sustained.
- Some of the issues were beyond the control of the school administration e.g. running two schools in double shift did not develop ownership among the students and staff.
- The school neither had any child with a disability on roll nor did the provisions to accommodate children with any disabilities exist.
- Teaching environmental science as a separate subject from classes 6-12 through science teachers clearly projects a poor understanding of ESD by the stakeholders implementing it.

ii) Conclusion

The school did win some accolades for some projects at some national and international contests, behind which solely the eco-club in-charge deserves appreciation for his efforts and untiring enthusiasm. A majority of the projects in which the school participated were actually tailored programmes designed and funded by large organizations with a limited (1-2% of the entire student population) and selected (mostly bright students) representation of students and only one teacher from the school with no efforts to encourage and involve other stakeholders. Also the participation is restricted to implementing the instructions with no efforts in identifying, planning and devising strategies to address the problems. Running mostly environmental drives in the neighborhood, and conducting the school-based projects with no long-term vision displayed lack of consistency, sustenance and linkage between the classroom learning and that of the ESD activities. Thus, treating ESD to be an activity in isolation from the regular teaching learning clearly reflects a gap about the understanding on ESD. Although to some extent the double shift arrangement in the school building hampered their sustenance yet simple steps at the administrative level involving all teachers and students could have addressed the issue. The school believed more in documenting and showcasing the work, as priorities were restricted to winning awards and recognition with inadequate attention for effective monitoring to sustain the initiatives at the ground level. This could be due to lack of coordination with all stakeholders with no significant measures adopted in this direction. It can be said that over-reliance of the school authorities on one person affected the sustenance of the enormous efforts which hindered their impact on the ground.

iii) Suggestions

- Awareness on how ESD is very much curricular and constitutes the core area in each subject and should not be dealt in isolation from the regular teaching learning needs to be a priority. Capacity of all teachers may be developed in this direction.
- Efforts to identify problems facing the school environment and encouraging the students, teachers and staffs to find solutions need to be emphasised.
- The contextual aspects are crucial with more emphasis on action-based activities with effective monitoring and follow up were required.

- It requires careful planning involving all stakeholders i.e. students and teachers at all levels besides parents and community members to ensure sustainability of the initiatives.
- Strengthening the Parent Teacher Association and maintaining a good connect with the community through its effective role may be explored.
- More attention may be paid to use the school as a resource for creating a sustainable environment.

4.2 Recommendations and Roadmap for Further Work

Based on field study, following recommendations are made for improving ESD in schools.

Green practices collected from different states across the nation, reveal that only plantation and celebration of events related to environment such as Earth Day, Wildlife Week etc. are considered to fulfill the objectives of ESD. Although many schools but the efforts have also displayed some innovative work in this area seem to be scattered lacking an overall vision. For example one school created water-harvesting system, the other harnessed solar energy and still another worked on conservation of water. A lack of understanding on environmental sustainability by different stakeholders at both the planning and implementation level appears to be the key reason for its ineffective implementation of ESD in schools. The awareness, motivation, learning, implementation and a long-term impact would come only when the students are encouraged to carry out meaningful projects that engage them to identify, and address issues in school and neighborhood by involving the school fraternity and the community to bring a positive change in the school environment and surroundings and ensure its sustainability.

For this a multi-faceted approach at different levels from policy makers and curriculum developers to the teachers working at the grass root level is needed. It requires development and implementation of green curriculum where ESD is at its core to help children connect with their context and enable them nurture a strong bond with it and thus ensuring their holistic development. Limiting it to a subject centric approach where the activities conducted are routine based and do not relate with the real life of children will restrict it to be an isolated and neglected activity. It will not help in accomplishing the objectives of ESD as the stakeholders will justify the fund allocations or restrict it to distribution/winning of awards or merely awarding grades or

marks to children through examinations. Thus, there is an urgent need to bring a change in the teacher education curriculum both at the pre-service and in-service levels. Developing meaningful resources and supplementary material to enable the teachers teaching different curricular areas at all levels to make ESD an integral part of the teaching learning in their classrooms and developing self learning material for students will also build an understanding about it. The orientation programmes need to be conducted to help the teachers imbibe the desired abilities and attitude to transact ESD effectively. Researchers need to be taken up to bring out the strengths that may be replicated and highlight the gaps with suggestions to address them.

Annexure

Annexure 1

1. List of the 83 schools showing green practices from the States/UTs

Name of the State	Name of school
Chhattisgarh	<ol style="list-style-type: none"> 1. Govt. primary and Middle School Shalakasavahi Village Kasavahi, Dist. – Damtari. 2. Govt. Middle Shalabhatgaun. Village Bhatgaun, Dist. – Damteri. 3. Govt. Primary and Sec. School, Bitera. Village-Bitera , Dist. – Damteri 4. Govt. Middle School, Bodara Development Area Damteri, Village-Bitera, Dist. – Damteri 5. Middle School Panderiparimal Development Area Damteri, Village-Bitera, Dist.– Damteri 6. Middle School Bhadsewan Development Area Damteri, Village-Bitera, Dist. – Damteri 7. Primary School Panderipanirey Development Area Damteri, Village-Bitera ,Dist.– Damteri 8. Primary Satbahan Development Area Damteri, Village-Bitera ,Dist. Damteri 9. Primary School Bhotha Development, Magarlod, Dist.-Damteri. 10. Rajiv Gandhi Shiksha Mission, Dakshin Bastar- Dantewada 11. Govt. Primary School, Badeypara, Kurandi: No.68 ,Jugdalpur, Raipur 12. Kasturba Gandhi Girls, Residential School, Kodgarh ,Bilaspur 13. Govt. Higher .Sec. School Hathbaudh, Block- Simger, Dist- Balloda bazar- Bhatapara. 14. Govt. Primary School Kulhautout, Gourela Bilaspur. 15. Primary School Patharatola Gawraila, Bilaspur. 16. DIET Shankar Nagar Raipur

Name of the State	Name of school
	17. Govt. Higher. Sec. School Hathbandh Block – Simga, Dist.- Baloda bazar - Bhatapara 18. Govt. Primary School , Village-Devakar, Block– Pather Monger 19. Govt. Primary School. Piparahi. Block– Gareyaband. 20. Bharat Mata School, Bilaspur. 21. Govt. Higher Secondary School, Mandhar, Block-Dharinva, Dist.- Raipur
West Bengal	1. Falta F.P School, Parganas 2. Narayantala Ramkrishana Vidyamandir, Basanti, South 24 Parganas 3. Giribala Adarsh F.P. School, Mathurapur, South Pur,Parganas
Haryana	1. Govt. Middle School, Prampura, Gopalpur, Rewari.
Uttar Pradesh	1. UchhPrathmikVidyalaya, Kathrskhage, Block- Jagat , Budaun 2. Upper Primary/Primary School Sherpur 3. Upper Primary/Primary School Shawli 4. Primary School Savtoo 1
Gujarat	1. Devda Primary School, Block –Gondal, Dist.- Rajkot 2. Bantva Primary School, Bantva Primary School, Block: Sojitra Dist.- Anand 3. Rajwad Primary School, Block: Bardoli District: Surat
Sikkim	1. Govt. Sr. Sec. School, Hee-Yangthang, P.O.-Hee Bazar, West Sikkim
Karnataka	1. GHPs BAGE, Karnataka 2. GLPS Hullhally 3. GHPs Dodkunduru 4. GHPs Heggadde 5. Govt. Lower Primary School, Keralur, Belur-Tq, Hassan -Dist. 6. Govt. Higher Primary School, Keralur, Belur- Tq. Hassan-Dist

Name of the State	Name of school
	7. GLPS Kuduravally 8. GHPHS Hunasavally 9. GLPS Thoragaravally 10. Govt. Lower Primary School Valakadama 11. Govt. Hr. Primary School Kundage 12. D.K. Z.P. Govt. Model Higher Primary School 13. D.K. Z.P. Govt. Model Higher Primary School, Markada, Mangalore
Punjab	1. Govt. Middle School, Phangtoli, Karoli, Dist.-Pathankot. 2. GHS Hadieba Govt. High School, Main Bazar , Hadiabad, Phagware,14 3. Govt. High School ,Main Bazar , Hadiabad, Phagware,14 4. G.H. S. – Ibrahimwal, Tehsil Phagwara (Kapurthala) 5. Govt. Sr. Sec School Khera Dona, Khera Dona (Kapurthala) 6. Govt. Girls High School Dhilwan (Kapurthala) 7. Govt. High School Harbanspur, P.O. Bhabiana 8. Govt. High School Bhawanipur (Kapurthala) 9. Govt. High School Toot Dist.-Ferozepur 10. Govt. High School NuepurJattan, P.O. NwepurLubane, Dist.- Kapwethala 11. Govt. High School Bhandla Bet Teh. Dhilwan, Dist-Kapurthala 12. Govt. High School ,Noorpur Dona, Dist.-Kapurthala 13. Govt. Sr. Sec. School Mattewal GSSS Manawala Kalan GSSS Lapoke } All Dist. Amritsar
	Govt. Sr. Sec. School, GMS Haran Kala, Dist. Amritsar 14. Govt. Middle School DearsaidaTeh. Sultanpur Lodhi Kapurthala. 15. Govt. High School Ibban Dist.-Kapurthala

Name of the State	Name of school
	<p>16. Govt. High School Gopipur P.O.-Khallu Dist.-Kapurthala</p> <p>17. Govt. High School, Sahni. Teh. Phegwara Dist.-Kapurthala</p> <p>18. Govt. Sr. Sec. School, WadalaKalan Dist.-Kapurthala</p> <p>19. Govt. High School ThatanawanTeh. Sultanpur Lodhi, Dist.-Kapurthala</p> <p>20. Govt. High School HumbowalTeh. Bholath Dist.-Kapurthala</p> <p>21. Govt. Sr. Sec. School, Kapurthala Near Civil Hospital Dist.-Kapurthala</p> <p>22. Govt. Sr. Sec. School, Dayalpur, Dist.-Kapurthala</p> <p>23. Govt. High School, Haibatpur SaltanpurLodhi Dist.-Kapurthala</p> <p>24. Govt. High School Panchhat, Teh. Phagwara Dist.-Kapurthala</p> <p>25. Govt. Sr. Sec. School, Hussainpur (Rail Coach Factory)</p> <p>26. Govt. High School Dhaliwal Donar Dist.-Kapurthala</p> <p>27. Govt. Middle School Shaheed Bhagat Singh Nagar</p> <p>28. Govt. Middle School Buraj Kandhara (Shaheed Bhagat Singh Nagar)</p> <p>29. Govt. Sr. Sec. School ThopiaTeh. Balachaur, Dist.-SBS Nagar</p> <p>30. Govt. High School Laroya Block Makandpur Dist.-SBS Nagar</p> <p>31. Lt. Gn. B.S. Memorial Govt. High School Mehandipur ,Teh. Balachaur, S.B.S. Nagar</p> <p>32. Govt. High School Bahiram and SBS Nagat</p> <p>33. Govt. High School Hakimpur</p> <p>34. Govt. Middle School Bhaura Dist.-SBS Nagar</p> <p>35. Govt. High School Takarla, Dist.-SBS Nagar</p> <p>36. Govt. Senior Sec. School Mandhali , Dist.- SBS Nagar</p> <p>37. Govt. Middle School Raipur Dobb, Dist.-SBS Nagar</p>

Annexure 2

Reports from different States and UTs send by different schools

(i) CHHATISGARH

1. Govt. Primary and Middle School Shalakasavahi, Village Kasavahi, Dist.-Damtari

Activities under ESD:

- Major of the activities carried out in the school is related to the plantation of saplings.
- Vegetable garden and herbal gardens are developed and maintained.
- Community participation is involved in plantation activity

Observations:

Activities are mainly restricted to plantation and maintain of gardens &trees around the school premises. The greenery around the school is appreciable however, it is not mentioned, whether the gardens are used in the teaching learning process or not, or is it just carried out in isolation. No evidence of community participation attached. The other aspects of greening of schools are not taken care of.

2. Govt. Middle Shalabhat Gaun, Village-Bhatgaun, Dist.- Damteri Chhattisgarh

Activities under ESD:

- Activities involved in the school are limited to plantation of different varieties of plants & tress by the horticulture department.
- The school has herbal garden & vegetable garden developed and maintained by the horticulture department.
- Staff members and students are involved in taking care of the garden, weeding and manuring of the same.
- Garden contains plantation in a geometric pattern , which are used by teachers to teach the concept of shapes and area to suitable
- Village Panchayat & community member are involved in upkeep of the garden.



pic 125

Observations:

The innovative practices are limited to plantation & development of garden. The aspect to be appreciated ids the geometrical patterns in which the garden is developed and used for teaching

learning of geometry in mathematics . All other aspects related to greening of the schools are ignored or not mentioned in the report.



pic 126



pic 127

3. Govt. Primary & Sec. School, Village-Bitera, Dist.-Damteri

Activities under ESD:

- Greening Activities in all the above mentioned schools are restricted to the plantation of saplings.
- Development of kitchen garden and herbal garden.
- Govt. Primary and Sec. School Bitera is the only school which mentioned about the involvement of the students in the plantation and upkeep of the garden.



pic 128

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- From the photographs given it looks the garden are not maintained, timely weeding it not carried out.
- All the other aspects or we can say all the other indicators of the greening of schools are not mentioned or practiced in the schools.

4. Govt. Middle School Bodara Development Area, Village- Bitera, Dist. – Damteri

Activities under ESD:

- Greening Activities in all the above mentioned schools are restricted to the plantation of saplings
- Development of kitchen garden and herbal garden

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- From the photographs given it looks the garden are not maintained, timely weeding it not carried out.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.

5. Middle School Panderiparimal Development Area, Village-Bitera, Dist.-Damteri

Activities under ESD:

- Greening Activities in all the above mentioned schools are restricted to the plantation of saplings.
- Development of kitchen garden and herbal garden.

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- From the photographs given it looks the garden are not maintained, timely weeding it not carried out.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.

6. Middle School Bhadsewan Development Area, Village-Bitera, Dist. –Damteri

Activities under ESD:

- Greening Activities in all the above mentioned schools are restricted to plantation of saplings
- Development of kitchen garden and Herbal garden.
- The school also mentioned about the involvement of the students in plantation and upkeep of the garden.

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- From the photographs given it looks the garden are not maintained, timely weeding it not carried out.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.



pic 129



pic 130

7. Primary School Panderipanirey Development Area, Village-Bitera, Dist.-Damteri

Activities under ESD:

- Greening activities in all the above mentioned schools are restricted to plantation of saplings.
- Development of kitchen garden and herbal garden
- The school also mentioned about the involvement of the students in plantation and upkeep of the garden.

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- From the photographs given it looks the garden are not maintained, timely weeding it not carried out.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.

8. Primary School, Satbahan Development Area, Village-Bitera, Dist.- Damteri

Activities under ESD:

- Greening activities in the above mentioned schools are restricted to the plantation of saplings.
- Development of kitchen garden and herbal garden.
- Govt. Primary School Bitera also mentioned about the involvement of the students in plantation and upkeep of the garden.

Observations:

- Activities are pertained to only plantation & gardening &their upkeep.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.

9. Primary School Bhotha Development, Magarlod, Dist.-Damteri.

Activities under ESD:

- Greening Activities in all the above mentioned schools are restricted to plantation of saplings
- Development of kitchen garden and Herbal garden
- The school which mentioned about the involvement of the students in plantation and upkeep of the garden

Observations:

- Activities are pertained to only plantation & gardening and their upkeep.
- All the other aspects or we can say all the other indicators of greening of schools are not mentioned or practiced in the schools.



pic 131



pic 132



pic 133

10. Rajiv Gandhi Shiksha Mission, Dakshin Bastar-Dantewada

Activities under ESD:

Reports contain power point presentation showing plantation activities

Observations:-

- Activities are not mentioned.
- Restricted to plantation activities, this is obvious through the photographs.
- No other indicators have been mentioned.

11. Govt. Primary School, Badeypara, Kurandi: No.68, Jugdalpur, Raipur

Activities under ESD:

Classroom:-

- Separate classroom for each class.
- Blackboards are non-reflective
- Windows are sufficient in number.
- Classrooms are well ventilated.
- Classrooms gets sufficient natural light
- Students have made committees to look after the cleanliness of the classroom.
- Each classroom is provided with dustbins. Dustbins are cleaned by students on rotation basis.
- Classroom walls are decorated with colourful paintings and pictures.
- Every classroom has fans and electricity.

School building:-

- To facilitates , differently-abled students, ramps are built at the school entrance
- School building has a boundary wall/ school is surrounded by a boundary wall.

Drinking water:-

- Hand pump is the only source of drinking water for the students.
- Water from hand pump is used to cooking mid- may meal.



pic 134



pic 135

Garden:-

- Sapling plantation is carried out every year & awareness drive is conducted for students in this regard.
- Water from hand pump is utilized for irrigation or watering the plants in the garden.
- Vegetable garden is developed and maintained in the school premises.

Toilets:-

- There are separate toilets for boys & girls.

Playground:-

- Sufficient space is available for the students to play in the school premises.

Green practices within the school:-

- Students and staff member of the school avoid using polythene bags in the school premises.

Music Room:-

- School has separate music room for students
- The music room contains local musical instrument for students.

Midday meal:-

- Midday meal is cooked under a tin shop.
- Vegetable from kitchen garden are used for cooking.

Observations:

- Though much has been claimed regarding appropriateness of classroom with regard to proper ventilation, the position of blackboard, windows and provision of electricity &fan, but proof provided in the form of photographs are insufficient.
- Classroom walls are though decorated with colorful paintings, but nothing has been mentioned whether they are used for teaching learning process or not.
- No proof provided for the presence of ramp in the building.
- No proper sitting arrange for the students in the classroom. Students are made to sit on the floor or Dari which may lead to postural disorder.
- No evidence attached to claim appropriate placement & number of fans in the classroom.
- Only source of drinking water is the hand pump no provision for its purification is it safe or not is questionable
- Midday meal is cooked under tin shed which raise concern for its hygiene & quality.

12. Kasturba Gandhi Girls', Residential School, Kodgarh, Dist.-Bilaspur

Activities under ESD:

- Development of garden & its maintenance by the student group
- Wall of the building painted with educational themes
- Development of learning corners
- Play area in the form of open ground having slides & swings

Midday Meal

- Appropriate storage facilities available for the ingredients required for the midday meal.
- Proper storage facility available for string dry ingredients such as rice dal etc.
- Hygiene cooking practices followed.

Drinking water:-

- Provision for RO facility available for safe drinking water
- Steel containers to store clean & safe drinking water.
- Menu provides adequate nutritional input to the students.

Personal Hygiene :-

- School Assembly is used to aware students regarding personal hygiene
- Regular supervision of students personal hygiene
- Students are felicitated for disposing & burning of sanitary napkins(no evidences provided)

Green practices:-

- Ban on use of polythene in school premises
- Community awareness programme carried out against the use of polythene bags

Ventilation:-

- Classroom and residential rooms are well ventilated.

Toilets:-

- Toilets are regularly cleaned, walls of the toilets depicts theme on healthy hands wash

Playground:-

- Used for yoga & other physical exercise.

Observation:

Work done in the school is appreciable.

- Emphasis is more on personal hygiene of the student.
- Appropriate storage practices followed to store material for midday meal

13. Govt. Hr. Sec. School Hathbaudh, Block- Simger, Dist.- Balodabazar- Bhatapara

Activities under ESD:

- Plantation activities carried out.
- Students were involved in the plantation of sampling , it was a group work by the students (Students from 6-12 were involved)
- Debate competition, seminar, and workshops, conservation of environment.
- Students are motivated to plant five samplings in and around their school or neighborhood on their birthday.
- Students made to take oath on the issue related to “No Polythene” or “Say no to use of polythene bags.”
- Rallies were conducted in & around the school neighborhood to aware community members on the adverse effect of the use of polythene on the environment.

- Pits are constructed to absorb the drainage water coming out of the sink meant for hand wash.
- Dustbin available in each classroom.
- Students are instructed
- Learning corners developed in classroom devoted to different subjects.

Observations:

- Evidence of plantation activities & rallies published in the newspaper.
- Major greening activities are restricted to the plantation of saplings and conducting rallies and cleanliness drive in and around the school and its neighborhood areas.
- No other indicators are of the greening of schools have been reported or elaborated on.
- No evidence provided in support of learning corners.

14. Govt. Primary School Kulhautout, Gourela Bilaspur.

Activities under ESD:

- The school has an outer boundary in the form of green fencing & not a proper concrete wall.
- Has garden in the school premises containing a variety of plants & trees
- Using the concept of BaLA walls of the building depicts science & math concepts (through pictures shows only the painting of great leaders & the national symbols on the wall.)
- Green fencing and cemented entrance gate of the school is building entrance gate of the school is built with the help of community members
- Vegetables from the kitchen garden are used in cooking mid-day meal.
- Students take full responsibility in keeping their school premises neat & clean.
- Dust bin are available for waste disposal.
- Complete ban on the use of plastic in the school premises.
- Ground water used for drinking purpose.
- Area around the hand pump well maintained
- Three separate toilets present which are regularly cleaned.

Observations:-

- Although much has been claimed, there are not pictures to approve such claims.
- Only pictures of garden trees & gate have been attached.
- Classroom receives natural light, but show unorganized sitting area no place for teachers to move between the rows.
- The picture of other classroom shows students sitting on the floor on dairies, which will lead to postural problems in them.
- Classroom shows sufficient natural light.
- No specification on plantation activities, classrooms or using classroom or building in teaching learning process.

15. Primary School Patharatola Gawraila, Bilaspur.

Activities under ESD

- Plantation activity carried out with the involvement of the students. These plants are maintained and looked after by the students of the school.
- Kitchen garden develops and maintained.
- Community members involved to make provision for the drainage of dirty water.
- Use of BaLA.
- Only source of water is the hand pump. It is ensured that area around the hand pump is neat & clean.
- Much work has been mentioned in the field of personal hygiene (e.g. Washing hands before taking midday meal, avoid defecating in open, maintain the cleanliness of the toilets.)
- Play area of students present in the school.

Observations:-

- Much has been written about the cleanliness awareness, personal hygiene, but no action plan has been mentioned.
- Activities carried out in the school premises; in the relation of cleanliness drives have not been mentioned.
- From the photographs it appears that the garden is well taken care of and timely weeding is carried out, but, are the students involved in these activities, is not mentioned.
- No purification facilities provided for drinking water
- No separate toilets for girls and boys.
- Although BALA has been mentioned but how it is used during the teaching process is not mentioned.
- Midday meal is served in open space which question about its cleanliness & hygiene conditions.

16. DIET, Shankar Nagar, Raipur

Activities under ESD:

- Plantation activities are conducted on the school premises, on a regular basis.
- Plantation activities are divided on area basis & class room wise
- Cleanliness drive organized under the 'Swachh Bharat Abhiyan' programme.
- Dust bin kept in each corridors & class room.
- Latest development in the school is the development of play area for the students having swings and playing equipment's
- Old 1000 liter water tank, 9 damaged tanks are used for rearing fishes & planting lotus
- Debate , essay writing and drawing competition are conducted

Observations:

- The school and DIET premises are covered with greenery & variety of plants & trees.

- The creation of water body containing lotus plantation & fish rearing is a good practice and a good step towards greening of the school surrounding.
- Classrooms are well lit and ventilated.
- BALA being practiced.
- Report does not mention community participation.
- It is not mentioned whether the students are involved in the development of water body or the aquarium.

17. Govt. Hr.Sec. School Hathbandh, Block– Simga, Dist.-Balodabazar- Bhatapara

Activities under ESD:

- Plantation activities carried out
- Gardens are allotted for the student's class wise; they are responsible for taking care of it.
- Cleanliness drive under "Swachh Bharat Abhiyan" carried out in and around the school & its neighborhood
- Debate, seminars & workshops conducted to aware students towards environment conservation & related issues.
- Students plant five saplings on their birthday.
- No polythene zone at the school , students and staff member took oath to say no to plastic
- Awareness programmed conducted in relation to the damaging effect of using polythene on our environment and rallies for the same were carried out in and around the village of the school.
- Hygiene condition followed while cooking and serving midday meal.
- No discrimination while serving the midday meal students along with faculty members sit together to have mid-day meal
- Acknowledging the contribution of elderly people of the community member they are felicitated by conducted various programme under the name of vardjansammansmaro.
- Celebration of "healthy hand wash" day
- Publication of write up in school magazine regarding water pollution due to statues made up of plaster of Paris.
- Development of science corner in the school.
- Organization of poster making, speech, song debate competition in relation to latest development in the field of science.
- Development of Educate center.
- The scout & guide wing of the school actively participates in community campaign such as literacy day , pulse polio , plantation activities etc.(no evidence to support the claim)
- Report mention that students are provided healthy & hygiene mid-day meal (no evidence to support)
- Old, broken furniture repaired & reused (no evidence)

Observations:-

- Although the activities and event mentioned above and events mentioned above are to be appreciated, but majority of the activities mentioned are not supported with relevant evidence.
- Major work done in the school are related to plantation and cleanliness drive.
- Work mentioned are good but reports do not elaborate about the objective & outcomes of the programs.

Awards & pub:-

- Newspaper clipping shows rallies & cleanliness drive were conductive

18. Govt. Primary School, Village-Devakar, Block –Patheriya, Dist.- Monger

Activities under ESD

- Plantation activities & carried out in school.
- Students & community members involved in plantation and gardening activities.
- Development of kitchen garden vegetable from the kitchen garden used in cooking of mid day meal.

Observations:

- Reported submitted given detailed account of how the students & community members were involved in setting up the floral garden & kitchen garden.
- Students take responsibilities in looking after the garden & maintaining it.
- Due to development of green area, greenery & garden in the school, the overall result in the increase in enrolment of students and regularity of the same . But no evidence in the support of this is attached in the form of attendance register or admission register.

19. Govt. Primary School, Piparahi, Block– Gareyaband.

Activities under ESD

- Plantation activity
- Setting up of garden
- Students are involved in looking after the plants & trees.
- Students themselves volunteers carry out weeding & irrigation of the plants.

Observations:

- Report submitted gives a detailed account of the gardening practices carried out.
- Both boys & girls are equally involved in gardening activities.
- The report lack evidence for the work claimed.

20. Bharat Mata School, Bilaspur

1. To solve the problem of traffic chaos in front of school by the students Goals:
 - a) Control the carbon emission in front of the school.
 - b) To reduce sound pollution in front of the school.
 - c) To develop internal discipline among the students.

- d) Problem is solved by internal motivation of the students.

Achievements:-

- a) Declared as best practice for sustainable development by MOEF and published in their top 100 stories from all over India.
- b) Getting a first prize in a global level competition at Paris, France for Your Ideas Your Initiatives for Green School.

2. Clean way of green living.

Goals:-

- a) To develop no plastic bag usage in school.
- b) To start zero waste in Tiffin–box concept in the school.
- c) Proper waste management in the school.
- d) To develop the practices of separating the biodegradable and non- biodegradable waste in their home.
- e) Preparation of compost by degradable waste and that is used for gardening.

Result Achieved:

- a) Getting first prize as the best cleanliness campaign in the Eco School in Chhattisgarh.
- b) Preparation of compost is still going on in the house of more than 50 students.
- c) Paryavaran Mitra Young Leader for Change.

3. Community Practices:

- a) Waste land management through Moringa plantation.
- b) To create employment by selling of organic compost.
- c) Development of water testing kit by students; Fecal Contamination.
- d) Development of UV drums for water purification.

4. Fuel- free day for students:

One day cycling in a week.

5. Education program in the schools of Achanakmar Amarkantak Biosphere Reserve to protect bio-diversity and wildlife conservation:

- a) Pick for your planet
- b) Each one, teach one

6. Development of Biodiversity cultural center for the students.

7. Observation of various environment days to aware the students and community people.

8. Innovative methods to maintain the school garden and surrounding by the students.

9. Involvement of small children (primary school) as a part of our project “FLORA EXPO” and “COOL CALCULATOR” to improve their habits and behavioral change .

10. COP-11 Hyderabad: Students' project achieved standing ovation by the international delegates and recognized by the Achim Steiner (Executive Director of UNEP) and Braulio F. De Souza Dias (Executive Secretary of CBD) for the project “Pledge for the Life”.

11. No. Stagnation No Mosquito project Represent INDIA at final VOLVO YOUNG ENVIRONMENTLIST AWARD AT “GOTEBORGE” SWEDEN.
12. Develop some recycle practices.

ii) WEST BENGAL

21. Falta F.P School, Parganas

Activities under ESD:

1. School Building:
 - a) Has laboratory
 - b) Has a library
 - c) Has a common room
 - d) Has a boundary wall
 - e) Classrooms are airy, spacious and taking over BaLA project.
2. Common spaces separate toilets for girls and boys :
 - a) Has an adequate supply of drinking water
 - b) Has a water purifier for students.
 - c) Has space for washing hands.
 - d) Has a playground.
 - e) Has a park with swings in the open field.
3. Midday meal:
 - a) Has a kitchen.
 - b) Has dining hall as a common space.
4. Green Practices within the school :
 - a) Plantation is done by the students.
 - b) Celebration of Normal Vidyalaya week every year. The rally is conducted regarding this.



pic 136



pic 137



pic 138

Any Awards won by the: NIL

School in this Area: NIL

Observations:

- a) Although it is mentioned that the school has a common room but, the activities conducted here and for the purposes which it is used for is not given.
- b) The school has mentioned about BaLA but it is not



pic 139

mentioned whether it is being used or not. And if being need them what kind of activities are being conducted with its help.

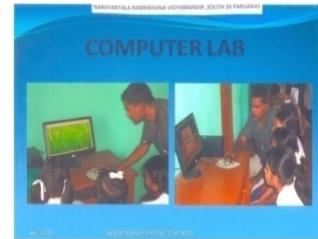
- c) The school has a dining hall with the capacity of so persons. Its alternate uses, if any, in school have not been given.
 - d) Plantation by the children is given, but the quantum and the time is not specified. Who takes care of them later on has also not been specified.
 - e) The objections of celebrating Nirmal Vidyalaya Week are not specified here. The purpose of conducting the rally is also not mentioned Details of the activity are missing.

22. Narayantala Ramkrishana Vidyamandir Basanti, South 24 Parganas

Activities under ESD:

School Building:

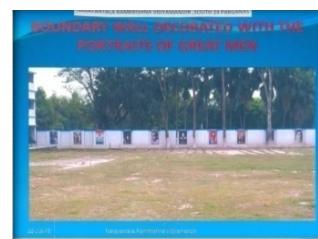
1. has laboratory
 2. has library
 3. has common room
 4. classrooms are alternative
 5. well decorated boundary wall is there.



pic 140

Common spaces:

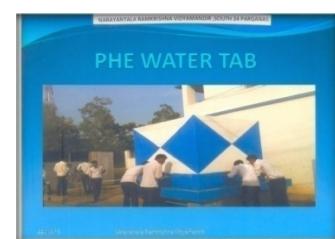
1. has an adequate supply of drinking water
 2. has a water purifier to maintain healthy & hygiene atmosphere
 3. have a playground and a park.



pic 141

Midday Meal:

1. The school has a kitchen shed.
 2. Has dining hall with the capacity of 200 people.
 4. The menu is pre-decided according to CMDMP



pic 142

Details of the activities:

1. Plantation is done by the students.
 2. Cultural Programme is arranged thrice a year by the teachers.

Any awards won: NIL

Observations:

1. The school has a common room, but the purposes which it is being used for and by who is missing.
 1. The classroom are attractive, but the details about the ventilation, air, space light etc. are missing.



pic 143

2. The evidence from the dining hall is not found.
3. The types of plants, their names, and the no. of plants that survived are all missing. After plantation, who takes care of them also need to be mentioned
4. The cultural Programme is done by the teacher. Its purpose has not been detailed. The
5. Programmes done by the students have nowhere been mentioned.

23. Giribala Adarsh F.P. School, Mathurapur, South Pur

Activities under ESD:

Common Spaces:

- a) The school has a place for hand wash.



pic 144



pic 145

Details of the activities:

1. Soap is used for washing the hands.
2. The children are in the habit of washing mouth and hands after taking mid-day meals.
3. Plantation activity is done by the students.

Any award won by the School: NIL

Observations:

Very little information about the school has been given. It mentions about the provision of midday meals, but no any details about that are given. Entire detail about the school building and the practices is missing. The types of plants grown, their number and the details about their survival and care are missing.

iii) HARYANA

24. Govt. Middle School, Prampura, Gopalpur, Rewari

Activities under ESD

1. The school has a laboratory.
2. Walls have been painted with the pictures pertaining to school.

Details of the activities :

- 1) Making of paper bags.
- 2) Preparation of gift pack.
- 3) Clay modeling, book binding mask making, painting.
- 4) Plantation is done every year .It has 45 types of tree with shed, flowers & fruits and even medicinal plants.
- 5) Sanskarsanskriti club being run by CCRT is in implementation.

Awards won by the school:-

- 1) Gold medal in school Readiness Programme

Observations:

- Many activities have been mentioned in the report, but there is no any evidence to substantiate them .The picture given is also not clear itself .It does not convey that why is it there. No details of the school building have been given. Activities are not supported with proper evidence.

iv) UTTAR PRADESH

25. Uchh Prathmik Vidyalaya, Kathrskhage, Block- Jagat, Budaun

- Plantation and gardening
- Cleanliness drive
- Health issues (height and weight cards)
- Organizing Bal Sabha activities to develop cultural and leadership qualities.
- Recognition of parents.
- Midday meal is being provided
- Publication of daily student activities in local newspaper

Any awards won- NIL

Observations:

- 1) A plantation on the birthday of the children is done, but not specified about the plants , their survival and taking care of them .(no evidence is given)
- 2) Cleanliness drive on every Thursday is being done.(no evidence is given)
- 3) Height and weight cards have been maintained. (no evidence is given)
- 4) What kinds of activities are being conducted in Bal Sabha? it is not mentioned
- 5) Parents are recognized for sending their children regularly to the school .but no any mention of their any kind of participation is given.
- 6) The place for mid may meal, the water arrangements for drinking & dish washing all these details are missing. It has no evidence.
- 7) What kind of student activities has been published, in which newspaper and when? All these details are missing. No newspaper/ article clipping is given as evidence.

26. Upper Primary/Primary School, Sherpur Sadar Dist.-Muzaffarnagar

Activities under ESD:

Some of the activities done in the school for making environment eco-friendly are tree planting, nukkad-natak, drawing competition, spreading awareness among villagers for cleanliness via environment awareness rally. Main innovative work is through working model on environment.

Nukkad-Natak:- In our schools we play a nukkad-natak with the help of our students for awaking all the people about cleaning our lives, planting and importance of plants and the environment in our life.



Pic. 146 Planting



Pic 147 Awareness rally



Pic.148 Drawing competition

Details of the Activities

Awareness rally Nukkad natak:- in our schools, we play a nukkad natak with the help of our students for awaking all the people about cleaning our lives, planting and importance of plants and the environment in our life.

Any Awards Won: - NIL

27. Upper Primary/Primary School, Shawli Sadar Dist.-Muzaffarnagar

Activities under ESD:

Some of the activities have done in the school for making environment eco friendly by planting, nukkad-natak, drawing competition, and aware villagers for cleanliness via environment awareness rally. Main innovative work is through working model on the environment.

Drawing competition:- In many of our schools, we have done a drawing competition about the environment to make it eco friendly and aware the villagers and citizens about cleanliness and many sustainable practices for make environment clean and pure.

Details of the Activities

Planting drawing competition

Drawing competition:- In many of our schools, we have done a drawing competition about the environment to make it eco friendly and aware the villagers and citizens about cleanliness and many sustainable practices for make environment clean and pure.

Any Awards Won: NIL



pic 149



pic 150

28. Primary School Savtoo 1Block Shapur Dist.-Muzaffar Nagar

Activities under ESD:

Some of the activities have been done in the school for making environment eco friendly by planting, nukkad-natak, drawing competition, and aware villagers for cleanliness via environment awareness rally. Main innovative work is through working model on the environment.

Model: - It is applicable mainly for cleaning Ganga and other rivers by applying this.

Model of severs water and impure water can be used for producing electricity and irrigation in field with this bio mixed water.

Details of the Activities

Awareness rally, planting and drawing competition

Model:- It is applicable mainly for cleaning Ganga and other rivers by applying this Model on Rivers water and impure water can be used for producing electricity and Irrigation in the field with this bio mixed water.

Any Awards Won: Nil

v) GUJARAT

29. Devda Primary school, Block-Gondal, Dist. - Rajkot

Activities under ESD:

- The school has an area for hand washing.
- Push taps have been provided to stop wastage of water.
- Sprinkles irrigation method being used to save water.
- It has a kitchen garden and tools have been provided for this.
- Different dustbins are used for the separation of waste.
- Compost pit is there

School building – connecting pathways are there in the school.

Green practices within school- fire bucket stand and fire safety plan for the safety of children in case of emergency.

Details of the activities –

1. Held rallies and competitions to educate children and village people about green practices.
2. Audit teams of children for air, water, land, energy and waste to maintain and sustain practices.
3. Using solar panels to save electricity.

Awards won by the school – Nil

Observations:

There is no any detail about any of the activity mentioned here, the



pic 151



pic 152 fire bucket



pic 153 solar panel

school building and the practices being undertaken. No any evidence regarding any of the activity has been given here.

30. Bantva Primary School, Bantva Primary School, Block-Sojitra, Dist.-Anand.

Activities under ESD:

- Developed child centric area.
- Audit teams of children for AIR, WATER, LAND, ENERGY, WASTE and BUILT SPACE to maintain and sustain the practices.
- Held rallies, elocution competitions, drama,etc. for the awareness of good practices in children of the school and village people.
- Provided Water testing kit to check the quality of water periodically by the children of the school.
- Provided hand wash and drinking water points as per requirement.
- Provided push taps to stop wastage of water.
- Use of glasses instead of palm to avoid wastage of water.
- Waste water after drinking and washing is reused and recycled to irrigate plants.
- Tree canopy harvesting to use rainwater.
- Provided MCB and ELCB for safety of the children.
- Use of CFL lamps to decrease the consumption of electricity.
- Provided Solar Panel to save electricity.
- Provision of first aid box.
- Separation of waste in dustbins provided as per norms.
- Compost pits for recycling of waste.
- Provided garden tools for gardening.
- Provision of pin up board for display.



Pic. 154 child centric area



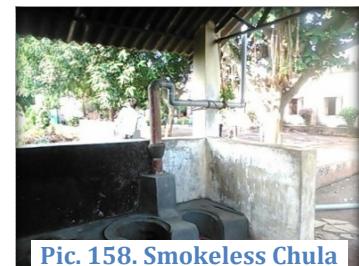
Pic. 155 Water testing kit



Pic. 156 Push Taps



Pic. 157. Compost pit



Pic. 158. Smokeless Chula

31. Rajwad Primary School, Block-Bardoli, Dist.-Surat

Activities under ESD:

- Audit teams of children for AIR, WATER, LAND, ENERGY, WASTE and BUILT SPACE to maintain and sustain the practices.
- Installed ‘SMOKELESS CHULHA’ in Mid Day Meal to reduce air pollution

- Installed Air Extractor in the classrooms to decrease the temperature and increase light.
- Use of glasses instead of palm to avoid wastage of water.
- Provided push taps to stop wastage of water.
- Waste water after drinking and washing is reused and recycled to irrigate plants.
- Planted more than 200 different types of plants to increase bio- diversity.
- Provided Solar Panel to save electricity.
- Use of waste bottles to slowly drip water to individual plants.
- Planted more than types of different plants to increase biodiversity.
- Provided potted plants.
- Use of waste Mangalore tiles for plantation.
- Separation of waste in dustbins provided as per norms.
- Compost pit for recycling of waste.
- Held different competitions and rallies to educate village people about good practices.



Pic.159 Plant biodiversity



Pic. 160 Use of Bottles

vi) SIKKIM

32. Govt. Sr. Sec. School, Hee-Yangthang, West Sikkim

Activities under ESD:

1. Used the land resources for production of funds and to promote greenery.
2. Reuse of waste water for irrigation.
3. Using drip irrigation method to save water.
4. Growing organic vegetables and using them for hostel mess and mid-day-meal Programme
5. Generating awareness about water related issues and protecting water bodies.
6. Culturing mushrooms with the help of the students.
7. Reusing waste material for different purpose.
8. Recycling of waste materials.
9. Participation of the community in various school activities.
10. Awareness programme for energy conservation.
11. Surveying & collecting, spreading awareness & motivating the community member conserving energy.
12. Plantation – mushroom, floriculture.

Details of the activities:-

1. Cardamom plantation was done 10,000 saplings were planted in the barren land of the school to promote greenery and boost up the economy of the school.

2. Orchid farming and herbal garden on the boundary wall of the school has been planted to sustain the environment and biodiversity. The wall has been converted into a store for herbal plants and species of orchid and insects.
3. Grey water management system – A grey water treatment system is set up in school, which consists of layers of gravel, sand, mud, charcoal, and bricks prices and pebble. The treated water is used for irrigation.
4. A greenhouse is set up in the school and a vegetable garden is grown inside it .Organic veg. are grown here which are used for midday meals, hostel mess and some of the products are sold to the members of the school faculty also.
5. Drip irrigation system is used here to save the wastage of water.
6. Conservation of a water body– A local water source near the school that supplies water to school and almost all the nearby house has been protected by the school with construction of a temple and maintaining it. The school also protects this water source by plantation.
7. Bee keeping activity is being taken up to conserve and sustain biodiversity. It is promoted to boost up the economic conditions of the local farmer and villagers.
8. Mushroom culture – The students are doing it in school as a part of non –scholastic component.
9. Waste management Programme:-
 - (a) Using biodegradable and natural made cups and plates in the school Programme.
 - (b) Using both sides of the paper and distributing half-filled notebooks to younger students for work.
 - (c) Using computer &internet for dissemination of information instead of paper.
 - (d) Using cloth sacks.
 - (e) Using coffee cans, shoe boxes etc. for packing and storing.
 - (f) Storing food in reusable containers.
 - (g) Distributing old things to the needy people.
 - (h) Considering waste as a resource and used to boost up the economy of self and the nation as well.
 - (i) Use of ‘potling’ leaves for packaging, wrapping the gift items is praiseworthy.
 - (j) Community participation for waste management is also shown.
10. Compact pits are there in the school .the photographs show the composting of paper, solid waste and plastics, etc. vermin composting is also done and the compost is being used for the plantations.
11. Recycling of waste material is done in the school. Exhibition of the items prepared after reusing different waste materials was also laid in the school. The photographs show the beautiful articles made in the school. Collected bottles were utilised as bricks for making cemented gallery and stage.
12. Community also participates in all the Programme of the school.
13. Energy conservation – An energy watch group has been formed CFLs are used instead of bulbs. Heavy electrical devices are not used in school to save energy. Gadgets in use are

switched off when not in use. Every class has energy monitor various seminars, quiz competition, plays, painting competition and processions have been conducted to create awareness of energy conservation. An energy conserving water heating mechanism is also used in the school.

14. Community energy watch group has been formed to spread awareness for energy management.
15. Dissemination of the work was done through a press release in daily newspapers like Sikkim Express, Samay Danik, Prajashekti, Sikkim Reporter.
16. In- situ and Ex-situ means of conservation means of biodiversity all adopted in the school.

Any awards won-

1. The school was 1st runner up in State Green School Award 2015.
2. It has been recommended for National PM Purushkar also.

Observations:-

It is praiseworthy that the school is conducting so many activities towards greening. The entire programme is well planned. All the activities have been supported with the meaningful photographs. They are depicting the actual activity. The picture of the ‘Patlingo’ leaves needs to be given .The idea of wall plantation is praiseworthy.

vii) PUNJAB

33. Govt. Middle School, Phangtoli Karoli, Dist.-Pathankot

Activities under ESD:

- Created a biodiversity park at the school. It has trees like neem, amla, peepal, dharek and lemon. Plantation activity is done by the students.
- Distribution of pamphlets. Teachers and students distribute pamphlets. Among local people create awareness about environment.
- Celebration of important days – the school celebrates earth day, world environment day and World Biodiversity Day. The school participates in all the environment related activities. National Science Day is also celebrated in the school.
- Celebration of climate change week, with some props which are not too clear.
- Paryavaran Mitra Activity – The school is an active member of this.
- Herb Garden – The school has develop a herb garden

Any awards won:- NIL

Observations:

Many activities have been mentioned by the school. But everywhere the write up about the activities is missing .What is being done during all the celebration mentioned by the school and how it is being done and by whom all these things need to be addressed. Any outcome/ impact of all these activities is also missing .celebration of the climate change week is not at all clear.

34. Govt. Middle School, Bhadroga, Dist.-Pathankot

Activities under ESD:

1. Awareness generation among local people and the students in school.
2. Participated in every environment friendly activity
3. Plantation of various kinds of trees like Peepal, Neem etc.
4. Celebration of important days and weeks

Details of the activities: -

1. Distribution of pamphlets among people
2. Celebration of Wet Land Day – The school has celebrated this day. Painting and chart making activities were performed on this day. A presentation was given on LCD and the Principal also addressed the children. Mementoes were presented to the students
3. Celebration of world Environment day–during this celebration plantation activity was done by SMC committee chart making competition was held. Prizes were given
4. World Biodiversity Day and climate change week are also celebrated

Any awards won – NIL

Observations:-

No any building specification has been mentioned in the report on the celebration of various important days what has been done by the students in the school is not clear. How were they celebrated and their follow up activities and impact are also missing.

35. Govt. High School, Main Bazar, Hadiabad, Phagware 14

Activities under ESD:

1. Cleanliness drive in the school.
2. Poster making competition to same environment.
3. Rally was held to create awareness for the protection of the environment
4. Plantation activity was done in the school.
5. Care of the plants is taken by the students, which is decided by the house captains and eco club
6. Speeches were also delivered to generate awareness about the greening of schools.

Details of the activities-

1. Celebration of Van Mahotsava was done by planting trees
2. Environment Day celebration were held. Rally was conducted.

Any awards won – NIL

Observations:-

Details of the activities are missing .Pictures are not depicting in activity in action. It seems they have been clicked in the garden and in e-classroom.

36. G.H.S. – Ibrahimwal, Tehsil Phagwara (Kapurthala)

Activities under ESD:

- (i) Celebration of Earth Day, Explaining its importance to heavenly living beings on 22/4/14.
- (ii) Organization of ‘Bio- diversity Day’ on 25/5/14 an activity to be organized in the school under ‘Punjab State Council for Science and Technology’.
- (iii) A completion of ‘Innovative Practices in Agriculture for future/ sustainability’ was organized on 25/5/14.
- (iv) A painting competition on ‘ENERGY CONSERVATION’ was held on 10.09.2014 separately for Senior Students & Junior Students (A photograph showing the participants also attached)
- (v) On ‘Ozone Day’, the school Science teacher explained about the importance of the Ozone Layer ‘, its harmful effects.
- (vi) Observation of ‘Wild life Week’ on 3/10/14.
Road Safety week on 12/10/15
- (vii) Math’s Olympiad was held on 16/1/15 for class VI.
- (viii) Observation ‘Water Conservation Day’ on 5/11/14 and ‘World Aids Day’ on 01/12/14



pic 161

Observations:

The report does not reveal, whether these activities were organized, keeping in mind the concept of ‘Green School’ ‘Wet Day’ on 23/1/15. However, no newspaper clipping/visual proof has been attached in support of it.

37. Govt. Sr. Sec School Khera Dona (Kapurthala)

Activities under ESD:

Work in the area of environmentally sustainable practices:

As informed by the school, following days and other activities were organized by the school-

- (i) Wet Land Day
- (ii) Earth Day
- (iii) Biodiversity Day
- (iv) World Environment Day
- (v) Van Mahotsava



pic 162

- (vi) Ozone Day
- (vii) Health Day
- (viii) No Tobacco Day
- (ix) Save Energy Day
- (x) Save Water Day
- (xi) Aids Day

Any awards won: NIL

Observations:

Although the names of the days celebrated by the school have been given in a list, but what activities were performed in their celebration, what was done by the teachers, the students and what was the output of the celebration have not at all been mentioned. No any photograph of the same has been given.

38. Govt. Girls High School Dhillwan, (Kapurthala)

Activities under ESD:

Work done in the area of environmentally sustainable practices.

- (i) Celebration of the Earth Day
- (ii) Environmentally and Bio- Diversity Day were celebrated. On this occasion, trees were planted in the school ground. No photograph or newspaper cuttings are attached.

Any Awards won: NIL

Observation:

Plantation activity was performed. It is good that the innovative ways to lessen the pollution were thought over. But those have not been mentioned here. There is no any proof/evidence for the activity. Speech was delivered to create awareness among students.

39. Govt. High School Harbanspur, Phagwara Dist. Kapurthala

Activities under ESD:-

- (i) Plantation of a Mango tree in the campus.
- (ii) Plantation of Medical plants; hybrid Roses and Hedges
- (iii) World AIDS Day
- (iv) Painting Competition on Pollution; causes and prevention.
- (v) Cleanliness Service in and around the school campus

Any Award Won

- (I) No Award Won.
- (II) No certificate/ newspaper clippings/ articles attached.

Observations:

Most of the plantation activities have been done. Although plantation of Hybrid roses and hedges have been mentioned, but not photograph has been shown. Painting competition organized regarding pollution also does not show any evidence.

40. Govt. High School Bhawanipur (Kapurthala)

Activities under ESD:

- (i) Celebration of Earth Day.
- (ii) Cleanliness in the school campus.
- (iii) Van Mahotsava: Plantation of Local and Medicinal Plants.
- (iv) Rally regarding awareness about environment.
- (v) Cleanliness in School Campus.

Details of activities with photographs

- (i) Some photograph showing the teachers, addressing students on these occasions, are attached.
- (ii) The students and teachers organizing the rally about awareness programmes are shown in two photographs.
- (iii) In one photograph plantation of tree is depicted.

Any Award Won: NIL

Observations:

The school has organized several important days. But the activities performed during Celebration have no details. A few photograph depicted activity taking place have been attached and rest of the photograph, the activity is not clear.



pic 163

41. Govt. High School Toot Dist. Ferozepur

Activities under ESD:

- Plantation of 2000 plants in the schools and village.
- More than 40 Bio-gas and solar energy products are established by Eco- Club.
- Villagers have started growing crops without pesticides
- Farmers' help-groups help the farmers.



pic 164

Any Award Won

The school has won a prize in a Green School Project. But no evidence in support of it is attached.

Observations:

The school has worked in the area of plantation and energy conservation. It is good that the villagers have stopped using pest ides for their crops. It shows that the awareness among the community is also being generated. Infecting buffalos before milking there is avoided in the village, which clearly indicates that the community is getting awareness about all these things.

The school has won category 'C' prize in Green School Project in 2007. But no significant evidence is attached along with the report.

42. Govt. High School Nuepur, Dist.-Kapwethala**Activities under ESD:**

- Celebration and organization of 32 different competition on the Environment Day

Any Award Won: NIL**Observations:**

The school has celebrated Environment Day. Under which plantation activity was done. It is supported by the photograph also.

43. Govt. High School Bhandla Bet Teh. Dhilwan (Kapurthala)**Activities under ESD:**

- Earth Day Celebration, Painting Competition
- Biodiversity Day
- Environment Day
- No Tobacco Day
- Energy Conservation Day
- World Ozone Day
- World Aids Day
- World Wet Land Day

Any Award Won: NIL**Observation:**

The school has celebrated various important days. It seems the entire programme was an awareness generating programme.

44. Govt. High School, Noorpur Dona (Kapurthala)**Activities under ESD:**

- Celebration of
1. Earth day
 2. Bio-diversity Day
 3. No Tobacco Day

4. Environment Day
5. World Population Day
6. Wet Land Day & Trip to Wet Land (Kanjali)

Details of Activities

Not given

Any Award Won: NIL

Observations:

The school has celebrated different important days on their respective dates. Details of the activities were not given. There is no photograph along with the report.

45. Govt. Sr. Sec. School

- | | | |
|--------------------------|---|--------------------|
| (i) Mattewal | } | All Dist. Amritsar |
| (ii) GSSS Manawala Kalan | | |
| (iii) GSSS Lapoke | | |
| (iv) GMS Haran Kala | | |

Address: As above

Activities under ESD:

- Schools have established National Green Corps for plantation drive.
- Established various composting Units regarding the importance of green manure.
- Schools have replaced tungsten bulbs by CFL/LED
- Organised National Environment Awareness Campaign Programme.
- One of the schools in the district won the Green School Award.
- Rain water harvesting unit to preserve the precious water content.
- Under National Environment Awareness Campaign Programme schools are financially assisted up to Rs. 30,600/- to turn barren land in to fertile land to establish medicinal plants nursery and to make green drive in schools and in nearly field or region.
- Most of the schools now show their interest to collect electronic wasters and try to recycle that material with the help to MICROSOFT to dispose of, these hazardous materials judiciously
- Awareness rallies slogan competitions are also the part and parcel of these activities.

Details of Activities

1. These schools have established Green Parks for plantation activity. Activities for conservation of water, lake, rainwater harvesting unit, and also 104 vermin composting is also being done.

46. Govt. Middle School Dearsaidan Teh. Sultanpur Lodhi, Kapurthala

Activities under ESD:

- Earth Day

- Hand Wash Day
- Ozone Day
- World Aids Day
- Wet Land Day

Poster Competition, Slogan Competition or Seminars or Essay Writing Competition was organized on these.

Details of Activities

No photograph attached

Any Award Won: NIL

Observations:

The school has celebrated days on the stipulated dates. Certain awareness, generating programme has been done. No evidence/photograph is attached. Also, no details were given.

47. Govt. High School Ibban Dist.-Kapurthala

Activities under ESD:

- Celebration of Environment Day
- Cleanliness of School Campus
- Anti-drug rally

Details of Activities

- No Details given
- No photograph attached

Any Award Won: NIL

Observations:

No photograph on evidence has been sent. No information above the activities conducted during these celebrations is given along.

48. Govt. High School Gopipur P.O. Khallu Dist.-Kapurthala

Activities under ESD:

- Earth Day Celebration
- Environment Day
- Energy Conservation Day
- Ozone Day
- World AIDS Day
- Wet Land Day

Details of Activities

- i) Painting competition on Earth Day
- ii) Aids Awareness Day celebrated in the school.

Any Award Won: NIL**Observations:**

The school has celebrated important days. But they had been celebrated is not given. No evidence of the project. A newspaper clipping on Aids awareness day attaches which cannot be read properly.

49. Govt. High School, Sahni Teh. Phegwara Dist.-Kapurthala**Activities under ESD:**

- Wet Land Day
- Earth Day
- Environment Day
- Ozone Day
- Bio-diversity Day
- World AIDS Day

Details of Activities with pictures and photograph: Nil

Any Award Won: NIL**Observations:**

Ozone day won celebrated. The news was given in the newspaper also. It is not readable. Other important days were celebrated. But their days are missing.

50. Govt. Sr. Sec. School, Wadala Kalan Kapurthala**Activities under ESD:**

- Celebration of Wet Land Day
- World Earth Day
- Bio diversity Day
- Environment Day
- Ozone Day

Details of Activities with photograph

- In two separate photos, one student each speaks on the occasion
- Photograph showing the Principal, planting the tree
- Students cleaning the school premises.

Any Award Won: NIL**Observations:**

Plantation activities were done while celebrating Environment Day and Biodiversity Day. Poem recitation / speeches delivered on this occasion.

51. Govt. High School Thatanawan Teh. Sultanpur Lodhi, Dist.-Kapurthala**Activities under ESD:**

- World AIDS Day

- World Ozone Day
- World Environment Day
- World Anti-tobacco Day
- Earth Day

Details of Activities with photograph

No

Any Award Won: NIL

Observations:

The painting, debate, Essay writing, Poster Making Slogan Writing and Quiz competition was held in the school in celebration of various important days. No photograph attached.

51. Govt. High School Humbowal, Teh. Bholath Dist.-Kapurthala

Activities under ESD:

- Seminar on Awareness about Environment
- Poster making competition (subject/topic not mentioned)
- Wet Land Day
- Competition about 'SAVE WATER' (Nature of the competition not given)

Details of Activities with photograph

Not given

Any Award Won: NIL

Observation:

The school Organised Environment awareness day wetland day, and save water. No detail given and no evidence attached.

52. Govt. Sr. Sec. School, Kapurthala, Near Civil Hospital, Kapurthala

Activities under ESD:

- Celebration of Earth Day
- Biodiversity Day (Painting Competition)
- Plantation of tress saplings
- World Forest Day
- World Water Day

Details of Activities with photograph

No

Any Award Won: NIL

Observations: The school celebrated the above mentioned days by organizing painting competition.

54. Govt. Sr. Sec. School, Dayalpur (Kapurthala)

Activities under ESD:

- Declamation contest
- Painting /Poster making
- Poem /Song/skit/Role-play/Rallies /Plantation/Field Visits

Details of Activities with photograph

Thought the report claims, that the details and newspaper clippings are attached. However, these are not there

Any Award Won: NIL

Observations:

Various competitions were organized in the school, but their themes not given.

55. Govt. High School, Haibatpur Saltanpur Lodhi (Kapurthala)

Activities under ESD:

- Earth Day
- International Biodiversity Day
- World Forest Day
- Environment Day

Details of Activities with photograph

- Photograph showing plantation in the school by the students/teachers attached.

Any Award Won

A newspaper clipping along with the news published in the paper, celebration of environment.



pic 165

Observation:

The School organized four important days. A newspaper clipping also attached showing plantation activity.

56. Govt. High School Panchhat, Teh. Phagwara, Dist.-Kapurthala

Activities under ESD:

- Chart Making Related to Earth Day.
- Plantation and chart making on Biodiversity Day
- Cleanliness drive and chart making on Environment day
- Declamation contest on Ozone day
- Quiz and chart making on Wet Land Day
- Environment Quiz

Any Award Won: NIL

Observations: Important days. No evidence has been attached.

57. Govt. Sr. Sec. School, Hussainpur (Rail Coach Factory)

Activities under ESD:

- Plantation of trees.
- Celebration of World Health Day
- Natural Diet Week.

Details of Activities

- i) Plantation in the school compound.

Any Award Won: Nil

Observations:

Plantation of Neem trees. Beds have been prepared for growing seasonal vegetable to be used for Mid Day Meal Programmes.

58. Govt. High School DhaliwalDonar Kapurthala

Activities under ESD:

- Cleanliness of School Campus
- Biodiversity Day-Plantation
- Environment Day-Poster Making
- Van.- Plantation
- Ozone Day/Conservation of energy- Painting competition
- ‘Save Water’ Day- Poster Making
- Road Safety Week- Poster Making
- Wet Land Day

Any Award Won: NIL

Observations:

Various important days were celebrated. A newspaper clipping shows that information regarding the conservation of water. Information about water bodies and Bio-diversity is given.

59. Govt. Middle School Kang Dist. Shaheed Bhagat Singh Nagar (S.B.S. Nagar)

Activities under ESD:

- Climate Change Week.

Details of Activities with photograph

Not given

Any Award Won: Nil

Observation:

The School organized climate change week. There is no evidence for the activity. No photograph attached.

60. Govt. Middle School Buraj Kandhara (S.B.S.Nagar)

Activities under ESD:

- Climate Change Week (Cleanliness of the school, Plantation) during this week Poster making

Details of Activities - Not given

Any Award Won: NIL

Observations:

Plantation activity was done for celebrating the Climate Change Week.

61. Govt. Sr. Sec. School, Thopia Teh.Balachaur, Dist.-SBS Nagar

Activities under ESD:

Work in Area of Environment Sustainable practices

- Rallies, debates, poster competition on plantation, drug addiction, protection of Ozone layer, Global Warming, Energy conservation, Anti tobacco, World Population Day

Details of Activities with photograph

It has not been stated whether these activities were organized in the school or not.

Any Award Won: NIL

Observations:

Although many activities have been conducted, but no picture is sent

62. Govt. High School Laroya, Block-Makandpur Dist.- SBS Nagar

Activities under ESD:

A herbal garden has been developed in the school under ECO Club. There are about 22 such plants in the garden.

Details of Activities with photograph: Not given

Any Award Won: NIL

Observations:

Plantation of 20 medicinal plants in the herbal garden is an important activity. The names of the plants are also given.

63. Lt. Gen. B.S. Memorial Govt. High School Mehandipur Teh. Balachaur, S.B.S. Nagar

Activities under ESD:

- Plantation
- Cleanliness
- Saving Environment

- Decreasing Pollution
- Recycling Waste Material

Details of Activities with photograph

- a. Earth Day
- b. Water Saving Day
- c. Bio-Diversity Day
- d. Anti Tobacco Day
- e. Aids Day
- f. Saving Ozone Day
- g. Wet Land Day

Organization of About 17, such days have been reported without giving any evidence.

Any Award Won: NIL

Observations:

The school celebrated many important days, but these are no photograph/details about this.

64. Govt. High School Bahiram, SBS Nagar

Activities under ESD:

- Painting Competition

Detail of Activities

- Not given

Any award won: NIL

Observations:

A painting competition was organized. But the themes is not given. No photograph attached.

65. Govt. High School Hakimpur

Activities under ESD:

- Climate change week

Detail of Activities:

- Slogan writing on climate change
- Plantation

Any award won: NIL

Observations:

The actives organised was climate change week. Students were asked to write slogan on this. The plantation was also done as fewer occasions.

66. Govt. Middle School Bhaura (Dist.-SBS Nagar)

Activities under ESD:

Celebration and Climate Change week

Detail of Activities:

- Organization of Rally for awareness among people

Any award won: NIL**Observations:**

The school organized rally for awareness of climate change.

67. Govt. High School Takarla. Dist.-SBS Nagar**Activities under ESD:**

- Climate Change week
- Plantation of trees.

Detail of Activities :

- Organization of Rally for awareness among masses
- Four Photographs attached but detail is not clear.
- Poster making competition (Topic/Subject>Title not given)

Any award won: NIL**Observations:**

The school organised climate change week. Rally was organized. Poster making competition was also organised by line Topic/ Title of the completion not.

68. Govt. Senior Sec. School Mandhali Dist.-SBS Nagar**Innovative Activities:**

- Climate Change week

Detail of Activities :

- Poster competition
- Four Photographs attached

Any award won: NIL**Observation:**

Plantation and poster competition were organised regarding Climate Change Week in the school.

69. Govt. Middle School Raipur Dobb Dist.-SBS Nagar**Activities under ESD:**

- Climate Change week

Detail of Activities

- Not given

Any award won: NIL**Observations:**

The school organised climate change week. The details of the events were not given.
No photographs sent.

viii) KARNATAKA

70. GHPS Bage.

Activities under ESD:

Some of the activities have done in the school for making Environment Eco Friendly by Plantations, (Herbs), and Growing Vegetables for Aksharadasoha, making fertilizers for plants, growing different kinds of vegetable plants like Brinjal, Beans, Pumpkin and Flowers and growing silver plants.

Any Awards won: Nil

71. GLPS Hullhally

Activities under ESD:

Some of the activities have done in the school for making environment, eco-friendly by plantations of different kinds of flowers, Growing vegetables, flowers, growing banana plants, making fertilizer for plants.

Any Awards won: NIL

72. GHPS Dodkunduru

Activities under ESD:

Some of the activities have done in the school for making environment, eco-friendly by plantations of different kinds of flowers, Growing vegetables, flowers, growing banana plants. Making fertilizer for plants.

Any Awards won: Nil

73. GHPS Heggadde

Activities under ESD:

Some of the activities have done in the school for making environment, eco-friendly by plantations of different kinds of flowers, Growing vegetables, flowers, growing banana plants. Making fertilizer for plants.

Any Awards won: NIL

74. Govt. Lower Primary School, Keralur, Belur-Tq, Dist.-Hassan.

Activities under ESD:

They have grown many useful plants, trees, flowery plants, food producing plants, fruity plants, medicinal plants, etc. for example- Banana, Mango, Saffota, Jackfruit, Coconut, Rose, and other different kind of vegetables.

Every day they are using vegetables for mid-day-meals in school. In this way school garden is helpful to school children for their good health, for learning and other activities

Any Awards won: NIL

75. Govt. Higher Primary School, Keralur, Belur- Tq. Dist.- Hassan.

Activities under ESD:

They have grown many useful plants, trees, flowery plants, food producing plants, fruity plants, medicinal plants, etc. for example- Banana, Mango, Saffota, planate, Jackfruit, Coconut, Rose, and other different kind of vegetables plants.

Every day they are using vegetables for mid-day-meals in school. In this way school garden is helpful to school children for their good health, for learning and other activities.

Any Awards won: NIL

76. GLPS Kuduravally

Activities under ESD:

- Some of the innovative activities have done in the school for making environment Eco friendly by planting different plants.
- Making fertilizers for plants.
- They are using drainage system
- Growing Banana trees, and different types of vegetables flowers.

Any Awards won

The School has won two certificates from the “ParisaraMithra” in the area of environmental sustainable practices.



pic 166



pic 167



pic 168



pic 169

77. GHPS Hunasavally

Activities under ESD:

- Some of the innovative activities have done in the school for making environment Eco friendly by planting, Growing Vegetables, Making fertilizers for plants, they have drainage system. They are growing Banana Trees, different types of vegetables, flowers. They are growing Charismas trees, fruit trees, Papaya tree, and show plants.
- Coconut trees, silver tree.
- They have good beautiful ground of playing

Any Awards won

GLPS thoragaravally has won certificate from the ‘ParisaraMithra’ in the area of environment sustainable practices.



pic 170



pic 171

78. GLPS Thoragaravally

Activities under ESD:

- Some of the innovative activities have done in the school for making environment Eco friendly by planting, Growing Vegetables, Making fertilizers for plants, they have drainage system. They are growing Banana Trees, different types of vegetables, flowers. They are growing Charismas trees, fruit trees, Papaya tree, and show plants.
- Coconut trees, silver tree.
- They have good beautiful ground of playing

Any Awards won

GLPS thoragaravally has won certificate from the ‘Parisara Mithra’ in the area of environment sustainable practices.



pic 172



pic 173

79. Govt. Lower Primary School Valakadama

Activities under ESD:

The School contributes major gifts for green surroundings for examples they have planted cashew nut, coconut are plants.

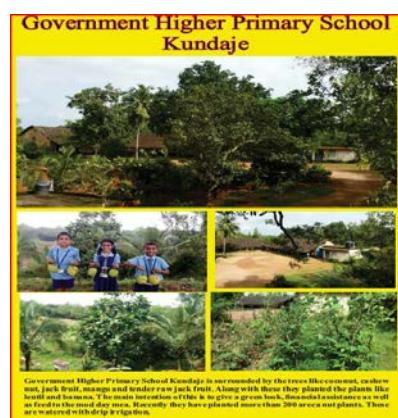
- These plants give a green look to the school premises

Awards: NIL

80. Governments Hr. Primary School Kundage

Activities under ESD:

The School is surrounded by the trees like coconut cashew nut,



pic 174

jack fruit, mango and tender raw jack fruit. Along with these they planted plants like lentil and banana.

- The main intention of this to give a green look;
- Recently, they have planted more cashew nut plants.
- These are watered with drip irrigation

Award any: NIL

81. D.K. Z.P. Govt., Model Higher Primary School

Activities under ESD:

On the occasion of Diamond Jubilee, the school has cleaned their surroundings areas.

- Celebrated 'World Environment Day'
- KIOCL Mangalore has renovated school garden with different species of plants

Awards: NIL

Observation:

Activities are mainly restricted to plantation & maintaining of gardens & trees around the school premises. The other aspects of greening of schools are not taken care of.



pic 175

82. D.K. Z.P. Govt., Model Higher Primary School, Markada, Mangalore

Activities under ESD:

On the occasion of Diamond Jubilee, the school has clean their surroundings areas.

- Celebrated 'World Environment Day'
- KIOCL Mangalore has renovated school garden with different species of plants -

Awards Won: NIL



pic 176

83. Govt. Higher Secondary School, Mandhar, Block-Dharinva, Dist.- Raipur

Activities under ESD:

There is a facility of dustbin in each class and school. Students maintain discipline and take care of cleanliness themselves, which helps in keeping the school clean. School has kept Napkin for sanitation purpose which is being used by girls of school and women's of the village. This is spreading the message of cleanliness and health passed in complete village.

There are factories all over around. The Mandhar village as a result of which is getting surrounded by dust, smoke and carbon.

Under this pollution, each student has taken a donation to plant 1100 plants to maintain the environment. Students have made a rose garden and kitchen garden in the school premise. They have also planted flowering and fruiting and medicinal plants in the school. Students play an important role in looking after these plants. They put plants by their and their class' names, which increase their attachment much more with these plants.

Awards- NIL

References

- Apple, M.W. & Beane, J.A (2006). Democratic Schools; Lessons from Chalk face.
- Bhopal: Report of the United Nations Conference on the Human Environment, Stockholm, 1972. <http://www.UneP.Org/Documents.Multilingual/Default.Asp?Documentid=97>
- Decade of Education for Sustainable Development, 2005-2014, <http://www.desd.org/>
- Framework for the UNDESD International Implementation Scheme, <http://unesdoc.unesco.org/images/0014/001486/148650E.pdf>
- Johannesburg Declaration on Sustainable Development,
<http://www.joburg.org.za/pdfs/johannesburgdeclaration.pdf>
- Henderson, K and Tilbury, D. (2004) Whole-School Approaches to Sustainability: An International Review of Sustainable School Programs.
- Report Prepared by the Australian Research Institute in Education for Sustainability (ARIES) for The Department of the Environment and Heritage, Australian Government. Available at http://aries.mq.edu.au/projects/whole_school/files/international_review.pdf
- Johannesburg Declaration on Sustainable Development,
<http://www.joburg.org.za/pdfs/johannesburgdeclaration.pdf>
- Apple, M.W. & Beane, J.A (.2006). Democratic Schools; Lessons from Chalk face.
- Report of the World Commission on Environment and Development: Our Common Future, <http://www.un-documents.net/wced-ofc.htm>
- Rio Declaration on Environment and Development, 3-14 June 1992, <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163>
- Towards a Green Future: A Trainer's Manual on Education for Sustainable Development. Ahmadabad : CEE.

United States Environmental Protection Agency (2011). Service Learning –Learning by Doing: Students take Greening to the Community. Washington, D.C.: EPA.

UNECE (2012). Learning for the Future: Competences in Education for sustainable Development.. Switzerland: UNECE,
http://www.unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf

Web sites: Learning for a Sustainable Future.

<http://www.lsf-lst.ca/>http://www.ceeindia.org/cee/ceenario_archive/ceenario57-new.html



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