The Impacts of the National Green Corps Program (Eco-clubs) on Students and their Participation in Environmental Education Activities

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“Nature is not for everyone’s greed, it is only for each one’s need” ~ Mahatma Gandhi
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Finally, I would like to note that as senior researcher and primary author of this report, I am solely responsible for the accuracy of the statements and interpretations contained within this document. Assistance provided by Sirisha Indukuri was also invaluable to the end result of this final product. Our collective interpretations do not necessarily reflect the views of the sponsoring organizations, or of the previously contracted agencies who conducted prior evaluations of the National Green Corps.
The Impacts of the National Green Corps Program on Students and their Participation in Environmental Activities

Executive Summary........................................................................................................ 4

I. Introduction.................................................................................................................. 6

II. Methodology and Data Analysis.............................................................................. 11
   Phase I (Document Review)....................................................................................... 11
   Phase II (Field Site Visits)....................................................................................... 12

III. Findings.................................................................................................................... 14

IV. Conclusions............................................................................................................... 35

V. Recommendations.................................................................................................... 38

Annexure:
   A. NGC “34 Points” ................................................................................................. 47
   B. List of professional interactions .......................................................................... 48
   C. EE Career Development Programs (sample)..................................................... 49
   D. Program Models (Internet sites): Environmental Education, Conservation & Natural Resources ............................................................................................................. 50
   E. Listing and chart of Eco-club Activities............................................................... 53
   F. Matrix of activities by region, state and category............................................. 64

References.................................................................................................................... 69
Executive Summary

• 2005-06 Eco-clubs were in existence in nearly 68,000 schools across India representing 150 Eco-Clubs per district. The target for school year ‘06-‘07 is 70,000 schools and 250 Clubs per district.

• Eco-clubs are in existence in each District of every State/U.T. and are implemented through a four tier system: National (MoEF, National Steering Committee), State (State Steering Committee, Resource Agency, State Nodal Agency), District (District Implementation and Monitoring Committee [DIMC]), and Eco-clubs at the School level. (Note: The State Education Departments are officially responsible for the implementation of the NGC at the district level).

• Objectives for the Eco-clubs: 1) Educate children about their immediate environment (increase awareness); 2) Impart knowledge about eco-systems, their interdependence and need for survival, through visits and demonstrations; 3) Mobilize youth by instilling in them the spirit of scientific inquiry into environmental problems; and 4) Involve them in active efforts of environmental preservation.

• Fulbright grant: The current study was multi-method consisting of two primary phases: 1) Document review of four previously completed evaluations (i.e., 12 states studied) and activity highlights from all 35 States/U.T. and 2) Semi-structured interviews and focus groups. Other documents reviewed include annual progress reports, a small sample selection of related Internet sites, and the “education and awareness” section of the MoEF annual report for 2004-05.

Major Findings / Conclusions

• Conceptual framework: The spirit behind NGC is alive and has received positive (overall) support among leaders who are actively involved across the nation.

• Management structure/Operations: There is a need to re-look at the management structure involved in the NGC and consider a new format/program design for implementation.

• Outcome measures: There is a need for all management & implementation levels involved to focus less on quantitative output and more on qualitative outcomes and impacts of program.

• Curriculum: The NGC has been generally successful in enriching the school curriculum. The supplemental activities and tasks completed by the student – This enriches student learning.

• Activities: Tree plantation and cleanliness drives are the top two most conducted activities in all Eco-clubs across India. (See Annexures E and F for complete list).

• Program essence: In its existing state, the NGC has peripheral presence; this is reflected in the whole system and operation of the program. Commitment, among some leaders, can be questioned and seriousness of outcomes is vague. To make an Eco-club an integral part of the school, and to remove it from its peripheral status, operations, management and implementation must be improved at all levels.

• Fund raising is lacking and has proven to be immensely important. Schools may need assistance regarding how/where to look for other avenues for funds for fulfilling Eco-club objectives.

• School teachers: The majority of “teachers-in-charge” (TIC) indicate being overloaded with other teaching assignments and school-related tasks so report having “little time for NGC.”

• Training: Too many inconsistencies. Lack of mandatory training, types of training offered varies, and the lecture format dominates. Must be more hands-on in future.
Key Recommendations for Improvement of the Scheme

- **Suspend program expansion**: Multiple problems exist among each of the five broad categories of the NGC 34-points. (see Annexure A for variables under study). The issues investigated have provided significant findings to recommend a moratorium on expansion of the Eco-clubs so as not to include any other schools until the seriousness of some of the problems are mitigated (Examples: serious communication issues, reporting problems, funding issues, training deficiencies and inconsistencies, lack of follow through by several managing agencies in the hierarchy/NGC structure, problems/inconsistencies with resource materials).

- **Streamline the organizational structure** and hierarchy of program management and implementation. The current system is considered “too top heavy, too cumbersome” and is plagued with a serious lack of accountability and breakdown of communication. A suggested structure for managing the program to increase efficiency and enhance more targeted results - to meet NGC goals (page 7; objective statements, page 9).

- **Major gaps**: For successful sustainability of the program, the following components must be addressed to avoid further bottlenecks and breakdowns of the system: Teacher trainings, monitoring/tracking, distribution of adequate funds, availability of resource materials for direct use by the Eco-clubs in the schools (and ensure production in local language), and decide on appropriateness/benefits of integrating Eco-clubs into the curriculum (complete infusion or remain external as “club” is supposed to operate) or maintain this program as a stand-alone extracurricular opportunity for students.

- **Report card system** and development of a program time line (i.e., see CMS findings and recommendations) should be considered as an efficient tool for monitoring.

- **Publicity/Media**: The Ministry should consider focusing on publicity of Eco-clubs at the national level by creating a program promotion campaign for advertising the mission and vision (when developed), existence, and overall activities being accomplished by these ECs. A tag-line or program slogan would help generate more consciousness as well.

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*Focus group with Eco-club members at the SMDJ School in Jaipur*

“The scarcity of water is increasing… the cutting of trees is also aggravating the lack of water… this creates a lot of problems for us … public awareness is very important, there should be more of it…”
Introduction

“There were many more animals, plants, and trees than there are today... everything is getting destroyed. The way harm is being done to the environment I am told that we could prevent this. Then it came to my mind that if we can save it, then I want to join this Eco-club.”
~ Eco-club member: Moginand Government High School  
Sirmour District, Himachal Pradesh – (Motivation to join Eco-club)

In the current education environment, schools must constantly supply evidence of student learning through measuring results obtained by reaching curriculum goals based on standards. Likewise, extracurricular activities such as the National Green Corps (NGC) Eco-clubs must use evaluation methods to assess their effectiveness, demonstrate their community value, provide useful resource materials, and (in general) meet requirements set forth by the District, State, as well as Ministry levels.

The environmental issues and concerns of India are vast and providing innovative approaches and supplemental materials for various school-based programs is a significant means of helping to mitigate some of the concerns. As more and more young people learn that “nature and humans are inseparable” the more they will realize how land, water, air, wildlife, etc. are interconnected, interrelated and interdependent with all of us as human-beings. India has valid concerns about such elements as air pollution, water scarcity and contamination, degradation of land resources, and loss of biodiversity. Having healthy natural resources is essential for survival; the land does not belong to us, on the contrary, we are all part of the land – how do we teach young people about this and know whether they understand? Subsequently, will their attitudes and behavior change? Will involvement influence their career decisions? A primary goal for evaluating NGC programs in India helps determine if current efforts are successful and, if so, how; if not, why not and what corrective measures are essential for consideration. If efforts should be directed towards strengthening institutions, training leaders, exchanging information, and integrating knowledge of complementary efforts of multiple agencies dealing with the environment, evaluation needs to be on-going and a vital tool for making effective decisions. Part of the intent of this project is to report sufficient detail and recommendations to assist the Ministry of Environment and Forests (MoEF) and NGC program with their overall strategic planning for the next five years to 2010.

NGC Project Methodology\(^1\): (1) Conduct a comparative analysis for currently existing evaluation projects already completed using a document review method, and (2) Evaluate the planning and implementation of no more than three NGC programs through school site visits and interviews (the number of interviews was modified/reduced due to adverse limitations of the grant period.) ~ Note: The document review also contained general materials about the NGC along with examination of a random sample of annual reports submitted by State Nodal Agencies and web sites of a variety of Eco Club programs.

\(^1\) Note: Clearance for my research visa was delayed. The study was therefore modified and completed in a shorter duration. Extension of this visa, due to research obligations with the U.S. National Park Service, was impossible. Preliminary reading and program investigation, however, about the NGC had occurred in advance prior to arrival in India.
Messaging: By supporting this type of study, the MoEF continues to send powerful messages to their constituents about the NGC commitment to excellence in educating youth about resource protection as well as direct service delivery of the program. Use of qualitative methods can best provide an in-depth understanding of the phenomena in question such as through use of personal interviews, observations, and document review as undertaken in this current study. The evaluation reports reviewed included quantitative instruments as part of their information gathering process. In general, employing this type of mixed methodology allowed for sufficient data collection in the timeframe allotted as well as systematic analysis and reporting.

Environmental education efforts in India – An abridged historical recap of the “nature club” movement: While there is a wide-ranging history of environmental education in India, spanning over a century, this brief section offers a few snapshots of information obtained during this study period. “Nature clubs” have existed in India for more than one-hundred years in some capacity. For example, the Bombay Natural History Society started its work in 1883 at Mumbai. The Madras Naturalist Society created the science club concept and this was developed in 1886.

Into the twentieth-century numerous organizations and programs began to surface. The Assam Science Society was set up in 1953 to disseminate science knowledge and impart environmental education and training through camps for teachers and students as well as conduct surveys on environment. The WWF Fund for Nature was set up in 1969 sparking a new decade of the nature center movement and within a few years (1971) the WWF started the “Nature Clubs” for youth. This was followed by establishment of the Centre for Environmental Education (CEE) set up in 1984 to spread awareness of environmental issues and contributing to finding solutions for them. CEE developed a well-known book of activities printed in approximately 14 different languages. In addition to the above enabling and empowering activities which have made a difference, others were carried out in the form of coordinated nationwide projects and have had impacts in more ways than one. One major project among these has been the Bharat Jan Vigyan Jatha (BJVJ) of 1987 known as the “People’s Science Movement”. Interestingly, this was a more rural-based program, not elitist, where people accomplished important environmental tasks with no money; they did not operate under any formal or regimented system, but were an organized force in the community. The Ministry of Human Resources Development later suggested that teacher training needed to occur in the form of environmental orientation which began to occur across India in the early 1990s.
(Source: http://edugreen.teri.res.in/explore/ngos.htm)

National Green Corps

The MoEF modeled their environmental education programs from the nature club model and history and subsequently provided the necessary structure, logistics and mode of consolidation of bringing many programs together helping to raise the standards and visibility of environmental education across India. Through these recent efforts, the MoEF has provided a good start for this important national direction.

This began informally with the concept of the “Eco-club” arising in 1986 and was known as a “Scheme”. Financial assistance was provided on a case-by-case basis with no institutional framework. In 2001, the National Green Corps (NGC) program was developed and provided the framework needed for the Eco-clubs to succeed. The NGC is currently being implemented all over the country (e.g., four regions) with an overall goal of “spreading environmental awareness among school children.” More specifically, the aim of the NGC is: “To impart environmental education and to encourage and mobilize participation of school children in various environment education activities in their localities” (MoEF, Annual Report, 2004-2005). Furthermore, pursuant to this purpose,
another statement found on the Internet provides support for the MoEF initiatives for strengthening non-formal environmental education in order to “...educate children about their immediate environment and impart knowledge about the eco-systems, their interdependence and their need for survival, through visits and demonstrations and to mobilise youngsters by instilling in them the spirit of scientific inquiry into environmental problems and involving them in the efforts of environmental preservation.” This goal is being achieved by establishment of Eco-clubs in every district in each State and U.T. across India with an emphasis on action oriented environmental programs. The respective governments are free to set up as many Eco-clubs as they would like yet financial assistance is only provided by the MoEF to a certain number of clubs per district.

Broadly, the clubs work as “agents of change creating a spirit of conservation and mobilizing citizens into environmental action” (www.socialforestryguntur.com/ngc.html). Furthermore, as noted on the West Bengal Pollution Control Board website, “…Children constitute the most significant fragment of our society. As the foundation for developing responsible citizens begins in the school years, young children are at an ideal age to start learning about environmental issues. By participating in environmental activities under the NGC program, children would very easily acquire the basic knowledge, skills & values that promote environmental responsibility” (www.wbpcb.gov.in/html/ngc/ngc.shtml).

The general program hierarchy flowchart of management and implementation can be found on page 10 of this report. The scheme is currently operated through Eco-clubs formed in member schools:

- Each club has 30-50 children, who show interest in environment related issues.
- Each Eco-club is supervised by a Teacher In-charge, who is selected from among the teachers of the member school on the basis of his/her interest in environment related issues (or through appointment by the school principal).
- Each Eco-club should be provided with a kit of resource material in the language of their preference apart from a token monetary grant of Rs. 2500/- per annum (formerly Rs. 1000/- per annum), for organizing different activities.
- There is a District Implementation and Monitoring Committee (DIMC) to supervise, organize training for in-charge teachers, and monitor periodically the implementation of scheme at the District level. There are one or two Master Trainers in each district to assist the teachers-in-charge for smooth functioning of the Eco-club activities.
- There is a State Steering Committee to oversee the implementation of the scheme.
- The State Nodal Agency coordinates the implementation of the scheme in the State and organize related activities (e.g., training for Master Trainers).
- The National Steering Committee gives overall direction to the program and ensures linkages at all levels.

1 Adapted from http://envfor.nic.in/divisions/ee/ngc/nge_brochure.html#1

Resource Material: The environmental materials developed and/or provided by the resource agencies are typically books, posters, pamphlets, and a few activity kits. These are selected and developed based on the guidelines provided by the MoEF and take into consideration local problems first, then issues within any given state, then across India. These resources are principally in the local language, but not always, as well as English and are updated with each reprint (duration varies). On the other hand, if a resource agency is already in the business of producing certain environmental education type materials, these may simply be passed along to schools for their use but not produce special for them.
**NGC Objectives**

- To make children understand environment and environmental problems.
- To provide environmental education opportunities for school children.
- To utilize the unique position of school children as conduits for awareness of the society at large.
- To facilitate children's participation in decision making in areas related to environment & development.
- To bring children into direct contact with the environmental problems facing the society they live in and make them think of solutions.
- To involve children in action-based programs related to environment in their surroundings.

“...Only when we give something to nature will we get something in return.”

~ Eco club member, Moginand Government High School, H.P.

**Background for the NGC Evaluation Process**

In 2004, the Ministry of Environment and Forests (MoEF) identified and contracted four agencies to conduct evaluation based on the previous experience of these entities. These currently existing reports were completed by the following Delhi-based organizations:

1) Centre for Media Studies (CMS)
2) Development Alternatives (DA)
3) The Energy Resources Institute (TERI).
4) World Wildlife Fund (WWF)

CLEAN-India (Development Alternatives), WWF-India, and TERI have been working with schools on environmental issues and projects and CMS has been doing other evaluative type projects for the MoEF. Apparently, all four of these agencies had been previously collaborating also on other projects. CLEAN-India (Community Led Environment Action Network), a nationwide program of Development Alternatives, was initiated in 1996. They have been working with schools and communities on environmental assessment, awareness, advocacy and action in 78 cities and towns across the country reaching out to millions of children. Their program is evaluated externally by the funding agencies as well as internally by the CLEAN team on an annual basis. This experience was useful in the planning and preparation of the questionnaires for all four of these external evaluations that were investigated through the present *document review* procedure. This team of four agencies decided they should design and use common questionnaires. Over numerous meetings, the questionnaires and the reporting format were prepared with continuous inputs from Alka Tomar (CMS), Krishna Bharali (TERI), Ajay Mohaptra (WWF) and Usha Srinivasan (Development Alternatives). Each agency chose three states for their respective evaluations based on pre-determined criteria for selection.

The overall goal was to assess and understand the effectiveness of the NGC Eco-clubs program against the set objectives of the MoEF and the program impact on school children so that the *gaps*, if any, could be suitably addressed and the *best practices*, if any, could be successfully replicated during future phases of implementation across the country.
Progression of Eco-Clubs through Funding

It is important to remember that while the concept of “Eco-clubs” was officially established as a formal, structured scheme, environmental education programs for youth across India have been in existence for several decades (e.g., nature clubs). As mentioned on page 5, the Government of India (i.e., MoEF) provided financial assistance in 2001 with formal establishment of Eco-clubs across the nation. This originally occurred at Rs.1000 per Eco Club for undertaking activities. This has since been increased to its current seed allocation of Rs. 2500 per Eco-club beginning in school year 2005-06:

<table>
<thead>
<tr>
<th>School Year</th>
<th>No. of Eco-clubs (per district)</th>
<th>No. of Eco-clubs Supported</th>
<th>Amount of Funding from MoEF (per yr/per club)</th>
<th>Financial Assistance Provided (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>100</td>
<td>57600</td>
<td>Rs. 1,000/-</td>
<td>Rs. 5,39,09,392/-</td>
</tr>
<tr>
<td>2002-03</td>
<td>100</td>
<td>37206</td>
<td>1000/-</td>
<td>4,46,11,499</td>
</tr>
<tr>
<td>2003-04</td>
<td>150</td>
<td>78250</td>
<td>1000/-</td>
<td>7,74,06,708</td>
</tr>
<tr>
<td>2004-05</td>
<td>150</td>
<td>68125</td>
<td>1000/-</td>
<td>7,31,10,540</td>
</tr>
<tr>
<td>2005-06</td>
<td>150</td>
<td>67943</td>
<td>2500/-</td>
<td>17,55,90,728</td>
</tr>
<tr>
<td>2006-07</td>
<td>250</td>
<td>70000 (approx)</td>
<td>2500/-</td>
<td>17 to 20 crore (proposed)</td>
</tr>
</tbody>
</table>

Current Framework of the Program
Methodology and Data Analysis

Phase I

Documentation of program success, program planning, implementation tools and resources, and a focused evaluation design all contribute to an evaluation’s usefulness. A high level of stakeholder involvement also improves an evaluation design, increases stakeholder understanding of the Eco-clubs, provides a tool for procuring additional financial and in-kind contributions, and improves Ministry satisfaction with the evaluation overall. As Senior Researcher of this project, I will add that evaluations conducted by these four external contractors provide added credibility due to the objectivity and expertise of the researchers as well as reputation of their respective agencies across India.

This phase was an objective document review and analysis of secondary data that occurred independently by me as Senior Researcher with assistance of a research associate. This phase consisted primarily of reviewing four evaluation reports completed by the previously noted NGO agencies in 2005. Second, a variety of materials and documents about the NGC were reviewed, including website content reviews. Activities conducted by Eco-clubs in all 35 States/U.T.s were captured from annual reports submitted by State Nodal Agencies. A document review provides contextual information for the evaluation as a whole and responds directly to some of the evaluation issues and questions posed by MoEF. It describes the program in detail as well as economic challenges confronting Eco-clubs and managing agencies. The review includes successes and problems as provided by key players and their respective roles as well as program implementation procedures. Furthermore, it provides an overview of activities to date and reviews some of the key issues that have emerged since the inception of the program in 2001.

This method helps determine consistency (or lack of) among methodology across evaluators; detects problems in document content (e.g., report errors, omissions); identifies uniform themes across report findings, conclusions and recommendations; determines gaps in the program overall; and allows for depth of synthesis to provide concrete recommendations, as an aggregate, to the MoEF. The document review procedure provides reliability and completeness of assessment across content of reports (Creswell, 2003). Second, at a different timeframe and location, the project research associate first reviewed the “at-a-glance” matrix that was designed and completed; second she inspected the four evaluation documents for content based on objectives; and third provided her input and feedback for modifications and/or additions to the matrix. Validity was achieved as each member of the research team completed this task on separate occasions, compared outcomes, and generally agreed on the meaning of the responses to formulate logical items used for the final list as provided in the final matrix (see page 15).

Four evaluation reports were released by the Ministry for review and analysis purposes. As mentioned in the introduction (see page 6), the MoEF decided to evaluate the NGC program in 12 states involving expert agencies during fiscal year 2004-05. Each organization chose three states from different regions across the country – The sample size of Eco-clubs was either 50 or 100 per state and care was taken to ensure a representative sample. Each evaluating agency explored the following seven factors:

a] Role of teacher-in-charge (i.e., strengths and weaknesses); b] Impact of Eco Club on student members in terms of sensitization towards the environment; c] Usefulness of resource materials; d] Coordination between Nodal Agency and Resource Agency; e] Role of the Resource Agency; f] Overall implementation and monitoring mechanisms; and g] Suggestions for improvement.
The evaluation teams all came together in a round-table, in advance of their respective studies, to meet and discuss an evaluation strategy. A meeting convened in December of 2004 to discuss the collective purpose and determine content of questionnaires used for consistency purposes across the country.

Major tasks were discussed and agreed upon based on the contracting arrangements with MoEF; components of each study were to include all items making up the 34 Points, and the time period consisted of five months (November 2004-April 2005). Furthermore, each agency was supposed to follow a mutually agreed upon procedure for obtaining sample size and design, selection of districts and Eco-clubs, and collectively developing the content of data acquisition tools. Each agency agreed to interact with the same category of NGC agencies, officials, personnel, etc., a common reporting format was to be adhered to, and all deliverables were to be consistent based on the terms and plan of evaluation activities.

**Questionnaires:** These tools were each designed collectively by all agency researchers and used by each entity, for the intended audiences, to ensure consistency of both research design and data collected from the field. The reliability of the instruments would need to be determined by completing a reliability analysis using inter-rater reliability. This allows you to study the properties of measurement scales and the items that make them up. The reliability analysis procedure calculates a number of commonly used measures of scale reliability and also provides information about the relationships between individual items in the scale.

As requested by the MoEF, subjective recommendations resulting from this document review are based on the collective knowledge, assessment of the analysis and combined professional expertise of me, as senior researcher, and the research associate (see page 38).

**Phase II**

Given the supplemental nature of this segment of the present study, two primary qualitative methods were employed: Semi-structured interviews with key informants and focus groups with student members of Eco-clubs. A secondary observation technique was utilized where applicable. Interviews were conducted by me, as Senior Researcher, and in Himachal and Jaipur - the NGC consultant assisted by interpreting the questions and comments from both parties (interviewer and respondents). Similarly, my project research associate was present and assisted during interviews in Delhi. Conversations were audio-taped and notes were taken during the interview process; a few exceptions occurred and informal interviews took place in English using hand-written notes taken in lieu of audio-taping. During this six week period, \( n=68 \) professionals and students were formally interviewed as well as informally engaged in conversation (lasting anywhere from one-hour to 90 minutes). See Annexure B for list of contacts.

Since special arrangements were made for our visit, as an American Scholar to a remote Indian Village and National Green Corps Consultant from the Ministry of Environment and Forests, the type of observation as a methodology was limited to direct observation (i.e., reactive). This is where “people know that you are watching them;” this can possibly be a concern in that individuals will change their actions rather than showing you what they are “really like” (Babbie, 1992; Montgomery & Duck, 1991). Given the cultural history of this village, and students and teachers at Govt. High School, Meginand in Himachal Pradesh, it was not difficult to determine impacts of the Eco Club program. Interpretation of observations in this phase is both descriptive and inferential. Evaluative variables, however, are not possible in this case merely because this would require both of us (senior researcher and MoEF consultant) to make both an inference and a judgment from
the respondent comments and behaviors. In our setting, only the consultant (native of India and Hindi as first language) could offer evaluative observations however this would be challenging to include as he is not a trained social scientist. The missing “evaluation” component of the observation data, in this case, is not an impediment to this research process as the observations will supplement the document review and interviews (which provide the most accurate data as expressed entirely through participant experiences).

Data analysis: Data analysis was accomplished using a constant comparative technique (Glaser & Strauss, 1967) and analytic induction as tools for analysis. First, after the data were organized, similarities between groups were established (e.g., exploration of common themes) and, second, each group of individuals was subdivided into similarities and differences to obtain within-group commonalities and variations.

The data were analyzed in two primary ways: Interviews were first coded using descriptive codes derived from the interview questions. Second, interviews were then coded by emerging patterns, themes and categories as part of the movement from data description to conceptual clarification. Validity was achieved as each researcher (me and the project associate) completed this task on separate occasions, compared outcomes, and generally agreed on the meaning of the responses to formulate logical items used for the final list. This analytical procedure involved independently reading and re-reading transcripts to ensure familiarity with the data. That is, based on keyword associations and patterns that emerged from the aggregated data responses were grouped into categories that relate, to some extent, to the NGC “34-points” for discussion and potential decision-making. Based on the structure of this study, no effort was made to tease out the relative effects of gender, type of school, or class in school based on standards of participants at this time.

Resource materials are used to both educate the Eco-club members as well as provide them with materials to use in the community:

“...we help spread awareness among people...give them knowledge about environmental destruction, explain to them what we learn...we campaign against use of polythene...rally for health awareness...”

~ Eco-club member, Arvind Shri Vidya Mandir Secondary School, Jaipur
Findings

**Phase I**

A document review took place following approval from MoEF to procure copies of final reports from the four agencies who previously conducted program evaluation of the NGC. Reports were extensively reviewed and synthesized followed by a comparative analysis. This process provided details about the individual programs and collective effects of the NGC on youth participating in Eco-clubs. Results assisted with providing overall recommendations for future. Additional interviews and focus groups occurred during this phase, given the convenience of opportunity and limitations of timeframe for the project, and are included in Phase II of this report.

Assessment of Major Tasks Undertaken and Methodology

This section provides a very basic overview including key attributes obtained from the information provided by the reporting agencies; fundamental variables for the document review were selected, determined, and ultimately analyzed. An at-a-glance matrix has been completed with the purpose of quick review by the MoEF and other agencies or individuals interested (see page 15).

There was **no** way to properly represent this data on a “point-by-point” outline based on the inconsistency of information reported by the evaluating agencies. Common themes and differences among all four reports provide the most valuable information gathered; which agency stated which findings, conclusions or recommendations is not as critical to view at-a-glance as it is to provide **ALL** details collectively (see page 29).

According to an introductory statement provided by the World Wildlife Fund, one of the tasks these 4 agencies were asked to undertake includes a *literature review*. As part of the document review process, none of these 4 reports analyzed included any “literature review” as defined. The only aspect provided was a narrow overview of the NGC program. From a methodological standpoint this is not a “literature review” but rather an introductory statement of the program being studied.

The questionnaires were not pre tested; similar ones that DA used in their CLEAN - India project were, however, tested. The data were not entered into any statistical package neither was any correlation completed. That is, no statistical analyses were completed; only frequencies from questionnaire items were reported. This evaluation exercise was carried out to qualitatively gauge the efficacy of the program and obtain first hand information from the students, teacher coordinators, other teachers of the schools, principals, management, District level and State level coordinators of the program, District and state level officials who are members of the committees and Panchayat Sarpanchs.

Suggestions and recommendations based on overall findings are provided.

The final reports submitted by each agency did not follow the same standard reporting format as indicated in the preliminary agreements during the evaluation planning process. Additionally, type of content reported also varied. For instance, categories and sub-headings were not the same across reports making comparative analysis very difficult.
## At-A-Glance Matrix of 12 States Evaluated by Four Agencies – Comparative Analysis Highlights

**Modules Provided:** Study objectives, study components, methodology, tools used and purpose, general conclusions, and overall recommendations. Comparison of common themes, differences and gaps can be found on page 29 of this report.

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<tr>
<th>States Surveyed and n Districts</th>
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### Study Objectives
- Appraise activities/performance
- Evaluate relevance & quality of resource materials provided
- Understand capacity building process, its significance, quality and usage
- Assess role of agencies & other stakeholders in strengthening Clubs
- Review effectiveness of reporting, feedback/monitoring followed by agencies involved.

### Study Components
- NGC overview in each state
- Activities of Eco-clubs in schools
- Resource materials
- Capacity building initiatives
- Role of various agencies involved
- Monitoring / feedback mechanism

- Activities, outreach, and impact at all levels of program.
- State nodal and resource agencies and DIMC
- Resource materials
- Functioning of progr. in schools.
- Awareness and attitude changes of student members
- Trainings and reporting aspects

- Activities, involvement of and impact on students
- Role of teacher-in-charge
- Training programs
- Recognition/Awards
- Resource materials
- Capacity building, admin., facilities
- Role of various agencies
- Monitoring/feedback/barriers
- Financial/budget issues

**Background to the NGC scheme provided as well as the status of schemes across each state; however, no study objectives were stated for the evaluation (it can be assumed this is the same as the other 3 evaluations).**

**Note:** All 34 points were listed in this section as components of the study:
## States Surveyed and Districts

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## Methodology

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**Data Acquisition Tools Used**

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<tr>
<td>- Members (school profiles), Students (35 items)</td>
<td>- Teachers-in-charge (45 items)</td>
<td>- Non-Eco club teacher (13 items)</td>
<td>- Principal (5 items)</td>
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<td>Observation Checklist</td>
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### KEY CONCLUSIONS (by the Evaluating Agencies)

**Operations, Monitoring, Capacity Building, and Fund Allocation**

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- Rigor of scheme implementation varies from state to state.
- Level of genuine interest of concerned officials and schools varies.
- State steering committee held no meetings (ineffective).
- Planning has “top to bottom” approach omitting local involvement.
- Importance of monitoring for effective functioning of the scheme has not been realized.
- Teachers-in-charge, in some districts, have not received any formal training.
- Funds arriving too late, delays in releasing grants from states.
- Most schools spend funds on plantation activities (re: instead of field visits and Eco club competitions. Due to lack of resources (e.g., tree guards, compound wall, water scarcity, etc), plants cannot be taken care of. Activity therefore considered "futile".
- Distribution of funds in schools were not uniform and either funds were being given in alternate year, some % of funds held back for district level activities, or some funds given in 2 installments.

- Good coordination overall between agencies. Records are well maintained.
- Resource persons/master trainers are effective in spreading awareness about various environmental issues.
- Training: Conducted every year however no training needs assessment is completed; no follow up to the training occurs; no hands on activities are part of the training, no re-orientation training conducted for master trainers.
- As a large scale program, the NGC (overall) has minimal monitoring of visits, a fluctuating orientation component ("irregular"), and nominal capacity building of teachers and students to transform the ambitions of the NGC into action at the school level.
- Current reporting format is not detailed enough to capture the real meaning of activities conducted in schools, and no standard format for reporting from state to state.
- Monitoring is difficult in some states due to inadequate staff and large distances between schools.
- Good use of media and general press

- Teachers trained less than 60% of students involved.
- Inconsistent systems of operation across states.
- Resource materials either provided in or translated to local language.
- Master trainers were all experienced in their respective fields of study.
- Training occurs in some areas but not others. When sessions do occur, reported to have "too much lecture", some hands-on but not enough.
- Parents – In some areas, there is lack of awareness of Eco Club goals/purpose leading to lack of cooperation or support.
- Most schools have electricity (not all) but very few have any AV equipment.
- DIMC is not properly distributing funds or resource materials in all districts.
- Many teachers not satisfied with support received from DIMC.
- Implementation of the program in many districts is “very good” and “effective” while “very poor” to the extent programs were not even being implemented.
- Some schools are raising their own funds from external sources.

- There are no functional linkages among the various implementing agencies due to non-functional or non-existence of various committees that are supposed to be in existence and functioning.
- Capacity building strategies are neither uniform nor adequate to ensure sustainability of the program.
- The existing monitoring and feedback mechanism is not adequate and there’s a lot of “lacunae” that need to be worked on.
- Efficient functioning of the DIMC is crucial for achieving the objectives of the NGC on the ground (“grassroots”) level.
- Resource agencies did not facilitate the DIMC in organizing and conducting the trainings (re: per guidelines). Also, guidelines for selecting master trainers was not followed.
- State Steering Committee involvement ranges from poor (no knowledge of happenings) to very active (mtgs once to twice per year).
### KEY CONCLUSIONS by the Evaluating Agencies – continued

**Eco-Clubs (EC), Activities, Resources**

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- Awareness about EC is minimal among various departments, civil society groups, and general public.
- Students enjoy outdoor activities (camps, rallies, etc.)
- Activities occur based on local issues and their understanding.
- Resource materials not being distributed early enough and not being handled properly.
- One copy of Resource Kit is available to schools, kept in custody of teachers, often not shared with students.
- Private schools are not very active in taking up NGC activities and responses from individuals interviewed were not very positive about being involved in the program (e.g., “skeptical”).
- Some schools visited that were supposed to have a functioning EC, did not have one.

- Everyone agreed to continue with the program and Eco Club scheme.
- The program should be more “student-centered”; they sometimes feel overburdened by extra-curricular work.
- Care should be taken to ensure students enjoy being part of the EC.
- In most schools, only the teacher-in-charge is actively involved.
- Only 60% of the schools had received resource materials and students from only 25% of the schools were aware of them. Where available and used, students found them “very interesting and useful”.
- EC meetings are not held regularly.
- Awards: “Best District” & “Best Eco Club” awards given at state level. Students and teachers win awards.
- Field Trips: Desire for more yet difficulty in organizing due to lack of transport or funds.
- Some schools manage to get other funding and resource assistance from local panchayaths, school alumni, and some from State Govt.

- Objectives of EC: Variation of understanding of purpose from “total” to “they had no idea”.
- Timing for meetings during “after school” hours – considered inconvenient.
- Teachers agreed EC should be part of regular school curriculum.
- Awareness generating techniques need to be more activity-oriented and not just seminars and lectures (e.g., considered “boring”).
- EC competitions are not organized frequently enough and are not based in the outdoors enough (e.g., majority essays, debates, quiz, arts/crafts).
- EC activities had impact on personal hygiene of some students not others (e.g., this is of utmost importance if students are to truly comprehend the need for care of environ)
- Only a few student members initially (before involvement) were aware of the degrading environment and the negative impact degradation has on their personal lives; most lacked this knowledge (clear expression of positive impact of program)

- In most cases, teachers are self motivated and volunteer to become the “teachers-in-charge”.
- Students are highly enthusiastic about the EC program.
- Despite level of motivation, teachers cannot effectively carry this responsibility as they are “extremely overburdened”.
- Gender bias towards selection of members has occurred favoring boys 3 to 1.
- Plantation and cleanliness drives taking place without employing safety measures.
- Timely production and distribution of resource materials in local languages was lacking in all states.
- EC’s meet during competitions and rallies but are unaware of other common EC programs at the district and state levels.
### PROPOSED RECOMMENDATIONS (by Evaluating Agencies)

#### 1. OPERATIONS AND PROGRAM MANAGEMENT

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- Give overall program management responsibility to one agency in each state (e.g., as “NGC Directorate”). Suggestion: Set up as the State Nodal Agency operated by the Education Department (e.g., coordinate implementing the scheme in the state, training master trainers, compilation/development of resource material and distribution, etc).
- District level – NGC Conveners should be deployed from education dept. for overall coordination at the district level and should be compensated adequately.
- Inconsistent role of Convenors & diminished monitoring of activities: Convenors could work exclusively with NGC not other programs.
- Provide more guidance and oversight to teacher-trainings
- Timely distribution of adequate funds (should provide at beginning of the year).
- Timely distribution of availability of resource materials.
- Abolish the “state steering committee”
- Develop a more participatory approach to school year planning to involve members at schools and districts.

- District level: The DIMC should be more proactive and conduct district and/or state level exhibitions, seminars, and competitions. Provide orientation for district level officials.
- Increase the emphasis on conservation and sharing of traditional knowledge both in terms of content and community support.
- Strengthen coordination with various line departments and local bodies (e.g., Forest Department, water supply, pollution control) and include municipalities and the Panchayats (i.e., local governing body).
- Reporting:
  1) Revise the reporting format; this should be more detailed to capture essence of activities conducted in schools; and
  2) Standard reporting format should be followed by all states.
- Explore use of well-established, existing networks in the states to assist with program functioning (e.g., Rajasthan Bharat Scouts & Guides as the Nodal Agency have enabled large-scale and effective sensitization of EC members of all schools in its purview.
- Create a system for reducing the communication gap between DIMC & schools.

- Objectives of EC within the schools: These should be very clearly stated, perhaps posted in the school (bulletin boards, newsletters, etc), and minimally understood by teachers, student members and possibly parents.
- Students should be encouraged to become members voluntarily as the impact of the scheme will be much more effective than when teachers force participation.
- DIMC needs to provide more assistance and overall support to schools (e.g., regular visits to activities, regular contact and communication with teachers – monthly phone or face-to-face discussions, etc).
- There is a need to create a strategy to improve coordination among agencies. There is strength in some areas so a consistent strategy would assist weak spots in the system across the state.

- Give priority to government and rural schools while identifying the EC’s. Purpose: Create awareness and enhance participation of the students or children living in rural areas or representing underprivileged sections of society (e.g., as relates to one of the primary objectives of the scheme).
- The composition of the State Steering Committee should be adhered to according to guidelines. This committee must ensure cooperation and mobilize resources (human/fiscal) of different divisions.
- Roles and responsibilities of State Steering Committee must be clearly defined and conveyed to members.
- NGO involvement should be enhanced at various stages of the program
- Convene a DIMC meeting once every 6 months – Agenda and minutes of mtgs should be properly maintained.
Proposed Recommendations (by Evaluating Agencies) – continued

2. ECO CLUBS (broad statements)

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- Teachers-in-charge who are aware and motivated (regardless of background) should be appointed to this leadership position.
- Should be at least 2 teachers (one “in-charge” and one assistant/supporting teacher).
- Media can play important role in increasing awareness and popularizing activities. State Nodal Agency and DMIC should organize “media briefs” to 1) act as motivation cues for EC, 2) promote EC activities, and 3) gain cooperation from local entities.
- Name plate/board with “Eco-Club” inscribed. Display prominently in the school (to increase awareness/interest among other students and teachers).
- Quarterly magazine – publish at the state level with input from EC (provide connecting links between all EC within state/districts).
- Parent Teachers Associations: Provide orientation, presentations. Avenue for information sharing and encouraging children from taking part.
- Student members – provide benefits or incentive (e.g., weightage or marks) to be used in classes or future classes.
- Private schools - Elicit interest/involvement to broaden experiences to more youth.
- Identify more ways and means to provide the students with inspiration and motivation to participate.
- Provide/offer more field trips and conduct more field-based exercises.
- Give teachers-in-charge (and supporting teachers if any) and students proper recognition and incentives for extra efforts they devote to the program (Note: not necessarily monetary – re: many ways to provide).
- “External Facilitator” - Identify and appoint an agency/organization with significant experience in managing NGC as a large network of programs. Note: Could work at the national level & would be responsible for: a] capacity building of personnel involved at various levels of the network, and b] monitoring and evaluation of the program.
- Training: Conduct needs assessment for master trainers training (should be better designed by the State Nodal Agency and Resource Agency.
- Provide recognition (i.e., identity) to Eco Club members in the form of caps, badges, t-shirts, etc. – Also provide “incentives” for teachers and students to maintain their motivation and generate additional support.
- Timing for meetings should be for a minimum of one hour, minimally once per month, preferably during school hours (i.e., need to maintain uniformity).
- Meetings should discuss more than just upcoming/desired activities - meetings should also review previous activities undertaken and the impact on students.
- Recognition prizes and awards given at all levels (school, district, and state).
- The younger the child, the “more impressionable” they are. Students of lower classes (e.g., starting from class IV should be targeted for the EC activities).
- Impact of new knowledge and participation on local environment in community: Where there is “marginal” impact or “no impact”, the DIMC should find out WHY and strategize a process relevant to local issues to help bring about change and ultimately measure the impact “for the better.”
- Questions arose by teachers as to actual level of understanding by the DIMC of the EC activities. It is essential that all key agencies fully comprehend activities.
- Membership should occur as per NGC guidelines and there should be no gender bias in selection and participation of Eco Club students.
- Provide financial incentive(s) or reduction in the number of teaching hours to provide proper remuneration for teachers (e.g., to help overcome issue of being “overburdened”).
- Provide awards and other recognition at the state level for outstanding teachers-in-charge.
- Many EC attempt to initiate activities that have an impact on the local community beyond the school campus – to reach out to the masses for greater impact to occur, activities must be properly documented and publicized (e.g., media, news circulars, etc) at both the state and national levels.
### Proposed Recommendations (by Evaluating Agencies) – continued

#### 3. ACTIVITIES

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- Develop an annual calendar: Involvement by teacher-in-charge and student members.

- Develop and publicize an annual calendar for EC activities and events with set targets.

- Provide a platform for sharing and showcasing the work of the Eco-clubs with each other (e.g., would allow students chance to feel part of a larger network). Can occur within Districts and/or State-wide.

- Promote income generating activities through environmental improvement to further strengthen ECs (e.g., vermi-composting, water recharge, vegetable/herb growing).

- Provide small environment kits with actual materials, equipment, supplies to conduct activities (e.g., saplings are not free of cost, schools must buy them).

- Theme – each year a particular theme could be selected and the schools around the state could work on this through their programs, etc.

- Approach corporate entities for sponsoring large-scale environmental awareness and action activities and special initiatives.

- Hold meetings preferably during school hours during the once a month minimum preferred standard for NGC; can occur during periods such as SUPW or games.

- Encourage spirit of competitiveness among students by organizing more frequently. Increase use of outdoors for these types of events (e.g., don’t just have essays, debates, arts and crafts, etc).

- Suggestion for program to be more effective: Require activities to be state specific and for a minimum number and similar types of activities/environmental projects to be required of all districts.

- A record of all activities carried out by the schools should be maintained. This will also assist with ease and accuracy of reporting.

- Conduct a “mass awareness campaign” was the highest percentage suggestion for an activity to be undertaken to enhance performance of Eco Clubs. More field work in the community was second.

- Develop avenues and opportunities for creative connections and better interaction among the Eco Clubs across the districts and within the state level and the Teachers-in-Charge.

- When action-oriented activities do actually occur at the community level, adequate measures should be taken to enhance participation of the local people in these activities (i.e., will have a longer term impact).

- Train and orient teachers-in-charge to watershed management, conservation of natural resources, pollution, energy conservation, etc. created at “grass roots level”. These models can be replicated involving local communities and other EC schools in the area for greater impact.
**Proposed Recommendations (by Evaluating Agencies) – continued**

### 4. RESOURCE MATERIALS

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- **Resource Kit**: Include information about local environmental experts, list of civil society groups, forest, state pollution board, etc. (e.g., can facilitate and enhance activities).
- Seek volunteers to be available to NGC conveners to assist with visiting each school and distributing materials at the beginning of the year. Option: When DEO personnel visit the schools give them the task of dispatching the material.
- **Development of materials**: Keep resource agency responsible for developing yet create closer coordination with state nodal agency and master trainers (re: they know about issues of the state).
- Include contributions from students to be included in materials for subsequent years (e.g., poems, stories, pictures, etc).
- **Audio-visual material in the Kit**.
- Teachers should be held responsible for discussing resource material in EC meetings (re: students can develop better understanding of environmental issues).

- **Resource materials** (for a particular state) should be developed by a local (state level) NGO with relevant experience in designing educational material (i.e., a centralized approach may not cater to needs of different regions of the country and ensure efficient distribution of materials).
- **At local/district level, partner with a NGO where they could design activities based on state-specific environmental issues**.

- **Obtain regular feedback from teachers-in-charge and master trainers for development of resource materials**.

- **Resources needed/requested to supplement activities include**: AV equip., materials in local language, equipment used for soil testing, water testing, etc., books/booklets/posters/leaflets, etc., journals and environmental magazines, VCD's, DVD's.
- **Make sure resource materials are developed and/or provided that address specific issues relating to the local environments (in regional languages) emphasizing pictorial and activity-based materials**.
- Produce and distribute resource materials in local languages.

- **Care must be taken to ensure all materials developed and used should relate specifically to local and state problems**.
- Some materials were updated every two or more years – suggestion to update annually with new or more current info.
### Proposed Recommendations (by Evaluating Agencies) – continued

#### 5. Monitoring and Tracking

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- Organize follow up meetings and/or 1-day workshops at district level with Heads of Schools.
- Lead schools organize ½ day workshop or meeting, quarterly, for EC schools (purpose: take feedback, discuss plan of action for next quarter, share activities progress reports, etc).
- Each EC/school should be visited and observed at least once in a quarter; and, funding should be available for visits.
- Ministry should place emphasis on bi-annual reports from each state. (1. State to ensure DIMC submit quarterly reports, 2. District nodal officer to ensure each school sends in monthly reports, 3. Schools receive timely feedback for each report submitted).
- Withhold grant funds for the following year to schools that do not send in their reports regularly - EC should maintain a register to record all activities and update this on monthly basis (using prescribed formats).
- Implement incentives/rewards (prizes, certificates for good students, teacher-in-charge, district officials) through effective monitoring system.
- EC Meeting/Seminar at State level.

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<td>- Assign two (or three) local NGOs (depending on size of the state) the task of monitoring the program in various districts of the state by the DIMC. This would ensure regular and consistent monitoring of all ECs.</td>
<td>- Increase level of monitoring at the initial stages of program implementation. Intensive monitoring is needed at the beginning (e.g., dedicate staff to get this started then can ease up).</td>
<td>- Nodal agency needs to give proper instructions to the DIMC to let EC know about the procedure for judging performance of EC. This will create more enthusiasm among members and lead to greater impact of the scheme.</td>
<td>- The chairperson of the DIMC should make sure/be responsible for seeing that all departments and NGO’s working at the district level cooperate, contribute, and help in proper functioning of EC activities.</td>
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<td>- After initial training, DIMC should follow up for any further guidance and assistance to all schools/teachers-in-charge.</td>
<td>- District officials should visit the school regularly for supervision, evaluation, and suggestions. Establish a structured schedule.</td>
<td>- DIMC, in some instances, failed to submit reports to the Nodal Agency (those received contained limited information). First, determine where the primary problem stems (i.e., from teachers not submitting to DIMC or DIMC not following through or sending to state); second, create a strategy for how to improve with those specific gaps in question.</td>
<td>- All members of all committees should meet annually to plan, evaluate, and develop follow up actions for the effective implementation during the next, upcoming year (and/or subsequent years in general).</td>
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<td>- Institutionalize a standard reporting format for all states.</td>
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<td>- A common reporting format should be followed by all schools and all information requested should be mandatory to complete. Reporting should occur quarterly.</td>
<td>- The report format for teachers-in-charge should be more concise and comprehensive and easy to follow.</td>
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<td>- Eco Clubs (via teachers-in-charge) should submit bi-annual reports in the suggested prescribed format (e.g., a template should be provided). The DIMC and Nodal agency should compile reports and send to MoEF.</td>
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<td>- State Steering Committees need to conduct a review on implementation of the scheme; no coordination among the committee and Govt depts</td>
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### Proposed Recommendations (by Evaluating Agencies) – continued

#### 6. Capacity Building

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<th>CMS Environment</th>
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<th>WWF</th>
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<tr>
<td>Madhya Pradesh ((n = 5))</td>
<td>Punjab ((n = 3))</td>
<td>Assam ((n=5))</td>
<td>Maharashtra ((n=5))</td>
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<td>Andhra Pradesh ((n = 5))</td>
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<td>Orissa ((n=5))</td>
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<td>Uttaranchal ((n = 3))</td>
<td>Chhattisgarh ((n = 3))</td>
<td>West Bengal ((n=3))</td>
<td>Tamil Nadu ((n=5))</td>
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- Teachers-in-charge who have not received formal training should receive training and refresher training for those with “some” training can occur as well. Regular teacher training (for in-charge) should occur once a year and can be called “orientation programmes”.
- Training should be more frequent, more participatory, and longer duration.
- Develop a set curriculum and training manuals to maintain consistency.
- Invite and involve subject matter experts relating to the environment to design and conduct trainings.
- Training formats should include: role-plays, games, films, slide shows, and other participatory approaches.
- RRA should be involved in designing and monitoring the trainings to ensure quality but only master trainers should conduct training.
- Prescribed formats for reporting provided by CMS as the Evaluating agency.
- Provide training of student members for upgrading/increasing their knowledge about issues and their role in helping protect the environment (conduct at regular intervals).
- Provide capacity building workshops for District coordinators: These people are the “most important link in the network” (e.g., it was noted that new officers do not have complete understanding of the NGC/Eco Clubs and local programs are affected.
- Partner with NGOs so they can help identify master trainers for capacity building trainings for teachers-in-charge.
- Increase number of days/duration of training (i.e., one-day duration is insufficient.)
- Approach corporations to sponsor large-scale environmental awareness and action initiatives: (e.g., They are trying to further their outreach in rural areas).
- Determine a regular allotment of time to have meetings and/or programs (i.e., often not able to meet “once a week”).
- The State Forest Department should take a more proactive role (e.g., provide guidance on plantation: what, why, how, where; provide saplings to Eco Clubs).
- Determine real issues behind not being able to meet at least once per week (e.g., every Saturday) and involve teachers & students in determining feasible/consistent alternatives.
- Nodal agency and resource agency should make conscious effort to find out whether training programs are conducted and, if so, report to the Nodal agency on the outcomes (re: to further enhance future trainings).
- Training should be compulsory. Such mandatory training would lead to greater consistency and provide a means of motivation if organized effectively.
- Increase the number of trainings and add new & hands-on activities to the sessions.
- DIMC should visit schools during training periods and maintain/manage record of these trainings.
- Teachers throughout the school could be made “in-charge” on a monthly rotational basis. In this case, the Principals should consider reducing the responsibilities of the teacher-in-charge during that cycle in order to supervise and lead the EC. Would significantly reduce work pressures & conceivably lead to increased enjoyment of their role.
- Organize a joint consultation of the State Resource Agency and the State Nodal Agency to review the trainings conducted so far. Document experiences that occurred and lessons learned.
- Based on this state level effort, design a more efficient training for the Master Trainers and Teachers-in-Charge (e.g., “state specific & uniform”)
- Develop training manuals to effectively implement the training programs.
- Identify master trainers from NGO’s and academic institutions. Ensure these trainers are motivated individuals to help make the “NGC a mass movement”.
- Training teachers – limit all training for teachers to 50 people.
- Training methods need to be more participatory in nature including group discussions, simulations, role play, A/V presentations, use of IEC materials (not just lecture style).
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**7. FUNDING ISSUES**

- Annual funds should reach the schools at the beginning of the school year. Very important if schools are to participate in any activities.
- Provide adequate funding.
- Provide teacher-in-charge with direction for utilizing funds.
- Utilization certificate should also have signature of teacher-in-charge to keep this person informed.
- A uniform fund distribution pattern should be maintained.
- District level: Funds should be available for monitoring, coordination and activities.
- Suggestion that Rs.5000 be given to Eco clubs for undertaking activities (re: noted that the State Govt can contribute 50% of this amount.
- Funds for implementation agencies should be "appropriately increased."

- Provide at least Rs. 3000 directly to Eco Clubs per year.
- Establish system for timely allocation of funds.
- Increase the amount of funds provided at the start. Different people had different opinions ranging from Rs.3000/- to Rs. 5000/-
- It is essential that better monitoring and record keeping occurs when funds are allocated. **Ex:** Some schools received Rs. 1000/- and some received Rs. 500/-. Some officials from DIMC noted receiving less than Rs. 1,00,000/- while some indicated receiving more than Rs. 2,00,000/-. Wherever there is a delay in receiving funds, the “reason” should be checked and a solution provided if necessary.
- NGO’s: Schools (and/or districts) should approach local NGO’s for assistance of in-kind contributions (not monetary) to assist with carrying out activities. They can assist with implementing the scheme.
- Efforts should be made to raise funds to organize special events (e.g., Earth Day, World Environment Day, etc.)
- EC exist in private, private-aided, and government schools. Sentiment: Private schools have easier ability to seek own resources. Focus Rs. On Govt. schools.

- MoEF, State Nodal Agency, and DIMC should monitor the timely release and dispersal of funds to the Eco Clubs at the schools.
- The grant should be released to all EC’s in one installment at the beginning of the academic year (will increase effective utilization).
- Nodal agency should issue broader guidelines for use of the grant by the Eco Clubs.
- Develop a simple accounting format (template) for the teachers-in-charge to maintain details of expenses incurred. TIC should send this statement to the DIMC for review.
- Increase allocation of funds to Rs. 3000/- per year.
- Provide the TIC with financial incentives for their involvement and leadership.
- Proper guidelines regarding appropriate uses of funds and recordkeeping need to be designed; TIC’s should be oriented on these guidelines to ensure proper use of funds.
KEY ANNOTATIONS BASED ON THE ANALYSIS  

(Note: use of “EC” = Eco-club)

A) CMS: Comprehensive report, well written, excellent detail of data collection efforts, good depiction of findings, and a few tables, charts and graphics were helpful.

1. Methodology for selection of respondents makes this report the strongest of the four evaluating agencies (e.g., good randomization of school selection based on list provided by nodal officers).
2. CMS says “so far 72,000 ECs have been set up across the country. GoI via the MoEF provides financial assistance of Rs.1000 per Eco-club for establishing the club along with training of master trainers, teacher training, distribution of resource materials). They note each EC has 30-50 student members of Class VII and Class IX. (Not consistent with other reports.) (Note: This no. of EC can be questioned based on data received from MoEF directly).
3. Suggests for MoEF to elicit involvement of private schools. Good rational. However, seems too many “bugs” need to be fixed/corrected. And, resources are really needed to support the public/government funded schools. As researcher of this present study, I am not so sure this is a good idea. The program can be introduced somehow and discussion about how private schools can adopt the model but suggestion would be that resources ought to be provided on their own.
4. The “Time Line” suggested by CMS is very useful for all levels of implementation. All reports have suggested an academic calendar for Eco-clubs, but this kind of time frame serves useful for all the players involved at all levels of the NGC (see page 169, CMS report).
5. Develop a quarterly magazine – or even a newsletter – at the state level connecting all EC’s in the state.
6. Stated that EC students should get some benefits/incentive in the form of “weightage” or marks that can be added/supported in their classes or future classes. This is a good idea and realistic to attain.
7. In comparison to boys, girls showed visibly higher interest in Eco-club activities.
8. Hoshangabad is very active and conducts activities regularly. Schools in other districts take up activities depending on the interest of members and instructions from nodal officer. The success of Hoshangabad can be replicated in other schools but there will need to be better communication between the nodal officer and teachers.
9. Skepticism: Bhopal evaluation – interview with principal suggested he was “very skeptical” to the idea of NGC and said they did not need an EC to undertake environmental activities.
10. Capacity Building, 9.5, p. 168: Confusion over use of the term “training” – officials and teachers-in-charge and master trainers are “trained”. Recommendation 2 suggests “there should be a provision for training of student members for upgrading their knowledge about certain issues and their role in protecting the environment at regular intervals.” – I take this as seeing a need for additional and more advanced opportunities within the ECs. When students participate in the ECs are they receiving “training” or obtaining new knowledge through educational opportunities? Synonymous use of this term can be misleading. If they are, indeed, receiving training – what are they being “trained” to do?
11. The idea of report cards that they have presented for each of the schools visited is a useful mechanism. This can be used for monitoring, and noting how much is percolating down to the immediate environment – the school – of the Eco-club members. It can be used as an important tool to assess the overall impact of having an Eco-club.
12. Recommendations are consistent with their observations and conclusions.
B) D.A.: I received two distinctly different copies of the D.A. report from MoEF whereby both cover pages indicated “Final Report”. While one of these reports was 44 pages (plus annexures) and the other was 29 pages (plus annexures), the content of each report was slightly different in that tables and photographs were in one but not the other. Annexures were also slightly different in each report. This inconsistency created a slight problem of assessment; information did, however, provide a “big picture” for their research efforts allowing a sufficient analysis to occur. Additionally, there were numerous typing errors and the coherence in format throughout the report was not maintained

1) “So far over 47,000 EC have been set up across the country… 100-150 are being established in every State/U.T…. around 40-50 students actively partake…each school with an EC is given annual financial assistance of Rs.1000.” (Not consistent with other reports.)

2) Did not say how many evaluators/researchers conducted the study.

3) Initial meetings with key officials from both state level agencies (nodal and resource) prior to embarking on the study.

4) Incongruence in the report – e.g. for Punjab the Profile of the schools is given, which has not been done for Chattisgarh and Rajasthan. Further, for Punjab and Rajasthan details like no. of Eco-clubs, total membership, names of key officials are given, which has not been done for Chattisgarh. If these had not been available for certain reasons, these should have been noted.

5) Conscientious selection of schools included girls’ schools, boys’ schools, and co-education program “for maintaining gender balance for studying the program’s activities, impacts, strengths, weaknesses and threats.”

6) In addition to the primary objectives of the evaluation, DA also set out to “look beyond” by providing input to becoming aware of various external agencies at the district level that can lend additional support to the program, provide suggestions for how and where to identify alternative and supplementary financial assistance at the district level, and find possible solutions in making the EC activities more prominent with a higher degree of impact within the available resources.

7) They provided 4 case studies and examples of resource materials used.

8) NGC program taken as part of the Scouts and Guides program (Rajasthan) – excellent model for other states.

9) Decent sampling procedure: Criteria for selection of Districts = spatial distribution, regional representation, and functioning of the NGC (per info from state nodal agency). School sample selection = 6 schools chosen in each district. Page 6 discusses “some considerations taken into account in the selection of schools in the districts” = a] selected Govt, private, and aided schools for covering various types of management systems and functions; b] Sampling procedure was through spatial distribution of schools including location within a district – 2 schools taken at district headquarter town level and 4 from different blocks in various directions from the district headquarter town; c] Socio-economic and demographic coverage was important criteria to ensure variability (this occurred in other reports also).

10) Interviews at the district level – This section was confusing – Notes indicate discussion (e.g., interviews) occurred with district authorities or the DIMC yet does not indicate which post of individuals or how many. Interviews also occurred with the school principal and teacher-in-charge. Report also notes “conversation with any other teacher besides teacher-in-charge” (which is an excellent idea) however does not specify what subject they teach or how many they interviewed.

11) Focus groups were properly conducted with student members.
12) Field observations relating to structure of the school campuses for basic amenities and eco-friendly initiatives and actions were noted.
13) Good job with a complete analysis and conclusions for each of the 34 points for each State they visited.
14) There was no overall comparison of their own internal analysis across states for each of the primary factors under investigation making it extremely difficult to determine cross-cutting variables of interest. Overall recommendations, however, consisting of details pertaining to each state surveyed were provided.

C. TERI: Outstanding report – very comprehensive, very systematic, well organized. For a 150 (plus) report, however, a table of contents should be present.
1) The comparative analysis is good and provides a precise “bird’s eye view”. What they have done is that for each of the points/study components they have given brief overviews, and supported these with graphs. Graphs and tables provide for quick and easy comparison across states for each variable examined.
2) There were no “objectives” of this project indicated, however, in the initial pages of this report. For future reports completed by TERI and other organizations, regardless of any type of collaboration that occurs, it is important to note that every document should stand alone and have all the essential component parts included.
3) Number of researchers and credentials not provided (e.g., principal investigators? field researchers and/or assistants?)
4) The selection of states is not random – all fall in the eastern region. Selection procedure unclear – was this a convenience sample? This makes sense, however, to use states in proximity to one another for making region-wide inferences.
5) District selection based on: Geographical representation, socioeconomic & demographic data, performance of ECs, and where the number of EC was less than the target of 100.
6) Eco Club sample selection: Purposive random sampling (including Govt/Govt aided/private schools).
7) Summary of the status of Eco-clubs for each state under investigation is provided.
8) Great provision of state-by-state detail as well as complete state-wide analysis.

D. WWF: They are the only one who provided and spelled out the process and procedures for the entire collaboration of what the 4 agencies were supposed to do collectively to achieve MoEF goals for contracting with them. I was not informed of this process at the onset of this current study by the MoEF so this discovery was significant in the overall assessment process and document review.
1) The weakest report of the four documents reviewed. Not systematic at all. Also, they had to look at three large states. The product for an immense level of investigation is far below average.
2) All three of the states surveyed are considered quite large. Given the size of these states, the report content could be considered inadequate and insufficient.
3) They indicate that 150 schools of each district of the country are participating (yes) and 72,000 Eco-clubs set up so far (Note: This no. of EC can be questioned based on data received from MoEF directly).
4) They say the “NGC program was launched in 2002-2003….” yet other 3 reports indicated 2001-2002.
5) Conclusions state resource materials need to address specific local issues because this is lacking yet the recommendations say “Resource materials should address state environmental issues in local language”. (Re: This is not always the case making materials not useful).
6) The report has merely drawn overall general statements on each of the 34-points for the three states they studied. Although this is one option for reporting, the differences in each of the states should have been drawn out, as seen in the other reports. Also, how they have concluded their general statements (on what basis?) is not provided.

7) Did not capture distinctness of each of the states. By providing one case study does not provide the depth of analysis/comparison across states that were required by this evaluation study.

8) Where indicators come from is not clear. For example, it is not clear regarding how WWF arrived at their generalizations or where the results actually came from.

9) Conclusions and recommendations were not distinct – many comments belonged in a different category than where it actually appeared (e.g., concluding statements were actually recommendations, not “conclusions” – what did they find/learn is essential before making recommendations).

10) The two case studies provided from Maharashtra are significant. Shows how the students can play an active part in the community and motivate/propel action on issues of environmental concern.

**Common Themes among all Four Evaluation Reports**

- Overall, the concept and outreach of the NGC program is well organized. The program functions very well in some districts, moderately in some others, and is deemed poor or unsatisfactory in others.

- In general, while a few good recommendations were provided, the emphasis among the 4 reports was on the results of the survey content and program operations versus what solutions they would suggest based on their findings.

- Eco-clubs help bring students together who have similar interests and concerns for the environment.

- Students/Eco-club members are enthusiastic about Eco-club activities.

- Students joined the club for many different reasons ranging from “genuine interest in the environment” to “forced by teachers due to lack of participation overall.”

- As all reports state there is a clear impact on the sensitization of student members towards environment and related issues. Changes in their attitudes and behavior have been reported.

- Strong recommendation to provide/offer more field trips and conduct more experiential and field-based activities and exercises.

- **Teacher-in-Charge (TIC):** The TICs are selected or chose to be due to their interest in environment related issues and the NGC. This was the general parameter for making a teacher the TIC for Eco-club. All the evaluations reported that, in some capacity, the TICs who responded were burdened, because the priority is their teaching responsibilities. Inability to do both easily affects their level and type of contribution, in terms of time, to the Eco-clubs.

- Resource materials: Development and distribution of resource materials across all programs evaluated seems to be a huge problem. This is occurring in many situations; however, every evaluation had numerous comments about the issues faced regarding these materials. This aspect would be considered a bottleneck as reported about the publishing and distribution of resource materials. Furthermore, responses pertaining to “use” of materials ranged from “very poor” (i.e., not used at all) to “excellent” (i.e., used ongoing) thereby showing huge inconsistency of use across states/schools.

- **Lack of financial resources is common complaint – “unable to carry out certain activities or more of them.”** Recommended allocation ranged from Rs. 3000/- to Rs. 5000/- per school, per year.
Bottlenecks also reported in timely allocation of grants. The late release of funds from the top agencies has led to delay or inactivity of the Eco-clubs.

Promote and market income generating activities (e.g., fundraising or seeking in-kind contributions) through corporate partnerships and collaboration with NGOs.

Training: Conduct a needs assessment in any given area (with target audience) prior to providing training; Training modules should be action oriented and experiential versus just lectures and group discussions – (i.e., more effective impact of training modules is necessary and for overall objectives to be truly achieved).

Calendar of activities/events: Suggestions to develop an annual or bi-annual activity calendar with assistance and/or oversight by the DIMC or Nodal Agency to ensure its implementation.

Most popular activities across the nation: Outdoor = Tree plantation and cleanliness drives. Indoor = Competitions such as debates and quizzes.

Primary impact is observed within the school buildings and campus property boundaries; some - but very few - reach out to the community in any way.

Impact on local environment: The findings do not yield very positive results. The question here is whether the impact is being assessed in terms of changing the attitudes of the community or public, or resolving some local environmental problems. If the former is the case, the researchers of this present study (document review) believe it is unrealistic to expect a change in the community attitudes so early in the program inception without adequate measures in place. If mitigating environmental problems is the target, then some Eco-clubs have made an impact on the local environment by taking up specific issues and campaigning activities. (Examples of these can be found in each of the respective reports.)

Differences Across the Four Reports

Discussion about timing of meetings for Eco-clubs was an issue for some schools in certain districts but not in others.

DIMC: In some cases, DIMC withheld funding from schools (e.g., Assam) with rationale that report(s) or the utilization certificate (i.e., financial statement) was not submitted. It is not known what DIMC did with the funds that were therefore not distributed (re: did schools ever submit documents and ultimately receive the money? If not, what did the DIMC do with this money?). Follow up may be needed from a fiscal accountability standpoint.

Minimum number of members suggested for each district/Eco Club varied from 30 to 50. This may not be an issue in that if “30” is a stated minimum by the MoEF, this will allow schools with more resources and greater interest (students/teachers, etc) to have more members if this can be accommodated. However, in some areas (e.g., Andhra Pradesh) the fixed number of members was 20 students.

Activities and/or awareness campaigns in the local community: These were not conducted by every Eco Club. In some districts/states students were taken to nearby communities or villages and mentored to talk to people about natural resource issues, challenges regarding ecosystems, and negative impacts of humans on the environment. This did not occur in other areas; rather students only maintained efforts in their own school yards (e.g., eco gardens, tree plantations) or inside the buildings (e.g., via bulletin board displays). Students can complete a variety of programs such as learning to facilitate group discussions (in a pre-arranged location), or lead active projects such as giving demonstrations about composting pits, recycling options or any host of other activities and ways to engage and interact with locals.
Teachers-in-Charge: Several findings note teachers were extremely well trained and others emphatically conclude that TIC “were not trained adequately regarding the objectives of the NGC program” and the importance of their major role in success of the activities as well as sensitizing students towards increasing their knowledge of environmental issues. Establish and institutionalize a “back up” TIC or formal “assistant” TIC to attend the training as well.

Age/class level (standards) of participants: While the NGC is designed to “cater to the needs and understanding of students at the secondary and senior level” (classes 6-12), a great deal of variation has occurred regarding the value of involving younger students from elementary schools. Many younger students do become members, but evidence shows the program does not help them to become more aware of environmental issues or enhance their participation in EC activities. They may not be developmentally or intellectually capable of comprehending the range of environmental issues, contribute to solutions, or even conduct/carry out the actual activities. This needs to be re-evaluated with the possibility of staying focused on senior level students.

Tree plantation activities: As one of the top 2 most popular activities across all reports, it is evident that survival rate of the trees is less than 50% across study states indicating lack of consistent/follow up care, lack of boundary walls in most of the schools run by the government, and/or water shortage.

CMS provided a “proposed timeline” for carrying out/implementation of Eco-club functions (including management/operations and activities). The other reports did not.

Financial records: Reports showed inconsistency of finances – “No records maintained by most schools regarding how their allocated funds are spent.” Others show records “well maintained and organized.”

A good idea suggested by Development Alternatives is for Eco-clubs to become engaged in “income generating activities.” Not only is this a motivational factor, but would also act to supplement the financial resources currently available - Also, the suggestion to involve local bodies like the village Panchayat is useful in this direction.

A gender bias was reported by WWF towards the selection of the members, across all the states. The reason cited was that the teacher-in-charge (TIC) felt that girls could not undertake manual labor involved in outdoor activities. Other states did not report this.

For the states researched by WWF, the composition of private and aided schools as compared to government schools is higher in all the states. This is significant to note as in other states the NGC is mostly comprised of government schools.

Parents expressing concern over their children’s participation in ECs as “diverting their focus from studies” was reported by CMS.

WWF spoke more in-depth to the “significance” of the programs on the environment (local) and the other 3 reports focused on impact to students.

Role of State Steering Committee. CMS suggests that it should be done away with. WWF sees it as playing an important role. Its role and responsibilities to be clearly defined. Others suggest more functional coordination between the various agencies.

IMPACT OF ACTIVITIES ON STUDENTS, SCHOOL AND COMMUNITY ENVIRONMENT

A. **On Students**
(D.A.)

- Increased awareness of environmental issues and problems (in 5-10% of the schools surveyed, information was provided by adult respondents that other students, not directly involved in the program, are also aware).
- Change in attitude and behavior relating to environment (e.g., turning off lights and fans in their schools, using minimal water, keeping their areas clean, planting more trees, helping to spread environmental awareness through what they learn).
✓ Improved personal hygiene
✓ Many students learned the value of passing their books along to their juniors as an effort towards re-using resources.
✓ Leading to increased awareness levels among the student members.
✓ Participation in activities is making the students more sensitive and has led to attitudinal and behavior changes among the students; for example, this is reflected in little acts like switching off lights when not in use, not wasting water, etc. This has also led to cleaner school environment.

(CMS):
✓ Overall “positive impact” reported.
✓ Changes have been noticed by other students and TICs in Eco-club members’ attitudes towards environment.
✓ Students have become more sensitive to environmental issues.
✓ Students have improved personal hygiene
✓ Knowledge has increased about local environmental problems, adverse effects of polythene, and importance of trees to human life.
✓ Increased controlled or limited use of plastic bags.

(TERI):
✓ Increased personal hygiene.
✓ Half of the students surveyed went from no knowledge about proper disposal of garbage to improving their knowledge, attitude, and practice relating to this variable as one of the major environmental problems. The remainder has not initiated any systems in their homes (e.g., “poor translation of knowledge and interest”).

(WWF):
✓ Student members are adequately sensitized to environmental issues as a result of their participation which is a direct correlation of the mentoring and motivation of the teachers-in-charge.
✓ Students are more concerned about their surrounding environment and have become more sensitive to pollution.
✓ Student members have discussions with family and friends informing them about environmental issues.
✓ Students have become more conscientious about rational use of tap water and electricity, sanitary latrine and waste disposal (e.g., especially biodegradable and bio non-degradable wastes), cleanliness of their school campus, and non-use of plastics in the school and at home whenever possible.
✓ Student learning has increased about the value of economical use of natural resources, cleanliness, sanitation, reuse of paper, promotion of non-plastic materials.
✓ Increased understanding of the civic authorities’ responsibility for utility service.
✓ Healthy lifestyles on the rise, personal hygiene improvements.

B. On School Environment and/or Local Community

(CMS):
✓ Schools reported to be more “clean and green”.
✓ Trees on school property are cared for daily
✓ Electric bills, in a small percentage of schools, have been reduced due to better electricity management.
✓ The impact on local environment has not been noticed as much as the impact on the students themselves and their schools.
(DA):
- Cleaner school environment
- Tree saplings planted by the students are being watered regularly and taken care of by them thus increasing survival rate and sustaining greener environments in local communities.
- Wastage of water has been reduced and water conservation measures have been initiated in some schools (e.g., re-using and re-charging).
- Behavior modification (e.g., turning off light switches, conserving water, not littering) has also led to cleaner school environment.
- Not much effect/change on the local community and environment has been noted.

(TERI):
- Vast improvement in school environment (e.g., more clean).
- Average improvement on local environment (e.g., West Bengal, had a clear impact on local environment. Not so true in the case of Assam and Mizoram).
- Local market place (in several areas) cleaned up by students.
- “No plastic drives” have been carried out and seemingly followed/carried out by many townspeople.
- Weekly monitoring of trees planted.
- Toilets in the community built with local materials; maintained by local people from the community (e.g., take turns on alternate days to maintain cleanliness); anyone misusing the toilets are fined Rs.2/- to go back into the Eco Club.

(WWF):
- School environments have improved in that they are cleaner and greener. When this occurs in rural environments, the local community is strongly influenced by this type of progress.
- Roadside defecation has been reduced by various percentages from 40-80% across states studied.
- Indication that more support of the departments that are related to the environment and also of the civic authorities as well as participation of the local community is critical if there is to truly be an impact on the local environment.
- In rural areas an impact has been noted on the local environment resulting from Eco-club activities (e.g., Maharashtra – two cases of the religious festivals).

Strongest States as Reflected in Previous Studies
The following states are considered the top 3 by this analysis across all 12 states evaluated. This list is in order with the most exceptional program on the top based on overall assessment of all 34 points. Eco-club activities are implemented mostly in government schools yet some states include private, non-aided schools in their schemes. This influences the program successes and bottlenecks (i.e., constraints and barriers). In particular the states highlighted in Table 1 are based on results depicting the greatest impact on youth served and effectiveness of program management. Programs in these states should be further explored to extract “best practices” for training, fundraising, capacity building, etc. in weaker areas.

Table 1. Strongest programs as reflected in the 12 State/U.T. evaluation reports:

<table>
<thead>
<tr>
<th>State</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Bengal</td>
<td>TERI</td>
</tr>
<tr>
<td>Orissa</td>
<td>WWF</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>CMS</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>DA</td>
</tr>
</tbody>
</table>

Note: West Bengal can be seen as a model state of all the states evaluated by the different agencies. It ranks above all due to the highly systematic and efficiency of work being done, overall, under the NGC.
Introduction

As previously mentioned, due to reduction of the grant period, focus groups were limited in number and therefore conducted with Eco-club members in 3 schools instead of more as planned (Himachal Pradesh = 1, Jaipur/Rajasthan = 2). Additionally, numerous individual interviews occurred in both formal and informal settings. Group interviews were conducted to obtain information about involvement and overall participation of students in Eco-clubs, as well as obtain a sense of their level of awareness and sensitization about environmental issues based on the activities undertaken.

Highlights of Findings

FOCUS GROUPS

A content analysis procedure was completed using transcripts from focus group interviews with Eco-club members. Results are in concurrence with the Activity section of the 34-points and clearly identified outcomes are organized into primary themes. Table 2 presents these outcomes and their overall interpretation of context based on theme.

Table 2. Themes Commonly Held by Eco-club members participating in the Focus Groups

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Context (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal awareness of environmental issues</td>
<td>Effects of degradation, benefits of trees, need for habitat protection, need for recycling, dangers of dump sites, environmental connection to health issues (sanitation, illness, disease, etc), dangers of smoking.</td>
</tr>
<tr>
<td>Interest in providing public awareness</td>
<td>Desire to create awareness among others (family, friends, general public), conduct rallies, informing others about use of jute bags instead of plastic, “do not litter” campaigns, educate about making rain tanks for water accumulation, impacts of noise pollution, vehicle over-use &amp; emissions, environmental messages/slogans.</td>
</tr>
<tr>
<td>Knowledge gain about the environment</td>
<td>Ecosystem info. How to conduct rain water harvesting, comprehension of and benefits relating to planting trees (for humans and all life forms), paper production, detrimental effects of polythene, concepts related to global warming, habitat loss, importance of salt testing, consequences of soil erosion, why &amp; how to test water.</td>
</tr>
<tr>
<td>Attitude change</td>
<td>Motivation to help find solutions to environmental issues, aspire to make a difference in local community, modified opinion of sanitation issues.</td>
</tr>
<tr>
<td>Behavior change</td>
<td>Turning light switches off, conserving water (broad), use of rain water, community service (e.g., serving water to passengers at rail station, clothes distribution to the poor), improvement in personal hygiene, ongoing use of compost at school and home, reduced littering.</td>
</tr>
<tr>
<td>Barriers (in some instances, not others)</td>
<td>Inability to do more activities based on limited funds, fear that adults won’t listen to them, resource materials not received, not enough Club meetings.</td>
</tr>
</tbody>
</table>

1 Government High School, Moginand, Sirmour District in H.P., Arvind Shri Vidya Mandir Secondary School and Shri Mahavir Digamber Jain Senior Secondary School in Jaipur.
Conclusions

As Suggested by Dr. Nina Roberts, Senior Researcher and Author of this Study and Sirisha Indukuri, Research Associate

The following inferences are based on both a concurrence of conclusions made by the four evaluation agencies as well as our own conclusions based on transcriptions of interviews during additional field site visits, during various meetings throughout the study period, and with officials in Delhi. The following statements represent a fusion of key data collected during the study period:

**STRENGTHS OF THE PROGRAM**

- The NGC is a good method of consolidation of bringing numerous national level environment-based programs for youth together. NGC has provided the structure of bringing many programs and organizations together and have provided a good national direction at the start.
- Teachers-in-charge (who are active) provide direct oversight and leadership for students and activities; it was noted that some who are extremely committed, and highly motivated contribute their own financial (or other) resources to assist the program due to dearth of funds available.
- Students come together with genuine interest in learning about the environment, are connected with others who want to participate with action-based programs and activities, and Eco-clubs provide a forum to educate students less aware/not as sensitized to environmental issues.
- The partnerships developed by the schools (e.g., with committed NGO’s) have contributed greatly to their ability to provide ongoing and quality programs for students.

**GREATEST IMPACTS OF ECO-CLUBS ON STUDENT MEMBERS**

- Eco Club members are very enthusiastic about their participation and attribute their increased knowledge of environmental issues to association with this program.
- Students seem to exhibit a change in their attitude and behavior as a result of participation and active involvement in the Eco-clubs.
- More sensitized to environmental issues and problems.
- Students have increased their participation in local conservation action.
- Students have improved their level of awareness about personal hygiene due to participation in Eco-clubs.

**AREAS NEEDING IMPROVEMENT (GAPS IN OVERALL PROGRAM)**

- The system and structure of operating the NGC programs from upper level management functions needs to be re-examined. Ex: Currently considered “too top heavy” and paperwork is regarded as “too cumbersome.” *(Note: this first item is a major consideration as results show the benefits and desired outcomes for youth are potentially stifled and hindered).*
- NGC is unable to maintain the continuity of the strength of the programs that were instituted at the start.
- Agencies involved are rarely connected to one another during the year.
- The NGC, as it presently exists, has a peripheral presence; this is reflected in the whole system and operation of the program itself – no specialist teachers, the teachers-in-charge are science teachers or other subject matter teachers who have an interest in the environmental field, there is no specialist agency or directorate at the state or district level taking care of the implementation.
✓ The teachers-in-charge (TIC) are overloaded with other teaching assignments and school-related tasks so report having “little time for NGC.” No separate dedicated system to oversee the program. The State Pollution Control Boards are the State Nodal Agency in many cases. Andhra Pradesh (state level) is an exception as it has a separate directorate for the NGC. Meetings are mostly held over the weekends. Commitment in some cases can be questioned and seriousness of outcomes is vague. To make Eco-clubs an integral part of the school, and to take it out of its peripheral status then operations/management and implementation must be improved at all levels.

✓ All teachers associated with the Eco-clubs have not received training or resource materials. Some have, many have not.

✓ There is an imbalance of male teachers-in-charge dominating this leadership position.

✓ Monitoring and tracking of activities at the schools in general needs enhancement: No regular monitoring of Eco-club activities (e.g., not that it does not happen at all, it is apparently extremely sporadic for the majority of programs studied and in some cases does not occur at all). A system for examining progress and obtaining feedback needs to be incorporated.

✓ Activity Calendar - Minimal in some states to none in others were developed for upcoming events.

✓ Activity Preparation – In many cases students were not provided with information or resources in advance of an activity. Prior to any action program, students should be educated about the issues that will be taken up by the activity so they can gain advanced knowledge and develop an attitudinal change leading to greater understanding of their actions through the activity – This will ultimately lead to improvement in environment. This, ideally, would be followed up with a mass awareness campaign that would be more comprehensive and meaningful.

✓ Monthly Meetings - Meetings should discuss more than just upcoming/desired activities - meetings should also review previous activities undertaken and the impact on students. That is, debriefing is an important component to sustainability, providing benchmarks, and informally evaluating the program within schools (e.g., rural vs. more developed school areas can each complete this – school location and size irrelevant).

✓ Guidelines for selection of “Best Eco-club” – Schools seemed to have generated their own criteria and guidelines. If there was information created or available elsewhere as a model, it was used for selection – if not, no “best” Eco-club was determined or given an award.

✓ Training – Too many inconsistencies. Lack of mandatory training, types of training offered varies, and the lecture format dominates. Must be more hands-on in future.

✓ Roles and responsibilities of both the State Steering Committee and the DIMC are apparently unclear and need to be carefully defined and effectively conveyed to all members of these committees.

✓ Activities primarily occur within and around the school campus; involvement of the community and local people is extremely inconsistent, non-existent, or difficult to solicit. There is some “community awareness” yet involvement/action-based participation of local communities is rare and apparently very difficult to pursue.
Important Judgment – Based on the current study objectives including all documents reviewed and content from supplemental interviews (see methodology), the NGC does not appear to have a clear vision. The broad goal, is clear however, and as stated is to raise environmental awareness among students. Yet beyond this, how does the Ministry visualize and see the Eco-clubs in terms of their importance, significance, and what role they play in achieving this goal? The vision would be representative of the purpose for which Eco-clubs were established and program objectives should match the vision. Creating a vision and answering the question “how do we define success” are the first steps and they seem to be missing. What is the NGC vision statement, the motive for existence, and desire for future? The vision must guide all program functions that follow (see 34-points). Additionally, Gray and Associates (1998) note that for a program to be considered “effective” the organization/program vision and mission must clearly communicate intentions as well as demonstrate commitment by everyone associated. Examples of what the NGC might include in a statement are: To nurture a spirit of ______; To instill sensitivity _______; To train ___________; To educate______; and/or to facilitate student learning towards being change agents in the future. Ensuring creation of a vision statement should be an integral part of the strategic planning process bringing this program into 2010. The National Steering Committee should be involved with this exercise.

Miscellaneous comment

As a national level program, an assessment of the NGC can place it in comparison with National Cadet Corps or National Social Service Scheme. For example, from an operations standpoint, does MoEF want to bring the NGC to be up to par with these organizations (e.g., in terms of management and implementation)? Can lessons learned from these schemes be garnished from the NCC or NSS? (School level and college level). Connection is to operations of a national level program (irrespective of environment, youth, etc). Can ideas emerge from their successes as a model for the NGC (admin/mgmt functions)?

“Our not just one person is responsible; the fact that problems are part of a larger system is a critical issue…The process of development [for instance] is nothing more than a series of choices and decisions. When the process is too fast, we experience unsustainable consumption…So how do we internalize this process of preservation so that what we do is totally sustainable regarding the ecosystem? Educate our kids - the children are agents of change and custodians of the future…”

~ Dr. T. Ramaswami, Secretary of Science and Technology, Government of India – Excerpts from his “Presidential Address” at a local World Environment Day event organized by the MoEF in association with CLEAN-India, Development Alternatives (June 2006)
Recommendations

As Suggested by Dr. Nina Roberts, Senior Researcher and Author of this Study and Sirisha Indukuri, Research Associate

The “34 Points” document (as reflected in the Annexure) is the cornerstone for each of the four existing evaluations included in the document review. The recommendations provided here follow a framework using the five broad categories that form the Eco Club scheme. Additional ideas may be provided to help enhance the overall operations and program implementation of the NGC. These recommendations are being put forth to assist the NGC with strategic planning of Eco-clubs through the year 2010.

To Improve Future Management/Operations and Implementation

Assertion: Based on all data gathered and subsequent analyses, it is strongly recommended that the MoEF, National Green Corps program consider a moratorium (i.e., temporary freeze) on expansion of this program—by not adding more schools—until the problems faced are sufficiently addressed and solutions adequately provided.

There is no question that many schools and districts are experiencing great success and few problems. This fact notwithstanding, evidence suggests that problems and issues reported are too numerous to justify adding more schools, problems and challenges are not being properly addressed, individuals at all levels are experiencing an enormous amount of stress related to implementing this program. Sample comments consistently noted (generalization):

STATE (Nodal): The sheer magnitude of number of schools to manage is overwhelming. Lack of follow-up, difficulty in maintaining communication, no accountability to lower levels when responsibilities are not adhered to.

DISTRICT: Too varied in its responsibilities, commitment and follow-up. Some were consistent (e.g., monthly visits, meetings), others were deemed “inefficient” and “non-communicative” with “not much of a role to play”. Many teachers “not satisfied with support received” (from DIMC).

SCHOOL (teacher and/or principal or head): The program can be a burden and considered “too much extra work on an already demanding schedule”. Also, complaints of being unable to carry out many activities due to lack of funds were prevalent.

Broad Recommendations for Improvement of Operations and Management

The MoEF should focus less on quantitative output and more on qualitative outcomes and impacts.

Streamline Management through Fewer Agencies Involved and Modified Structure of Operations and Implementation: There are too many levels in the hierarchy of program management and implementation and therefore too many people involved in attempting to manage Eco-clubs. This has created conflicts, many challenges in communication, and a huge disconnect ultimately effecting students who are supposed to be the beneficiaries of this program.
**Suggestion 1:** Omit the Resource Agency all together – they may not be needed. Assign responsibility to the State Nodal Agency OR designate the Resource Agency to take on roles/responsibilities of the State Agency. This will:
1) Minimize administrative costs,
2) Provide effective implementation of the program regarding production of locally relevant resource material, training modules, and monitoring. The professional from the Nodal Agency involved should seek an assistant to help lighten the load.

**Suggestion 2:**

**Suggested Flow Chart (e.g., Framework) for Program Implementation**

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1 Coordination at this level can also be completed by the Tribal Department for tribal districts (in tandem with Dept of Environment or in lieu of).
2 Dept. of Education Coordinator could be responsible for overseeing resource materials in consultation with the environmental education specialist (see description that follows).

**Rationale:** Education at the state level is a state subject; environment is concurrent with education in that these must operate hand-in-hand. State level operations for both environment and education departments is a must. The NGC needs specialized professionals working at the state level within the education department because the Eco-clubs operate in schools; and, the most direct agents are the teachers-in-charge. Institutions where they need to go for training typically occur at universities all under the stream of the Dept. of Education. The Pollution Control Board (PCB) or Dept. of Environment is also a state level operation. According to the current Eco-club structure (see page 10), the State Dept. of Education does not have direct link (e.g., chain of command) to the PCB or the Dept. of Environment (or Forests). The current NGC structure has many channels to go through for implementation, but they do not actually link based on reporting and hierarchy. Different entities involved do not report to each other so communication often breaks down. Too much time is being wasted. For example, in many cases, results of both phases of this study show meetings do not occur, reports do not get submitted, follow through is lacking, and more. Too many decisions being made but are not being followed up for implementation. There is no accountability given the distinct government operations and
NGO involvement because there are no official links between agencies. MoEF only has official communication with the PCB and Dept. of Forests (and Environment). A “polite letter requesting cooperation from the other state level government operations” will only get MoEF so far and those individuals may or may not comply (e.g., results show level of commitment at the state and NGO levels vary).

**Recommendation for re-organization elaborated**

At the State level, the Department of the Environment (Forests) should have a dedicated “Education Coordinator” (or Education “Officer”) position. This would ideally be parallel to the qualifications of certain education personnel at the state Dept. of Education (e.g., college degree qualifications for education with background in environment). The Dept. of Education would also have a person dedicated as the NGC Coordinator. The Dept. of Environment/Forests Education Officer would be the primary lead reporting to the MoEF with responsibilities that include ongoing communication with the NGC education official at the Dept of Education.

Although primary operations for NGOs occur at the state level, a variety of NGOs could be invited to help manage the overall responsibility of Eco-clubs at the district level (e.g., complete multiple tasks to ensure success). An important recommendation is the NGO must be active and want to work with ECs and would therefore be the implementing agency at the district level. The NGO overseeing this function, to include implementation, at the district level allows for greater innovation of presentation, ideas, implementation of the scheme, etc. The NGOs have the knowledge and the imagination; the state agency as the current “nodal” managing body does not necessarily have the creativity needed for developing environmental education programs for school-age youth.

Within the current fiscal structure of the ECs the MoEF should provide this level allocation directly to the NGO to oversee ECs at this district level. Omit the full District committee as results show this may be “unnecessary and excessive”. Continuation of the NGO as the implementing agency could depend on periodic performance review to supplement the annual report already being submitted by State agency officials. Note: this would also help to alleviate the problems for inactive NGOs that do want to be involved but receive no remuneration for their efforts. Process: A suggestion would be for the NGO interested in this duty to submit a proposal to be the managing “nodal” agency but at the district level.

Consideration for the operations and implementation of the Eco-clubs should be to remove “overkill” of management from government hands (national and state). The MoEF does not need a separate resource agency to be involved or an entire district committee with multiple officials. The two state coordinators would be responsible for all facets of managing the process and distribution of resource materials. Outsourcing for resource materials could be also done based on the needs and discretion of the states. For some, there may be no need to do this if the state agencies are functioning well. For others, where state agencies are not functioning well – this plan could be executed. Consider omitting all committees except at the national level and this group should operate as an “advisory council”

MoEF can act as the patron of the program, but involvement in operations should be reduced or removed. **Bottom line:** Regardless of how the implementation of the scheme is re-worked, a strong recommendation based on all variables of this study is that an education officer (highly qualified in environmental education) needs to be dedicated to the Eco-clubs within the State Dept. of Environment/Forests. MoEF funds would be more wisely spent on paying the NGO at the district level.
Training: Hands-on activities/experiential exercises should be an integral component of all training sessions. Reports noted “training is mostly in lecture mode” (e.g., over 2/3 of all districts surveyed reported this method). This is not sufficient for adequate learning and professional development.

- Conduct a “training needs assessment” prior to the training – Apparently many assumptions are being made without prior knowledge of teacher needs in order to develop training content.
- A specially designed training program should be instituted for giving training to master trainers, teachers, orientation to district level implementing agents (or officials), etc. Currently there is no specific strategy/plan for consistency of training across Eco-club schemes.
- Resource material should be distributed during the training program and should be linked with modules during these events. (Note: This does not detract from the fact “resources” should be sought out and provided on an on-going basis to schools as applicable throughout the year).
- Involve NGOs with experience and expertise in participatory training (experiential type modules) to help organize and conduct the trainings.

Teachers-in-Charge: Given disproportion of men to women TICs, female teachers should be encouraged and motivated to become a TIC. This would indisputably assist with increasing enrollment and participation by girl students in the Eco-club activities. Establish an assistant TIC who could be a junior-level teacher, college intern, or part-time teacher or substitute.

Specialized personnel, with backgrounds in the environmental field, to be hired – at state level, district level, and as TICs. This reference also relates to the fact these positions should be dedicated to work with the NGC only. That is, professionals currently involved are already committed to their other responsibilities and ECs, in many cases, are considered “an added burden”).

Monitoring/Tracking and Feedback: There seems to be a consensus that there is a great deal of irregularity among the amount, level and type of monitoring, Eco-club tracking of programs, and follow up (e.g., general evaluation). A key will be for State Nodal Agencies (or suggested new structure coordinators) to assist the DIMC – or district level NGO – with developing a regular schedule for monitoring and hold them accountable. The involvement of the Bharat Scouts and Guides (e.g., Rajasthan) is an excellent model. Findings from interviews in Jaipur indicate other Scouts and Guides organizations across other states were approached to partake; they decline involvement with Eco-clubs due to “too much work and not enough financial incentive”. If there was a way to solicit support from the national level Bharat Scouts and Guides organization, this connection may be an influence for greater involvement across other states. There must be a mutually beneficially reason for them to be engaged and this could assist with sustainability for the long-term.

“Report Card” – As provided in the CMS evaluation study, the idea of report cards presented for each of the schools visited is a useful mechanism. This can be used for ongoing monitoring (or monthly, etc), and for noting how much is permeating down to the immediate environment, the school, and for the Eco-club members. It can be used as an important tool to assess the impact of Eco-clubs overall.

Reporting: This needs to be taken more seriously. A system should be outlined to ensure a required standard reporting format is followed by all States: This can be accomplished by providing a template to the State official who is the contact person for this
program. This template would present them with the format to be followed upon submitting reports to MoEF. Reporting should occur on a quarterly basis. Overall, the reporting and monitoring mechanism needs to be tightened up.

➢ Parents/Guardians: Host an “Eco-club Open House” either at the start of every school year when the Eco Club begins (e.g., provide orientation for parents and students together) and/or host an open house mid-year for parents when students have had a chance to be educated about environmental issues, etc. and have tangible products to showcase regarding their involvement. In many cases, parents may be hesitant to send their daughters for outdoor activities. Increased education for parents about the values and benefits for involvement of girls in the program is essential.

➢ Publicity/Media: The Ministry should consider focusing on publicity of EC at the national level by creating a program promotion campaign for advertising the mission and vision (when developed), existence, and overall activities being accomplished by the ECs. Schools at the local level, and in some cases at the district level, are the primary ambassadors for promoting the ECs and this occurs primarily in the print media (e.g., local newspapers). The promotional campaign should include an appeal to solicit overall public support for EC in any capacity (e.g., support provided would depend on needs of the program and definitely interest of the viewer). An element of this could include an annual “big picture” newsletter update that is comprised of highlights from the states and is made available to key supporters and officials and potential funding sources. This type of once-per-year publication definitely has merit, would speak to the continued good work of the MoEF and their support of environmental education for youth, and would potentially encourage states to submit updates and highlights as well. The MoEF should decide on the feasibility of this based on human and financial resources to carry this out or consider outsourcing this task to a selected contracting agency.

➢ Fiscal Responsibility: On June 5, 2006 an urgent memo was sent out via speed post to all NGC Program Nodal Officers. This reflects a switch from payment of checks and DD’s to a more efficient “e-payment system”. This change to an electronic payment system will significantly reduce the delay in payments received for use and distribution. Nodal officers are required to open a separate bank account for the NGC program with an approved institution. This is an important advancement. Issues may still remain; however, with disbursement of funds to rural schools with no computer access (e.g., costs of registered mail or speed post to deliver funds will continue to elevate operating costs substantially). An alternate mode of timely distribution to schools is essential to be determined by Nodal agencies and district officials.

To Improve Activities/Events/Exercises
The MoEF should focus less on quantitative output and more on qualitative outcomes and impacts of the Eco-clubs (EC).

➢ School-based functions: The immediate environment must be taken care of as part of overarching EC objectives – That is, the school environment should come first. The EC for each school could have a periodic phase-by-phase process to ensure the school is a completely environmentally sustainable unit. Subsequent or simultaneous activities could then occur in the community following benchmarks of success in their own school or upon interest of community members/leaders (or with support of district officials, etc). One model would be to focus on school locale prior to venturing out beyond the school boundaries – “learn to crawl before you can walk”. As community involvement is clearly significant, someone (e.g., principal/TIC) or committee needs to decide where the priority or frequency of community awareness activities, etc. ought to
occur based on resources available (e.g., current funding indicates perhaps a focus on school-based activities is more realistic) – this would also offer increased visibility for potential, added support and fundraising efforts in the community.
* Activities should occur beyond cleanliness and tree plantation.
* Develop and maintain an Annual Calendar.
* Maintain Eco-Club activities as an extracurricular component of schools and do not integrate into the classroom curriculum. This should be an enjoyable part of the requirements and responsibilities of the “teacher-in-charge” and not an added burden. These Clubs can be a major supplement to this coursework in particular and the timing of meetings should therefore be included during a typical school day.
* Class/Standards of Participants: Primary school is clearly too young. They are not as capable as comprehending or performing certain activities. Furthermore, developmentally they are not ready for the type and level of activities undertaken by the Eco-clubs. Omit this as an option and remain focused on middle school groups and high school class level students.
* Best Eco-club: If this is important to MoEF and the NGC program as a whole, the Ministry should develop and distribute “guidelines” for selection of best Eco-club. If this exists, it is not being disseminated widely. This could be one of the roles of the National Steering Committee to take charge of this. Important to note the value of this type of award (i.e., “Best Eco-club”) are one example of many that help create an increase in motivation to participate and showcase their learning.

Note: The Central Board for Secondary Education: [http://www.cbse.nic.in/](http://www.cbse.nic.in/) recognizes validity of the Eco-clubs: “The board imparts environmental education through schools to familiarize the students with growing concerns of environmental degradation and ecological imbalances. Eco-clubs to create sensitivity to ecological problems and eco-friendliness are the hallmarks of this subject.”

- **Community Engagement:** Eco-clubs alone cannot develop a comprehensive, healthy, personal and social attitude towards environment. A partnership between the school, family and community needs to be established and strengthened so as to develop proper attitudes. This would lead to a more positive action towards helping the environment from a more holistic point of view. This may sound like a gigantic undertaking – while it may be difficult to engage with local communities in some instances, greater effort could be made to extend more activity options beyond the school boundaries.

- **Establish Mentoring Component:** The high school students are experiencing development of many valuable skills. This is also a great opportunity for them to develop and enhance leadership skills through peer mentoring. A peer leadership program that uses high school students (e.g., Class XII/Seniors) as peer leaders for primary schools in their neighborhoods. Peer leaders are positive leadership-oriented youth who present environmental information to younger students through lectures, role plays, games, videos and other experiential means such as teaching younger children how to conduct tree plantation. All participating schools would be encouraged to send peer leaders to the training sessions (student involvement was suggested by the 4 evaluation reports reviewed).

  *Suggested resource: A Guide to Mentoring Programs:*
  [www.mentors.ca/mentorprograms.html](http://www.mentors.ca/mentorprograms.html)

  Includes school and community modules such as “teacher-to-student”, teacher-to-teacher and “student-to-student” components, etc.
- Establish Environmental Education Career Development Component: The Eco-clubs provide a vital opportunity to educate young people about careers in environmental education, conservation and natural resources, parks management, and related fields. The U.S.A. has numerous models of existing programs and sample Internet sites are provided in Annexure E. Start up is not difficult and can be both cost-effective and worthwhile in terms of generating interest among youth regarding obtaining information and getting key questions answered in preparation of their future.

- Corporate Sponsorship: Approach corporations to sponsor large-scale environmental awareness and action initiatives. It was noted that some corporations are trying to further their outreach in rural areas and these locations could therefore benefit from corporate sponsorship. I strongly recommend that corporations that are committed to environmental improvement, education in general, and/or youth be approached for sponsorship. Examples include: To help provide resource materials, pay for trainings, provide transportation for field trips.

- "Adopt an Eco Club": In the U.S.A., there is a very well known and extremely popular means of obtaining much needed care and assistance to school programs, highway and park clean-ups, water testing/clean-up, etc. One model that exists is called Adopt-A-Highway (or Street). This can be modified and steps implemented for companies to “adopt” an Eco-club in order to assist them with activities by providing resources to achieve their goals of conducting activities directly in the community (e.g., cleanliness drives). The corporate sponsor program would provide the Eco-club with necessary resources and materials for the cleaning of highways or roads, for testing water, cleaning rivers, or participating in agricultural assistance (e.g., educating villages/farmers about the use of organic fertilizer) for example. Regarding even the most heavily littered highways and roads, or most polluted waterways across India, corporations who are willing to support this effort would assist Eco-clubs by supporting frequently cleanliness drives and resulting in these areas becoming a source of pride (e.g., provide transportation, supplies, meals). Whatever area the Eco-club works in, a banner/sign with the companies name could be placed on the roadside or near the river, etc. in plain view of thousands of motorists, indicating their participation. Businesses can display their name and company logo to thousands of motorists during the activity students are involved with.

Example: Adopt-a-Highway Litter Removal Service of America, Inc. has been in business for over a decade. They have provided hundreds of sponsors with excellent service while working with states to develop the Adopt A Highway (and Sponsor A Highway) Corporate programs. While the basis for this service is an organization would “adopt” a section of the highway or street to be considered “their area” for ongoing clean-up and/or restoration, modification for Eco-clubs could be modified to reflect sponsorship of activity type and support of a specific club/school. By approaching a local corporation within any given state or district, the Eco-club programs could allow this company the chance to be recognized as a company that is concerned with the environment, has civic pride, a sense of community involvement, as well as support of ensuring sustainability of youth programs and education about the environment.

- Resource Materials: According to the results and findings, resource materials found most useful and should be continued are: Informative books, pamphlets and other written educational materials; Materials providing ideas/suggestions for activities to conduct with students; Success stories and case studies (accompanied by relevant activities); and Materials provided in the local language. Additionally, consideration
should be given to partnership with local NGO to sponsor development and distribution of materials (e.g., such as what is occurring by the Indian Environment Society and CEE). Need for Resource Materials to be published in local languages, quality to be improved and also timely distribution.

**Idea:** Develop an exchange program with school children in the U.S.A. where environmental education materials can be provided to Eco-clubs in India, and Eco Club members can write letters to these youth in America providing them with photographs and letters about the activities and events they are doing here in India.

- **Audio-Visual Equipment:** It is a common sentiment among all four agencies that provision and use of AV equipment would greatly enhance and supplement the continued work of the Eco-clubs. In order to determine need, a brief survey or inventory should be undertaken by the DIMC or District Coordinator if new NGC structure is adopted and instituted (e.g., What do they have available? What do they need versus want? etc.)

- **Non-Governmental Organizations (NGO):** Continue to encourage and enhance involvement of NGOs. Several comments made throughout the reports noted that Eco-clubs are “functioning in isolation and without any support or expertise input from local organizations.” On the other hand, for those schools where NGOs are active and supportive, their contributions among states surveyed, as found in the document review, as well as the phase II interviews of the present study indicate their leadership, partnership desires, overall contributions, etc. have played a significant role in the success and “movement” of the National Green Corps Eco-clubs. Not all schools are working closely with any NGOs and this is essential for long-term success and sustainability. (See also recommendation for organizational structure, p. 39).

- **College Internship Opportunities:** Develop a component for the Eco-club programs where college students can have the opportunity to work with teachers and students with logistical arrangements as well as hands-on instruction. Promote the NGC to any and all colleges/universities in the locations where Eco-clubs exist. Discuss opportunities with select Department Chairs and determine feasibility. Many institutions of higher learning would indisputably support this concept, the students would benefit from college-age instructors and mentors, the college students would benefit from developing leadership experience, and the respective institutions are recognized for the partnership.

- **Internet Marketing and Promotion for Eco-clubs:** The following NGC websites are out-of-date and in urgent need of updating:
  1. All links on this NGC site are out of date, including contact information:
     http://envfor.nic.in/divisions/ee/ngc/left.html
  2. “National Green Corps (Eco-clubs): An Overview”
     http://envfor.nic.in/divisions/ee/ngc/main.html
  3. “NGC Brochure”
     http://envfor.nic.in/divisions/ee/ngc/ngc_brochure.html#10
**Closing comments:**

1) Given the breadth and depth of the content of this study, it is highly recommended that a special forum (e.g., round-table) be convened by the MoEF to include State Nodal Agency representatives, minimally, and other interested or invited parties, to discuss findings and recommendations of this report. There is a great deal of information provided here that should be synthesized by key stakeholders and decisions should be made by consensus whenever possible. As with any strategic planning process, not all suggestions are feasible to implement at once – an incremental process of improvement should occur year-by-year to ensure success and sustainability of the NGC Eco-clubs.

2) **Future evaluation studies:** If the MoEF decides to conduct another comprehensive evaluation in the future, it is highly recommended that, from a social science standpoint, comprehensive data analyses occur to also allow for statistical significance tests to be completed. Qualitative data will continue to be equally essential. Hence a mixed method evaluation study built on a strong conceptual and methodological foundation, and employing rigorous research techniques and subsequent analyses is encouraged.

   **Attitudes/Behaviors & Impact:** The question remains as to whether the impact being assessed (by the four evaluating agencies) occurred in terms of “changing the attitudes” of the community or public, or resolving some local environmental problems. This is not clear. If the former is the case, as researchers, we believe it is unrealistic to expect a change in the community attitudes without adequate measures. But if it is the latter, then, some Eco-clubs have made an impact on the local environment by taking up specific issues and this is open for further research to determine the extent and specific type of “impact” that has been made. More robust techniques and alternative methods are required for the measurement of attitudes and subjective opinion as well as true impact on the environment itself within any given community. Regarding the impact on local environment the findings of the present study do not yield very positive results.

   Finally, Eco-clubs are a great concept and a hot-bed of research opportunities! For example, future studies could also include: 1) Survey or interviews with parents, 2) Determine care and longevity of tree plantation activities – how many actually survive for the long-term (re: what percentage “make it”?), 3) True “impact” of Eco-clubs to the local community, 4) Empirical assessment of the effects of the program on the local [physical] environment – (e.g., has it really been effected? If so, how?). Theoretically, if behavior change occurs, there is a direct correlation to a “cleaner” environment; however, this would need to be tested, and 5) Opportunity for influencing local and/or state politics (e.g., decision-making about environmental policies) – Environmental policy is typically driven by natural science and economics. Can Eco-clubs make a contribution in this way and if so, how?

   Government policies, at any level, are more likely to be effective if it works with public perceptions and opinions rather than against it. Student members of Eco-clubs can potentially be a catalyst to help bridge the gap between the general public and government officials. More public awareness and education and/or the use of economic incentives are needed to help create change.

Mizoram, 2005-2006, Aizawl District Eco-club
Annexure A

“34 points”

A. Activities of Eco-clubs
1. Role of Teacher-in-Charge of the Eco-club.
2. Strengths and weaknesses of Eco-clubs.
3. Activities undertaken in Eco-clubs (action and outdoor) and future plans.
4. What difference Eco-club had on its members in terms of sensitization towards environment?
5. Perception and understanding of members of Eco-clubs
6. Networking between Eco-clubs and Teacher in-charge
7. Appreciation/awards to Eco-clubs
8. What are the significant contributions/achievements/innovations made by Eco-clubs since inception (can be documented as case studies)

B. Resource material
9. Type of resource material developed/shared (quality)
10. Usefulness of resource materials in the local context.
11. Acceptability of the material
12. Is it supplementing the activities?

C. Capacity building initiatives
13. Type and frequency of training programmes conducted for teacher-in-charge and members
14. Effectiveness of Resource persons/master trainers for imparting training
15. No. of teacher in-charged trained
16. Follow ups of trainings
17. Any set curriculum/programme/module for the trainings?
18. Technique for conducting trainings
19. Relevance of trainings

D. Role of various agencies
20. Role / responsibilities of agencies in effective functioning of the Eco-clubs
21. Networking between agencies
23. Assistance to Eco-clubs in their functioning
24. Understanding of agencies on Eco-clubs activities

E. Monitoring and Feedback Mechanism
25. Overall implementation
26. Reporting mechanisms
27. Monitoring mechanisms
28. Financial allocations
29. Follow ups
30. Is there any mechanism to enhance the performance of Eco-clubs?
31. Bottlenecks
32. Maintenance of records
33. Maintenance of accounts
34. Suggestions for improvements

# # # # # # #
Annexure B

Throughout the actual five weeks of data collection, I had the opportunity to meet with numerous individuals and have both formal and informal conversations with them about the NGC and Eco-clubs (n = 68):

1. Dr. Uday Shanker, Deputy Secretary, Ministry of Environment and Forests, National Green Corps Unit, Paryavaran Bhawan, C.G.O. Complex, New Delhi ~

2. R.P. Singh, Consultant, NGC Programme, MoEF, New Delhi

3. Field Site Visit - Govt. High School, Moginand, Sirmour District of Himachal Pradesh:
   ✓ Students – Eco Club members (1 focus group = 15 students)
   ✓ Teacher-in-charge (Dr. Sanjeev Attari),
   ✓ 4 other teachers
   ✓ Head of School
   ✓ Representative from local NGO called Gyan Vigyan Samidi
   ✓ Two staff from the Centre for Media Studies
   ✓ District Forest Officer and Member Selection Committee for DIMC (Mr. Gupta)
   ✓ Deputy Director of Higher Education for H.P. (Paramjit Singh).


5. Field Site Visit – Jaipur:
   ✓ Shri R.P. Vijay, State Secretary, Rajasthan Rajya Bharat Scouts & Guides
   ✓ L.R. Sharma, Bharat Scouts & Guides, Rajasthan
   ✓ Ms. Brij Rani Mathur, Assistant Divisional Organizing Commissioner, Rajasthan Rajya Bharat Scouts & Guides
   ✓ Ms. Daya Meghani, State Organizing Commissioner, Rajasthan Bharat Scouts/Guides
   ✓ Lajpat Rai Kumawat, Director, Arvind Srhi Vidya Mandir School, Rajasthan Rajya Bharat Scouts & Guides.
   ✓ Students - Eco Club members (1 focus group = 15 students)
   ✓ Atul Kumar Garg, Principal Secretary to Govt of Rajasthan, Dept of Co-operation, Secretariat, Jaipur, Rajasthan, State Chief Commissioner, Rajasthan Scouts and Guides: Chairman, State Steering Committee, NGC.
   ✓ Retired Colonel Kau Shal Misra, School Principal, SMDJ School, Jaipur, Rajasthan
   ✓ Students - Eco Club members (1 focus group = 12 students)


7. Debabrata Swain, Conservator of Forest and Director, Simlipal Biosphere and Tiger Reserve, Baripada, Orissa (Involved at the District Level)

8. Dr. Bala Krishnamoorthy, Professor of Business Policy and Environmental Management, Narsee Monjee Institute of Management Studies, Mumbai (discussion on youth participation in environmental education programmes, desirable skills sought for college entrance and career development in natural resources/conservation/the environment in general).

9. Centre for Environment Education:
   • Dr. Shyamala K. Mani, Coordinator
   • Mr. Sharad Gaur, Coordinator

10. Dr. Desh Bandhu, President, Indian Environmental Society
Annexure C

Career Development Programs in Conservation and the Environment

The following sample programs in America have similar goals and objectives regarding increasing awareness about the environment and sensitizing them to critical natural resource issues. They also have a career development component that is strategically designed to offer students information and knowledge as they consider possible future careers:

1. Environmental Careers Organization
   30 Winter Street, 6th Floor
   Boston, MA 02108 USA
   Tel: (001) 617-426-4783
   http://www.eco.org/

2. Minorities in Agriculture, Natural Resources and Related Sciences
   MANRRS
   P.O. Box 381017
   Germantown, TN 38183 USA
   Tel: (001) 901-757-9700
   http://www.manrrs.org/

3. Student Conservation Association
   P.O. Box 550
   Charlestown, NH 06403 USA
   Tel: (001) 603-543-1700
   http://www.thesca.org

4. U.S. Environmental Protection Agency (EPA)
   Environmental Education, Educator Training Program:
   Office of Environmental Education
   1200 Pennsylvania Avenue, N.W. (1704A)
   Washington, DC 20460 USA
   http://www.epa.gov/enviroed/educate.html

5. U.S. Forest Service
   http://www.fs.fed.us
   Jobs: http://www.fs.fed.us/fsjobs/

6. U.S. National Park Service
   Interpretation and Education: http://www.nps.gov/learn
   Nature and Science: http://www.nature.nps.gov
   Park Rangers, Career Information: http://www.nps.gov/personnel/rangers.htm
Annexure D

Excellent American-based Program Models:
Environmental Education,
Conservation & Natural Resources

All Science Topics Resource Links  www.ed.gov/frees-scienc.html
American Wilderness Coalition  www.americanwilderness.org/resources/resources.html
Association of National Park Rangers  www.anpr.org
Association of Partners for Public Lands  www.appl.org
Bureau of Land Management: Learning Landscapes  www.blm.gov/education
EarthScope  www.earthscope.org
Ecological Society of America  www.esa.org
Educational Resources Information Center  www.ericse.org
Educational Resources Information Center (Outdoor & Experiential Education Resources)  www.ael.org/eric/outdoor.htm
Environmental Education Link  www.nceet.snre.umich.edu
Environmental Education and Training Partnership  www.eetap.org
Environmental Protection Agency (Student Center)  www.epa.gov/students
Educational Resources Information Clearinghouse  www.eric.ed.gov
Geology in the Parks – “Teacher Feature”  www2.nature.nps.gov/grd/edu/index.htm
Geological Society of America  www.geosociety.org
George Wright Society  www.georgewright.org
Globe Program–Hands on Education & Science  www.globe.gov
Hands on the Land  www.handsontheland.org
The Jason Project  www.jasonproject.org
Leopold Education Project  www.lep.org
<table>
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<td>Minorities in Agriculture, Natural Resources &amp; Related Sciences</td>
<td><a href="http://www.manrrs.org">www.manrrs.org</a></td>
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<td>National Association for Interpretation</td>
<td><a href="http://www.interpnet.com">www.interpnet.com</a></td>
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<td>National Audubon Society</td>
<td><a href="http://www.audubon.org/educate">www.audubon.org/educate</a></td>
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<td>National Environmental Education and Training Foundation</td>
<td><a href="http://www.neetf.org">www.neetf.org</a></td>
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<td>National Geographic Society</td>
<td><a href="http://www.nationalgeographic.com">www.nationalgeographic.com</a></td>
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<td>National Park Service</td>
<td><a href="http://www.nps.gov">www.nps.gov</a></td>
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<td><a href="http://www.npca.org">www.npca.org</a></td>
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<tr>
<td>National Recreation &amp; Park Association</td>
<td><a href="http://www.nrpa.org">www.nrpa.org</a></td>
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<tr>
<td>National Wildlife Federation</td>
<td><a href="http://www.nwf.org/education">www.nwf.org/education</a></td>
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<tr>
<td>Natural Resource Education Links</td>
<td><a href="http://www.in.nrcs.usda.gov/mlra11/education.htm">www.in.nrcs.usda.gov/mlra11/education.htm</a></td>
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<tr>
<td>North American Association for Environmental Education</td>
<td><a href="http://www.naaee.org">www.naaee.org</a></td>
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<tr>
<td>One Planet Education Network</td>
<td><a href="http://www.oneplaneteducation.com">www.oneplaneteducation.com</a></td>
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<tr>
<td>Outdoor &amp; Adventure Education Resources</td>
<td><a href="http://www.wilderdom.com/OEresources/index.htm">www.wilderdom.com/OEresources/index.htm</a></td>
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<td>Project Learning Tree</td>
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<td><a href="http://www.montana.edu/wwwwt">www.montana.edu/wwwwt</a></td>
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<td>Project WILD</td>
<td><a href="http://www.projectwild.org">www.projectwild.org</a></td>
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<tr>
<td>State Education and Environmental Roundtable</td>
<td><a href="http://www.seer.org/pages/EELinks.html">www.seer.org/pages/EELinks.html</a></td>
</tr>
<tr>
<td>US Army Corps of Engineers (Education Center)</td>
<td><a href="http://education.usace.army.mil">http://education.usace.army.mil</a></td>
</tr>
<tr>
<td>US Forest Service Conservation Education</td>
<td><a href="http://na.fs.fed.us/spfo/ce/index.cfm">http://na.fs.fed.us/spfo/ce/index.cfm</a></td>
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<td>Wilderness Information Network</td>
<td><a href="http://www.wilderness.net">www.wilderness.net</a></td>
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<td>World Wildlife Fund</td>
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<td>Professional organizations (U.S. based)</td>
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<td>Association of National Park Rangers</td>
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<td>National Recreation &amp; Park Association</td>
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<td>Natural Areas Association</td>
<td><a href="http://www.naturalarea.org">www.naturalarea.org</a></td>
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Annexure E

Listing and Chart of Activities Undertaken by Eco-clubs

The following list of activities undertaken by Eco-Clubs has primarily been drawn from the respective State or Union Territory progress reports submitted to the MoEF. If the reports have not contained systematic and adequate information on the activities, newspaper clippings and photographs enclosed in those reports have been used to gather the information. The latest available reports have been used to chart this list and such reports have varied from year-to-year. For some, the reports for 2005-06 have been available, whereas for others, 2004-05 have been used; in cases where these were also unavailable the last available reports have been utilized: 2003-04 or 2001-2002. Enumerated below are the activities of 24 States and Union Territories. For the remaining, which have not been included, data is not available. In such cases one of two situations has been noted: 1) the progress reports have not been submitted at all since the inception of the Eco-Clubs or, 2) the progress reports do not contain any information on the activities (not even newspaper articles, or photographs). As of the compilation of this list, data has not been available for the states of Arunachal Pradesh, Assam, Goa, Jharkhand, Kerala, Nagaland, and Sikkim; and U.T.’s of Andaman and Nicobar Islands, Dadar and Nagar Haveli, Daman and Diu, and Lakshadweep. Note: See Annexure F that follows for an at-a-glance table of activities organized by region, state, and category.

STATES

1. Andhra Pradesh: 2004-05

- Cleanliness drives – cleaning the river Krishna, and its banks especially during religious gathering.
- ‘Public awareness’ campaigns, rallies. Mobilizing public opinion against wastage, littering.
- Organizing fairs, exhibitions.
- Organizing mock parliaments.
- Organizing seminars, debates, discussions, popular talks.
- Model-making exercises.
- Plantation drives.
- Organizing cultural programs depicting topics related to environment.
- Doing street theatre.
- Organizing human chains.
- Inventorying and reporting polluting source, and mobilizing action against pollution and environmental destruction.
- Organizing summer camps for Eco-Club students.

Notable campaigns:

- Campaign for farmers – promoting sustainable agriculture.
- Campaigning for noise free Diwali.
- Clean Railway Campaign – producing songs to generate public concern. Video to be aired at railway stations across South Central Railway Zone.
- Zoo guideship program – first, student visit to zoo for awareness, and second, spreading the learnt message to public visiting the zoo.
2. Bihar: 2004-05

- On occasion of Independent & Republic Day, World Environment Day and Ozone Depletion Day, NGC Eco-clubs have conducted campaign through human chains by members of Eco-clubs.
- Students participated in painting and essay writing on environmental issues and biodiversity topics. About 10000 students participated in the competition.
- Awareness rallies were organized on occasion of Independent & Republic Day, World Environment Day and Ozone Depletion Day.
- Environmental awareness by way of Cycle rallies were also performed. About 3000 students of various Eco-clubs participated in these rallies.
- Plantation in and around the schools and on other vacant land were also done by the students of Eco-clubs.
- Cleanliness drive was also undertaken by Eco-clubs in and around their schools and some part of the towns and villages.
- Sr. Sec. schools staged some street play on environment protection like Sagar aur Samandar & Bachayein Ya Gawayein and etc.
- Eco-club member’s undertaken mass campaign against crackers at the eve of Diwali.

3. Chhattisgarh: 2005-06

- Preparation and collection of data on local environmental problems as well as on health, hygiene and diseases.
- Vermi composting and rain water harvesting pits were setup by some Eco-clubs.
- Eco-clubs have organized meetings group discussions & debates on different environmental issues.
- Sanitation & personal hygiene drives were undertaken by the Eco-club members around city.
- Mass awareness campaigns & rallies were organized by the Eco-club members against polythene & for water conservation.
- Students participated in poster painting, essay writing, quiz & speech competitions.
- Polythene collection and disposal drive was undertaken by the Eco-clubs.
- Plantation in and around the schools and on public land were done by the students of Eco-clubs.
- Cleanliness drive for the public places and roads was undertaken by members of Eco-clubs.


- An eco-fair had been organized where more than 1000 students and teachers participated from more than 250 Eco-clubs.
- Heronary survey meetings were conducted. Heronaries are gregarious nesting sites where number of water birds or water dependent birds breed in huge colonies.
- Environmental awareness by way of Cycle rallies was also performed.
- An Eco-club of Bardoli of Surat District developed simple mechanical devise to dispose off the plastics and polythene. This simple mechanical devise has been developed from an air pump normally used for filling air in a cycle tube.
- An Eco-club developed a medicinal plant nursery using their sewage water flowing near by this Eco-club.
- An Eco-club raised a permanent Eco-art gallery in their schools.
- Eco-clubs have organized meetings, & debates on different environmental issues.
• An Eco-club member Master Jayadeep Jhala won the first prize of the national children science congress during 2004-05.
• An Eco-club developed nursery & took benefit of Rs. 18000 from this activity.
• Sanitation, health & hygiene drives were undertaken by the Eco-club members around city.
• Mass awareness campaigns & rallies were organized by the Eco-club members for the protection of environment.
• Students participated in poster painting, essay writing, quiz & speech competitions.
• Students were carried on Nature Park like dinosaur and Fossil Park, botanical garden, zoo, snake and cactus house.
• Special nature education camp was organized for Eco-clubs members where experts on energy, environment and wild life educated the education.
• With the purpose of conserving water & preventing water from draining out of school premises, the Eco-club has set up water recharging plant in the school premises. The water in this manner diverted in turn in the 100ft deep well. The water recharging plant maintained by the Eco-clubs.
• The school makes a new entrant child to adopt a tree as a friend which he is supposed to take care of until he leaves the school after some years. The students who have already passed out from the school revisits their adopted tree friend and rejoice.
• Plantation in and around the schools and on public land were done by the students of Eco-clubs.
• Cleanliness drive for the public places was undertaken by members of Eco-clubs.

5. Haryana: 2004-05

• Visit to and workshop for Eco-club students at a bird sanctuary. As a part of this interactive sessions organized with experts and specialists, training to students in bird watching. Exercise of pond cleaning.
• Anti-crackers and pollution free Diwali campaign – organized rallies.
• Cultural activities – plays and performances.
• Planting trees.
• Nature study activities.
• Visit to industrial treatment plants.
• Lectures for students on bad effects of plastic carry bags.
• Celebration of forest week.
• Launching environmental awareness magazine.

6. Himachal Pradesh: 2004-05

• Eco-clubs have organized meetings, group discussions & debates on different environmental issues.
• Sanitation, health & hygiene drives were undertaken by the Eco-club members around city.
• Mass awareness campaigns & rallies were organized by the Eco-club members against polythene & for water conservation.
• Students participated in poster painting, essay writing, quiz & speech competitions.
• Very harmful Parthenium grass collection and eradication drive was undertaken by the Eco-clubs from their near by areas.
- Plantation in and around the schools and on public land were done by the students of Eco-clubs.
- Cleanliness drive for the public places was undertaken by members of Eco-clubs.

No data available on the activities done by the Eco-Clubs, per say. However, the activities organized by the State Pollution Control Board, the Nodal Agency there, are given below:

- State-level competitions organized. These included essay writing competitions, poetry writing competitions, poster-making and painting competitions, and photography competitions.

8. Karnataka: 2005-06

- Nodal agency has prepared a year long activity calendar for Eco-clubs and distributed it to all DIMCs.
- Preparation and collection of data on local environmental problems as well as on health, hygiene and diseases.
- Eco-Clubs members visited some rich bio-diversity & forestry sites. To identify plant and animal species, and to know their habit habitats and to address threats faced by these species.
- Prepare plan of action and model of rain water harvesting.
- Eco-clubs have organized meetings group discussions & debates on different environmental issues.
- Sanitation & personal hygiene drives were undertaken by the Eco-club members around city.
- Mass awareness campaigns & rallies were organized by the Eco-club members against polythene & for water conservation.
- Students participated in poster painting, essay writing, quiz & speech competitions on World Forests Day.
- Polythene collection and disposal drive was undertaken by the Eco-clubs.
- Plantation in and around the schools and on other vacant land were also done by the students of Eco-clubs.
- Cleanliness drive for the public places like village & city roads was undertaken by members of Eco-clubs.


- Eco-clubs have organized meetings group discussion & debates.
- Gardening and plantation in school campus.
- Sanitation drives around city.
- Students were provided with exposure on conservation of Historical & Religious Monuments.
- Campaigns & rallies were organized against polythene & for water conservation.
- Students participated in poster painting, essay writing, quiz & speech competitions.
- NGC students & teachers participated in the state level programmes like BAL-RANG & MOGLI-MAHOTSAV.
- Public awareness programme on bio-diversity conservation & cleanliness/personal hygiene.
- Students prepared & presented some Eco-friendly models like Soak-pits construction and ground water recharge model.
- Eco-clubs organized a series of cultural programme on environmental conservation.
- Bio-composting & Vermi composting pits were developed by some Eco-clubs.
An innovative experiment of school media interface programme was organized in collaboration with dailies like Hindustan Times & Bal-Bhaskar, etc.

10. Maharashtra: 2004-05

- Eco-clubs have organized meetings group discussions & debates on different environmental issues.
- Gardening and plantation in school campus.
- Sanitation & personal hygiene drives were undertaken by the Eco-club members around city.
- Public awareness campaigns & rallies were organized by the Eco-club members against polythene & for water conservation.
- Students participated in poster painting, essay writing, quiz & speech competitions on different environmental days.
- Public awareness programme on environmental conservation.
- Eco-clubs organized a some cultural programme on environmental conservation.
- Bird watching trip was carried over for the Eco-club members.
- Plantation in and around the schools and on other vacant land were also done by the students of Eco-clubs.
- Cleanliness drive for the public places was undertaken by members of Eco-clubs.


In Manipur state most of the Eco-Clubs, as it appears from the report have been formed in 2004. Thus, we do not find a list of the activities, as the thrust probably has been on starting the Eco-Clubs. However, those Eco-Clubs that were formed earlier conducted the following activities (Activities were reported 2003-2004):
- Planting trees
- Cleaning and greening the school campus.
- Organizing rallies for ‘public awareness’ on environment.
- Organizing essay competitions.
- Organizing seminars, talks, debates.


- Group discussions and debates.
- Sanitation, health & hygiene drives.
- Rallies, shouting slogans and Public awareness campaigns.
- Poster painting, essay writing, quiz & speech competitions.
- Field trip to the Wildlife Park, nature sites, sanctuaries & forests.
- Plantation in and around the schools and on public land.
- Cleanliness drive for the public places.


- Lecture, meetings & debates on different environmental issues.
- Collection and cleaning of polythene and other wastes from the streets and drains.
- Mass awareness campaigns & rallies.
- Poster painting, essay writing, quiz & speech competitions.
- Developed flower and herbal garden.
- Plantation in and around the schools.
- Cleanliness of dried leaves from the school compound and their disposal.
- Awareness campaign on preservation of wild life.
- Cleaning of public parks.
- Cleaning of soil for planting tree saplings.
- Awareness campaign on prevention of forest fire.
- Cleaning of link/approach roads from schools to the houses.
- Developed dustbins and placed in the school compound.

- Field visits to zoological parks.
- Organizing nature camps.
- Making products from waste.
- Plantation programs.
- Cleanliness drives – cleaning the school campus, and outside – cleaning ponds, cleaning bridges.
- Rallies for ‘public awareness’ on environment.
- Organizing seminars, talk, debates, drawing competitions, essay competitions, workshops, exhibitions.
- Celebration of ‘World Environment Day’, Forest Week, Water Month.
- Celebrating ‘Raksha Bandhan’ by tying ‘rakhis’ to trees.
- Maintaining gardens.

15. Punjab: 2004-05
- Meetings, & debates on different environmental issues.
- Sanitation, health & hygiene drives.
- Public awareness campaigns & rallies.
- Poster painting, essay writing, quiz & speech competitions.
- Field trip to the Wildlife Park, nature sites, sanctuaries & forests.
- Plantation in and around the schools and on public land.
- Cleanliness drive for the public places.

16. Rajasthan: 2005-06
- Hanging of bowls on branches of trees to provide water and food grains to the birds.
- Developed quarterly Eco-clubs bulletin & disseminated to all Eco-clubs.
- Development medicinal plant nurseries around school premises.
- Meetings, & debates on different environmental issues.
- Sanitation, health & hygiene drives around city.
- Public awareness campaigns & rallies.
- Poster painting, essay writing, quiz & extempore competitions.
- Visit to environmentally important sites.
- Nature education camps.
- Setting-up of water recharging plant in the school premises.
- Plantation in and around the schools and on public land.
- Cleanliness drive for the public places.
- Camp & field visits.
- Cycle rallies for environmental awareness.
- Sanitation awareness campaign.
- Visit to Wildlife Park, nature sites, sanctuaries & forests.
- Rallies against polythene.

17. Tamil Nadu: 2004-05
- Eco-clubs have organized seminars meetings group discussion & debates on the environmental issues.
- School gardening and plantation in school campus.
Sanitation drives around city.
Students were provided with exposure on conservation of Historical & Religious Monuments.
Awareness rallies & campaigns were organized against polythene & for water conservation.
Students participated in painting, essay writing, quiz & speech competitions.
Public awareness activities on environmental protection & bio-diversity conservation.
Herbal and medicinal plants gardening in school campus.
Inter school competitions on the issues related to environment were organized.
Various other environmental activities were taken on world environment day, world forestry day, earth day, ozone day, etc.

18. Tripura: 2005-06
- Tree plantation.
- Cleanliness drives – in the school and in the community.
- Fairs.
- Public awareness – rallies, postering in the local areas, door-to-door campaigning.
- Organizing meetings with the village panchayat.
- Cultural programs.
- Debates, drawing competitions, quiz, slogan competitions, placard writing competitions, essay competitions, extempore competitions.
- Discussions, seminars, dramas, workshops
- Making compost and vermi-compost pit in school.
- Training for making compost pit.
- Maintaining garden in school.
- Testing drinking water.
- Conducting surveys.
- Making waste products.
- Organizing environment related magic show.

Public awareness activities:
- Rallies – public awareness on environment, against the use of polythene, conserving the forests, water, protection of forest animals, benefits of going vegetarian.
- Making charts, posters, pamphlets, slogans etc, for rally.
- Street plays, folk songs related to environment, poetry recitation related to environment during rallies.
- ‘Door-to-door’ and ‘shop-to-shop’ campaigning against the use of polythene.
- Public awareness on cutting of trees and forest fires – their impacts.

Other:
- Earth Day – state level competitions.
- Cleaning of waste/garbage. Cleaning drives – temple premises, in the local village (on the day of Gandhi Jayanti – that is Gandhi’s birthday), in the school and its vicinity.
- Planting trees – school premises, in the school and around. Taking care of these.
- Removal of weeds, removal of elephant grass/parthenium.
Making compost pit and vermi-composting.
Earth Day – state level competitions.
Celebrating one whole week as ‘Environment Week’ – organizing competitions - debates, essay competitions, poster-making competitions, extempore competitions.
Organizing competitions - debates, essay competitions, poster-making competitions, extempore competitions, poetry writing competitions, writing folk songs competitions, chart making, poster and slogan making competitions, photography competitions, debates, essay competitions, poster-making competitions, and declamation contests.
Removal of polythene – in the market area
Making compost pit and vermi-composting.

20. Uttar Pradesh: 2004-05

- The wild life week celebrations in association with Lucknow zoo was organized for Eco-clubs members.
- Eco-clubs members were brought to Dudhwa National Park on a nature camp. The programme was named as Dudhwa Utsav.
- Eco-club member’s undertaken mass campaign against crackers at the eve of Diwali.
- Screening of Film festival was done fro the Eco-clubs members at Kanpur & Lucknow, etc.
- Eco-clubs have organized seminars meetings group discussion & debates on the environmental issues.
- School gardening and plantation in school campus.
- Sanitation drives around city.
- Students were provided with exposure on conservation of Historical & Religious Monuments.
- Awareness rallies & campaigns were organized against polythene & for water conservation.
- Students participated in painting, essay writing, quiz & speech competitions on world environment day, world forestry day, & ozone day, etc.
- Public awareness activities on environmental protection & bio-diversity conservation.

21. West Bengal: 2005-06

General activities in the state:
- Seminars/talks/debates
- Nature camps/field visits
- Plantation programs
- Cleanliness drives
- Rallies for ‘public awareness’ on environmental issues.
- Conducting surveys to identify local environmental problems – visit to local lakes, agricultural fields, surveying the local area pollution levels etc.
- Organizing Eco-meets.
- Maintaining medicinal plant garden.
- Publication of wall magazine.
- Organizing rain water harvesting programs.
- Organizing activities for waste management like segregation of waste, advocating against the use of polythene.
Notable activities across West Bengal:

- Organizing Eco-Club Summit.
- Organizing Eco-Parliament.

UNION TERRITORIES

22. Chandigarh: 2004-05

- Rallies for environmental awareness, including cycle rally, rally to campaign for ‘No Use of Crackers’ during Diwali.
- Run by students to observe a particular day.
- Organizing competitions - poster-making competitions, slogan writing competitions,
- Planting trees.
  - Coverage in newspapers and periodicals – including some in Braille (as one of the Eco-Clubs is of a school for visually impaired students.
- Training on water harvesting and drip-irrigation.
- Observing a particular month as ‘Water Month’.
- Activities during the forest/wildlife week like tree plantation - Vanmahotsav.
- Observing International day for Preservation of Ozone Layer
- Celebration of World Environment Day.
- Celebration of Pollution Prevention Day.
- Observing Hiroshima-Nagasaki Day.
- Organizing inter-school painting competitions, essay writing competitions, declamation contests, debate competitions, quiz, music competitions, paper reading contests, banner competitions.
- Organizing exhibitions.
- Performing plays and workshops on topics related to environment.
- Waste management
  - Awareness in school about segregation of waste during morning assembly and in
  - Classes
  - Provision of separate bins (organic and inorganic) in the school.
  - Utilization of organic waste.
  - Maintaining compost pit in school.
- Activities for making products out of waste like newspaper bags, wall hangings etc.
- Distribution of clothes and study material to slum children
- Increasing number and cleanliness of toilets in the school.
- Installation of solar water heater, and solar photo-voltaic light etc., as well as encouraging use of solar cookers.
- Making the school plastic free zone.
- Advising students on ill-effects of burning dead leaves.
- Field visits to sanctuaries, gardens, and organizing nature camps.
- Students conducting surveys of school compounds giving information on the material found like dry leaves, paper pieces, glass, polythene etc.
- Maintaining botanical garden, flower banks.
- Reading latest facts on environment along with news in the morning assembly.
- Participating in the Green Olympiad.
- Preparing models on conservation of wildlife, water, air pollution.
23. Delhi: 2004-05

- Planting saplings – in the vicinity and outside.
- Adoption of nearby roads and parks for plantation and maintenance.
- ‘Say no to plastic bags’ campaign
  - Ban on entry of plastic bags in schools.
  - Spreading awareness among general public on the harmful effects of plastics.
  - Skit on ‘Say No to Plastic Bags’.
- Zero-garbage in school campus
  - Segregation of waste – reusable, recyclable and biodegradable. Use of twin bins.
  - Students encouraged to reduce waste to the maximum extent possible – recycling and re-use of waste.
  - Training given to students on vermin-composting techniques – to make compost out of bio-degradable waste generated in the school campus.
- Paper recycling
  - Paper recycling units set up in Lead Eco-Club Schools.
  - Using recycled paper for making charts, posters, packaging material, cards, and handicrafts etc.
- Water and electricity conservation
  - Activities to develop water and electricity conservation as a habit among students.
  - Awareness among children about rain water harvesting.
  - Rain water and tap water harvesting adopted in some schools.
- Observation of Environmental Calendar
  - Feb 2 – World Wetland Day
  - Feb 28 – National Science Day
  - April 22 – World Earth Day
  - July 1 to 7 – Vanmahotsav (Forest Week)
  - September 16 – International Ozone Day
  - October 2 – Gandhi Jayanti
  - October 1 to 7 – Wildlife Week
  - November 14 – Children’s Day
  - December 29 – International Bio-diversity Day
- Anti-crackers Campaign: ‘Say No to Fire Crackers’ Campaign
  - Street plays performed by schools in the schools, and in the nearby community areas
  - Organizing competitions on Anti-Cracker Campaign.
  - Rallies in various parts of Delhi to promote Anti-Cracker Campaign, and depicting the harmful effects of crackers.
- ‘Khelo Holi Naturally’ (Play Holi Naturally) Campaign
  - Street plays performed in the schools, and nearby community areas.
  - Rallies conducted in and around the vicinity of the schools to spread awareness
  - among the general public and children and motivating them for not playing holi with harmful colors.
- Vacation Program for Eco-Club School Children
  - Training program organized in collaboration with an NGO, for selected students of Eco-Clubs of different schools.
- Annual Eco-Meet
  - Meeting with Chief Minister, Minister for Environment and Forests, and from each Eco-Club the teacher-in-charge, and 5 students. An exhibition of eco-friendly products.
- Cleaning of River Yamuna

**NOTE:** In Delhi, all the activities have been in close coordination with the Delhi government. In fact, some of the campaigns have been initiated by the Delhi government and have been encouraged in schools.

### 24. Pondicherry: 2004-05

- Eco-clubs have organized meetings, & debates on different environmental issues.
- Sanitation, health & hygiene drives were undertaken by the Eco-club members around city.
- Mass awareness campaigns & rallies were organized by the Eco-club members for the protection of environment.
- Students participated in poster painting, essay writing, quiz & speech competitions.
- Students were carried on field trip to the herbal garden.
- Plantation in and around the schools and on public land were done by the students of Eco-clubs.
- Cleanliness drive for the public places was undertaken by members of Eco-clubs.

# # # # # # # # # # #
## Table of activities organized by region, state, and category
(Note: The year listed next to each state represents the Annual Report where information was obtained)

<table>
<thead>
<tr>
<th>Region</th>
<th>North</th>
<th>South</th>
<th>East</th>
<th>West</th>
<th>Central</th>
</tr>
</thead>
</table>
|              | Chandigarh: 2004-05  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in school and community.  
4) Energy conservation – making use of renewable energy.  
5) Water management and conservation.  
6) Waste management.  
7) Competitions on topics related to environment.  
8) Cultural programs on topics related to environment.  
9) Conducting surveys on local environmental issues.  
10) Organizing exhibitions.  
11) Field visits and nature camps.  
12) Products:  
- making models.  
- from waste.  
13) Observing significant environment related days and events.  
14) Publicity: organizing press coverage.  
15) Social service – donation to slum children.  
**Delhi:** 2004-05  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in school  | Andhra Pradesh: 04-05  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in school and community.  
4) Energy conservation.  
5) Cultural programs in school on topics related to environment.  
6) Conducting surveys on local environmental issues.  
7) Organizing exhibitions and fairs.  
8) Field visits and summer camps.  
9) Campaigns:  
- noise-free Diwali.  
- farmers to promote sustainable agriculture.  
- Clean Railway Campaign 10) Products:  
- making models.  | Bihar: 2004-05  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in school and community.  
4) Cultural programs on topics related to environment.  
5) Observing significant environment related days.  
6) Campaigns:  
- cracker-free Diwali.  | Gujarat: 2005-06  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in the community.  
4) Water management and conservation.  
5) Competitions on topics related to environment.  
6) Organizing exhibitions and fairs.  
7) Field visits and nature education camps.  
8) Conducting surveys on local environmental issues.  
9) Cultural activities related to environment.  
10) Products:  
- making models.  | Chattisgarh: 2005-06  
1) Raising awareness:  
- public awareness  
- student awareness  
2) Greening activities.  
3) Cleanliness and sanitation in school and community.  
4) Waste management.  
5) |
<table>
<thead>
<tr>
<th>State</th>
<th>Year</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haryana</td>
<td>2004-05</td>
<td>1) Raising awareness: - public awareness - student awareness 2) Greening activities 3) Cleanliness and sanitation in school and community 4) Water conservation 5) Competitions on topics related to environment 6) Conducting surveys on local environmental issues 7) Field visits and nature study camps 8) Observing significant events – ‘Forest Week’</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>2004-05</td>
<td>1) Raising awareness: - public &amp; student 2) Greening activities 3) Cleanliness and sanitation in school and community 4) Competitions on topics related to environment</td>
</tr>
<tr>
<td>Jammu and Kashmir</td>
<td>2001-02</td>
<td>1) Competitions on environment related topics. 2) Greening activities. 3) Cleanliness and sanitation in school and community. 4) Competitions on topics related to environment.</td>
</tr>
<tr>
<td>Punjab</td>
<td>2004-05</td>
<td>1) Raising awareness: - public awareness - student awareness 2) Greening activities. 3) Cleanliness and sanitation in school and community. 4) Competitions on topics related to environment. 5) Field visits and nature camps.</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2004-05</td>
<td>1) Raising awareness: - public awareness - student awareness 2) Greening activities. 3) Cleanliness and sanitation in school and community. 4) Competitions on topics related to environment. 5) Field visits and nature study camps.</td>
</tr>
<tr>
<td>Tripura</td>
<td>2005-06</td>
<td>1) Raising awareness: - public awareness - student awareness 2) Greening activities. 3) Cleanliness and sanitation in school and community. 4) Waste management. 5) Competitions on topics related to environment. 6) Field visits and nature education camps. 7) Bird care. 8) Developing and disseminating quarterly Eco-clubs bulletin.</td>
</tr>
</tbody>
</table>
- public awareness
2) Greening activities
3) Cleanliness and sanitation in school and community.
4) Waste management.
5) Cultural programs on topics related to environment.
6) Observing significant environment related days.

**Uttar Pradesh:** 2004-05
1) Raising awareness: - public awareness - student awareness
2) Greening activities.
3) Cleanliness and sanitation in school and community.
4) Competitions on topics related to environment.
5) Field visits and nature camps.
6) Observing special events – ‘Wildlife Week’.
7) Organizing film festival.

- on topics related to environment.
5) Observing significant environment related days.
6) Exposure to conservation of heritage sites.

- exhibitions and fairs.
8) Conducting surveys on local environmental issues.
9) Products: from waste.
10) Observing significant environment related days.

**West Bengal:** 2005-06
1) Raising awareness: - public awareness - student awareness
2) Greening activities.
3) Cleanliness and sanitation in the community.
4) Water management and conservation.
5) Waste management.
6) Conducting surveys on local environmental issues.
7) Observing significant environment related days.
8) Publication of wall magazine.
9) Organizing Eco-meets, Summit, Parliament.

See next page for a few highlights of unique and innovative programs and activities!
Unique and innovative programs and activities – Selected examples

**Andhra Pradesh:**
- Campaign for farmers to promote sustainable agriculture.
- Clean Railway Campaign
- Cleaning of river banks during the time of religious festival (i.e., Krishna Pushkaralu: one-time special event)

**Chandigarh:**
- Active participation by members of Eco-club of a school for visually impaired.
- Raising student awareness: reading latest facts on environment along with news in the morning assembly

**Gujarat:**
- Greening activities:
  a) medicinal plant nursery developed using sewage water flowing nearby.
  b) making every new entrant student to the school adopt a tree.
- Cultural: raising a permanent Eco-art gallery in the school.

**Madhya Pradesh, Tamil Nadu, and Uttar Pradesh:**
- Raising awareness: providing students with exposure on conservation of Historical & Religious Monuments.

**Orissa:**
- Celebrating ‘Raksha Bandhan’ by tying ‘rakhis’ to trees.

**Rajasthan:**
- Bird care – providing water and grains in the traditional customary local Rajasthani way.

**Tripura:**
- Raising public awareness: organizing meetings with the village panchayats.
- Cultural: organizing environment related magic show.

**West Bengal:**
- Organizing Eco-meets like Eco-clubs Summit and Eco-Parliament.
Top 5 activities most engaged in by Eco-clubs across all 5 regions in India

- Greening activities (ex: Tree planting, maintaining gardens, weed removal)
- Cleanliness and Sanitation (In school and in the community, ex: Collection & disposal of polythene, cleaning public roads & rivers/ponds, hygiene drive, clearing & cleaning drains)
- Observance of significant dates and events (ex: World Environment Day, Earth Day, Forest Week, Wildlife Week)
- Competitions (ex: Debates, essay writing, poster making, slogan writing)
- Cultural Programs (ex: Skits/street plays, dances, song all relating to environmental themes)

NGC Goal: Raising Awareness Among Students
References


