

**A report on**  
**“SUSTAINABLE WASTE MANAGEMENT THROUGH FACILITATING ECO STUDENT CLUB IN SHIVAPURI**  
**NATIONAL PARK”**



**Submitted to**  
**Nepal Environment and Tourism Initiative Foundation (NETIF)**

**Submitted by**  
**ROTARACT Club of Lalitpur**  
**Kathmandu University Youth Red Cross Circle (KUYRCC)**

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## Chapter 1: INTRODUCTION

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### 1.1. About the Project

The project was first initiated in the year 2011 as “Student Partnership in Environmental Conservation”. During 2011, different training and talk programs were facilitated by the team members from Kathmandu University to the students in around Shivapuri National Park covering the environmental conservation factors like, SODIS, Solid Waste Management, Drinking Water Management, Forest Conservation, Health and Sanitation etc. under the project supported by Nepal Environment and Tourism Initiative Foundation (NETIF).

In one year of time it has achieved a lot in terms of its objective, bringing change in knowledge, attitude and practice of student and local people and preparing the young generation for environmental alertness. There are more to achieve in upcoming days, the project is continued to facilitate same group of students with more focus on waste management sector. Different workshops, awareness programs, trainings, talk programs are planned to conduct in the year 2013 to mobilize students for the healthy, clean and green environment.

In the area of Shivapuri National Park there are settlements of different group of people and majority of them are illiterate and unemployed. Bagmati river is Hindu's one of the precious rivers and its source lies in Shivapuri National Park. For the protection of National Park and Water Resources there is a need of these kinds of projects to inform them the impact of our activity on environment.

### 1.2. Project Proponent

This project is under support from NETIF, ICIMOD and is facilitated by Rotaract Club of Lalitpur and Kathmandu University Youth Red Cross Circle (KUYRCC). It is financially supported by NETIF and ICIMOD whereas the overall project was conducted by Rotaract Club of Lalitpur and KUYRCC.

#### 1.2.1. Nepal Environment and Tourism Initiative Foundation

Nepal Environment and Tourism Initiative Foundation (NETIF) is a non-profitable, Non Governmental Organization working in the field of environment and tourism. This organization works towards an economically winning combination of tourism and pristine environment, with the idea that a beautiful

environment will attract tourism which in turn will stimulate local economies. It works with local communities to develop sustainable tourism, conservation of the environment and organic farming practices.

#### **1.2.2. Kathmandu University Youth Red Cross Circle (KUYRCC)**

Kathmandu University Youth Red Cross Circle (KUYRCC) is non-departmental club formed by the students of Kathmandu University. KUYRCC works for the positive change in the society and benefit of humanity. KUYRCC have been organizing several programs such as awareness campaign on climate change, energy conservation campaign, training on health and sanitation, disaster preparedness, establishing library in school of rural area and blood donation.

#### **1.2.3. ROTARACT Club of Lalitpur**

Rotaract Club of Lalitpur is a Rotaract club sponsored by Rotary Club of Lalitpur. The purpose of Rotaract is to provide an opportunity for young men and women to enhance the knowledge and skills that will assist them in personal development, to address the physical and social needs of their communities, and to promote better relations between all people worldwide through a framework of friendship and service. The club acquires a group of 40 people where they meet every Saturday (Pulchowk, Lalitpur) for the betterment and development of the society. Some of the major projects that the club has initiated are 'Black Plastic Remove Campaign', 'Karnali Book Donation Campaign', 'Pap Smear Test', 'Cleanliness Program', 'Matya Health Camps', etc. Rotaract clubs are part of a global effort to bring peace and international understanding to the world.

#### **1.2.4. International Centre for Integrated Mountain Development**

The International Centre for Integrated Mountain Development (ICIMOD) is a regional inter-governmental learning and knowledge sharing centre serving the eight regional member countries of the Hindu Kush Himalayas; Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan. Globalization and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues.

### 1.3. Objective

The main objective of this project is to prepare an environment alert team from the school students in the area around Shivapuri National Park. This trained human resource will take action on sustainable environment development and alert the other group of people in the village. Their training is mainly focused on following areas;

- Proper disposal of waste
- Drinking water management
- To promote the eco-tourism
- To maintain the environmental status of Shivapuri National Park
- To develop the status of health and sanitation
- For the minimization of waste by reducing, re-using or re-cycling
- To aware the community/local bodies about the waste and its impact on the environment

The report prior to initiation of Environmental Conservation program based on waste management was prepared in order to achieve its main objective, that is, “to develop Shivapuri National Park area to a sustainable and green environment by facilitating the school children”. The motive for selecting the school student is in order to maintain the sustainable environment through proper management and conservation.

## Chapter 2: DISCUSSION

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Environmental conservation project with more focus on 'Waste Management' was carried for six month (July 2012 to December 2012) in Sundarijal. Different trainings, workshops, talk program and field visit were conducted within this time period of which the details are given below;

### 2.1. Site Visit

Time: July 7, 2012

Facilitator: Ms. Matina Shakya, Mr. Anish Shrestha

Objective: For the preliminary planning of the project

#### Rapport

On 7<sup>th</sup> July 2012, a visit to Shivapuri National Park was made with the objective to initiate waste management trainings and programs for the sustainable environment. We also visited four schools in the site namely; Shree Baghdwar Prathamik Bidhyalaya, Shree Ishwori Nimna Madyamik Bidhyalaya, Shree Sundarijal Prathamik Bidhyalaya and Shree Okhreni Madhyamik Bidhyalaya for the commencement of program. From this visit six months project planning was prepared (table 1).

**Table 2-1: Preliminary Planning For Six Months in Shivapuri National Park**

S/N	Training/ Workshop	Time
1	Visit to Sundarijal	July
2	Training on Art and Drawing	August
3	Training on health	September
4	Training on sanitation	October
5	Environmental awareness program	November
6	Training on waste management	December

### 2.2. Participation in community meeting

Time: August 3, 2012

Facilitators: Ms. Matina shakya and Mr. Jitendra Bajracharya

Objective: Sharing of the project planning to the community

**Rapport:**

A meeting was conducted by the community for the sharing of the objective of the project. Principals from the respective school with the eco club students were present in the community meeting. Besides the school principal and students, local functioning bodies were also present in the meeting. The meeting was called for the sharing of two projects under NETIF; one being the waste management project and other highlighting the minutes of eco-tourism promotion in Shivapuri National Park. A brief planning about the project was presented to the community, school children and also the local people.

**2.3. Training on Art and Drawing**

Time: September 22, 2012

Facilitators: Ms. Matina Shakya, Ms. Sony Shakya, Mr. Amulya Shrestha, Mr. Rabin Maharjan

Objective: To facilitate the students in conveying environmental awareness through art and drawing

**Rapport:**

Picture is worth a thousand words. We can explore lot of information with pictures. With this particular saying, a training program was conducted in Shivapuri National Park to facilitate students with different environmental related pictures. Simple and informative drawings with the quotations like “throw waste to dustbin”, “Clean Environment, Green Environment” etc were the major part that were trained to the students. There were altogether 50 students participated in this program from the four school. About 6 hour training was given to student which is scheduled in table 2-2 below. An individual and a team work were coordinated between the students to develop their new ideas and extract them to the pictures. There were many ideas developed within the students. Most of the pictures were related to forest conservation, proper defecation, clean environment, proper waste management etc. Prizes were distributed among the students for their hard work. Besides, students were also trained to develop some new ideas in art so that they can flow the information regarding the environmental conservation.

**Table 2-2: Schedule for the Art competition**

S/N	Time	Program
1	10:00 - 11:00	Introduction with the eco-club
2	11:00 - 12:00	Train small icons and pictures related to waste management
3	12:00 - 1: 30	Lunch Break
4	1: 30 - 3:00	Individual art work

5	3:00 – 4:00	Team work
6	4:00 – 4:30	Pack up and farewell to students

## 2.4. Health and Sanitation Training

Time: November 4, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: To improve the healthy behavior and introduce water purification methods

### **Rapport:**

The training was much focused on the health and sanitation. As informed to Eco-club, our program formally started at 10 am with our introduction at Okhrenei School. The first section of program included the information of objective of our project with the slide presentation about health and sanitation with their importance. To make it more effective, the introduction was then followed by short documentary related to the topic.

After lunch, the second section included the flip chart show about personal hygiene habits. The prepared chart regarding the water purification methods was presented among the students. After the presentation, the students were divided into four groups and were allowed to summarize the theme of the purification method. As per their presentation, the best two groups were awarded.

## 2.5. Eco-club rally

Time: November 5, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: To aware the public for proper disposal of solid waste, hygienic environment and sanitation through the voice of children

### **Rapport:**

This rally was carried out with the objective to serve clean and green environment in Shivapuri National Park through the community level. The rally was divided to two phases. One phase started from 7am from the Baghdwar School to Mulkharka. There were students (20 in numbers) from Baghdwar School and Ishwori School. The student visited every house in the village and interacted with them for the safe disposal of solid waste, maintain hygienic environment and measures to improve proper sanitation.



We along with members of Eco-club from Baagdwar and Ishowri School went door to door interacting about the importance of health, sanitation and water purification method. On second phase students from Sunarijal School and Okhrei School participated in this program. There were around 35 students joining us from Mulkharka to Sundarijal Bus Stop.

## **2.6. Site visit for the better placement of dustbin (Doko)**

Time: October 20, 2012

Facilitators: Mr. Anish Shrestha, Ms. Matina Shakya

Objective: Meeting with local stakeholders and monitoring dustbin site

### **Rapport:**

On this day we had meeting with local entrepreneurs operating hotels in the area of Shivapuri National Park. We explained about the activity of our project and its outputs and outcomes. Furthermore we discussed on the challenges in the area of Shivapuri National Park and the probable activity that can mitigate those effect.

We performed monitoring of the site where doko could be placed for the disposal of solid waste in and around the school premises.

## **2.7. ICIMOD Visit**

Time: December 8, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Field visit

### **Rapport:**

The selected students from all the four schools of Shivapuri National Park along with the teachers of respective schools had a field visit to exhibition “Green Fair Solution” at Godavari organized by ICIMOD.

To celebrate International Mountain Day (11 December) and ICIMOD Day (5 December), the ICIMOD Knowledge Park at Godavari opened its doors to the public for the first Green Solutions Fair. The event, held on 8 December, showcased green technologies and demonstrated sustainable farming practices and other innovative practices for income-generation that have been adopted by communities in the Hindu Kush Himalayan region. ICIMOD partners and members of the private sector were also on site to share green technologies that they have developed or adopted.

Some major activities at the event included the following:

- Presentation of first ICIMOD Green Champion Award
- Cycle rally for 'Green living, Healthy living'
- Eco-friendly tours
- Green Market
- Documentary and Mountain Quiz Show
- Children's Drawing Competition
- Private sector companies showcasing green products and technologies

## **2.8. Waste Management Training**

Time: December 22, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Source separation of waste and proper disposal

### **Rapport:**

At 10 am, we formally started the program with the introduction of solid waste and its management. We discussed the 3 R's (Reduce, Reuse and Recycle), its importance and motivated them in reducing the use of plastics and recycling the possible solid wastes. We presented the winners of a recreational game with the recycled items we had prepared. By the end of the program student also learned to segregate the waste.

## **2.9. Scarf Distribution**

Time: December 22, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Handover scarf to the student of Eco Club

### **Rapport:**

After the completion of the waste management training, a scarf was distributed to eco-club student. Scarfs were distributed for the identification of the eco club students.

## **2.10. Presentation to ICIMOD, NETIF**

Time: November 5, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Interaction with representative of ICIMOD and NETIF

### **Rapport:**

Different delegates from ICIMOD, NETIF, local bodies, teachers, principals and students from the respective schools were present in this program. The presentation was given by Ms. Matina Shakya about the undergoing project and future planning of the project. Different challenges were discussed in the presentation and also some views were presented by representative of ICIMOD and NETIF.

## **2.11. Environmental Awareness Program**

Time: December 9, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Aware the local entrepreneurs operating shops for proper disposal of solid waste

### **Rapport:**

Pamphlets were prepared informing people for proper disposal of the waste. These pamphlets were distributed to all the shops operating within the Shivapuri National Park which was later attached in form of notice by all the shopkeepers. This notice requested customers, not to litter in the surrounding and dispose the waste in designated place only. A group of eco-club students and the facilities had a valuable time to interact with the shopkeepers, explain them about the waste management and stick the pamphlet to the shop.

## **2.12. Book Donation and Library Formation**

Time: December 9, 2012

Facilitators: Ms. Matina Shakya, Mr. Anish Shrestha, Ms. Sanju Maharjan, Ms. Archana Maharjan, Ms. Sujata Dhakal, Ms. Sabita Adhikari Chettri

Objective: Library formation and book donation

### **Rapport**

On December 2, 2012, a talk program was organized within the schools of Sundarijal periphery. The main objective of the program was to distribute the books to the school for the library formation. The donated books were related to environment, health and sanitation. A cupboard in each school was also donated so that the books can be well managed.

Books of different categories including general knowledge, story books, poems, history, etc; arranged by NETIF, were handed over to the teachers of respective schools by Finland delegates and President of NETIF.

### Chapter 3: Budget planning and Cost analysis

**Table 3-1: Cost Analysis**

S/N	S/N	Particular	Date	Program	Amount (Rs)
<b>A</b>		<b>Transportation</b>			
	1		7-Jul-12	Site Visit	200
	2		3-Aug-12	Community Meeting	60
	3		22-Sep-12	Art Competition	500
	4		20-Oct-12	DOKO Survey	250
	5		4-Nov-12	Health and Sanitation	900
	6		5-Nov-12	Eco-Club Rally	NA
	7		5-Nov-12	Presentation to ICIMOD	NA
	8		8-Dec-12	ICIMOD visit	180
	9		9-Dec-12	Environmental Awareness	900
	10		9-Dec-12	Book Donation and Library Formation	NA
	11		22-Dec-12	Scarf Distribution	NA
	12		22-Dec-12	Waste Management Training	900
		<b>Total (A)</b>			<b>3890</b>
<b>B</b>		<b>Scraf</b>		<b>25 piece</b>	<b>2500</b>
		<b>Total (B)</b>			<b>2500</b>
<b>C</b>		<b>Refreshment</b>			
	1		7-Jul-12	Site Visit	650
	2		3-Aug-12	Community Meeting	250
	3		22-Sep-12	Art Competition	2800
	4		20-Oct-12	DOKO Survey	350
	5		4-Nov-12	Health and Sanitation	3770
	6		5-Nov-12	Eco-Club Rally	3459
	7		5-Nov-12	Presentation to ICIMOD	NA
	8		8-Dec-12	ICIMOD visit	150
	9		9-Dec-12	Environmental Awareness	1265
	10		9-Dec-12	Book Donation and Library Formation	NA
	11		22-Dec-12	Scarf Distribution	NA
	12		22-Dec-12	Waste Management Training	3105
		<b>Total ( C )</b>			<b>15799</b>

<b>D</b>		<b>Stationery</b>			
	1		7-Jul-12	Site Visit	420
	2		3-Aug-12	Community Meeting	NA
	3		22-Sep-12	Art Competition	1860
	4		20-Oct-12	DOKO Survey	NA
	5		4-Nov-12	Health and Sanitation	3140
	6		5-Nov-12	Eco-Club Rally	2900
	7		5-Nov-12	Presentation to ICIMOD	NA
	8		8-Dec-12	ICIMOD visit	NA
	9		9-Dec-12	Environmental Awareness	460
	10		9-Dec-12	Book Donation and Library Formation	NA
	11		22-Dec-12	Scarf Distribution	NA
	12		22-Dec-12	Waste Management Training	6325
		<b>Total (D)</b>			<b>15105</b>
<b>E</b>		<b>Library</b>			
	1	Library Cupboards			68800
	2	Books			40000
		<b>Total (E)</b>			<b>108800</b>
		<b>Total (A+B+C+D+E)</b>			<b>146094</b>

#### **Chapter 4: Conclusion and Recommendation**

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The project conducted in 2012 at Shivapuri National Park have been effective in terms of change in knowledge, attitude and practice of students as mentioned by respective school Principals and parents of students. Maintaining an interactive atmosphere was fruitful, distributing chocolates to the students who answered the questions asked by the facilitator was found to be encouraging for the students. The students described to the locals about what they have learnt, these sorts of activities have helped in building up their leadership quality.

The training given to the students has brought positive change in Shivapuri National Park. The students have started sharing their knowledge with their parents, relatives and friends. The books donated to the schools have been useful for enhancing their knowledge in environmental conservation.

## Annex

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**Photo A: Site Visit**



Shree Ishwori Nimna Madyamik Bidhyalaya



Shree Baghdwar Prathamik Bidhyalaya



Shree Okhreni Madhyamik Bidhyalaya



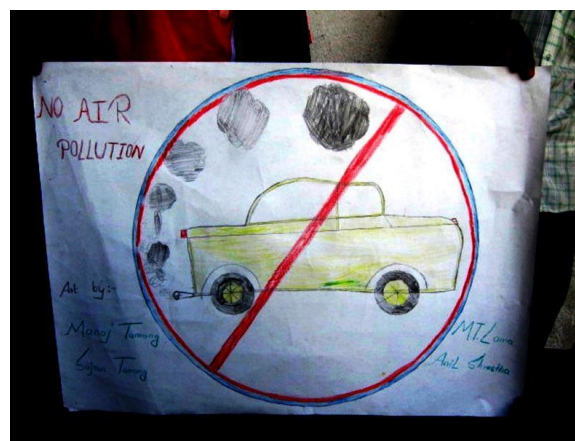
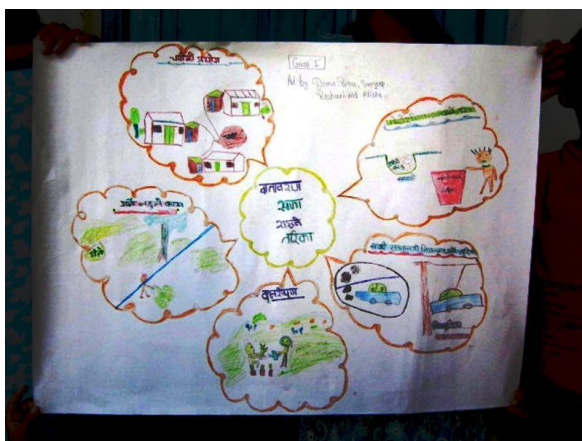
Shree Sundarijal Prathamik Bidhyalaya

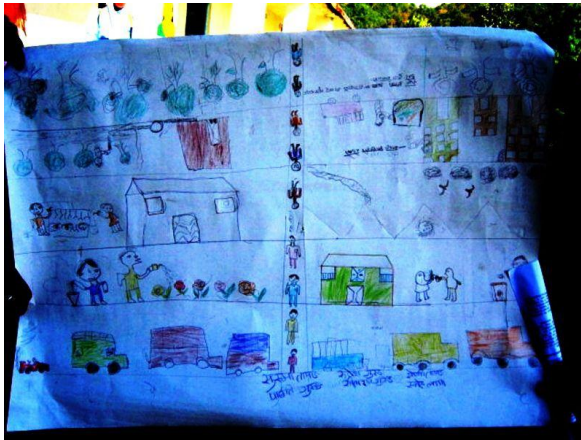


**Photo B: Meeting with Local Stakeholders, Community, School Principals' and Students**



**Photo C: Art Training**





Students' effort on art training showing different environmental awareness ideas

Photo D: Health and Sanitation

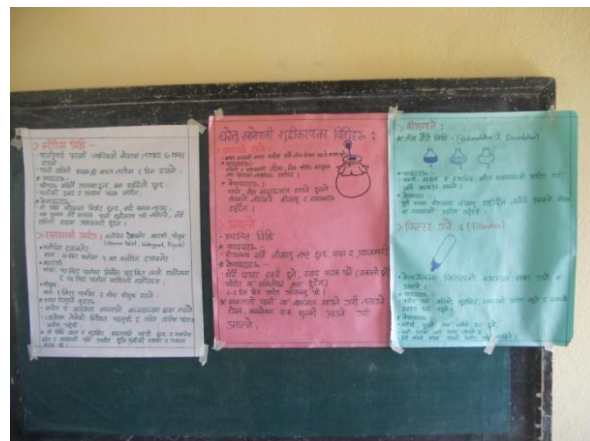


Environmental policies developed by Eco-clubs

developing environmental policies



Flip chart presentation by the facilitators

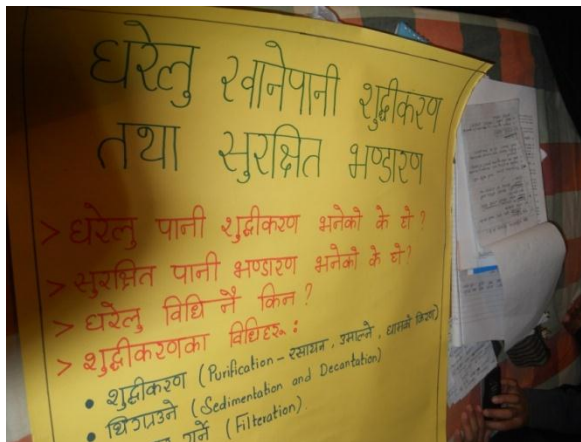


water purification technologies



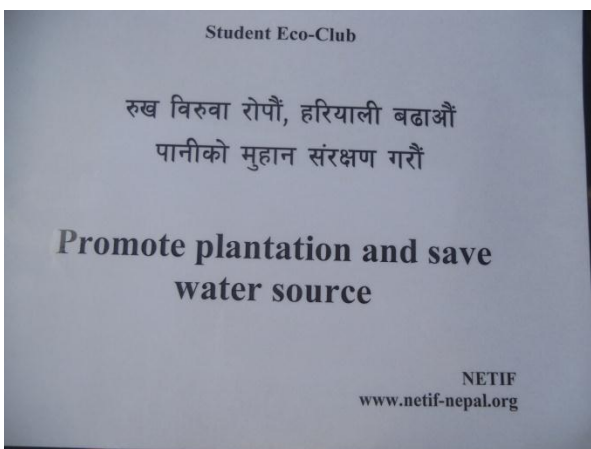


Health and sanitation workshop



preparation of the chart presentation

Photo E: Eco-club rally



Rally carried out by the eco-club in Shivapuri National Park



Eco-club interaction with the local bodies and explaining them about the environment conservation

**Photo F: Presentation to NETIF and ICIMOD delegates**



**Photo G: ICIMOD field Visit**





**Photo H: Environmental Awareness**



**Photo I: Book Donation and Library Formation**





**Photo J: Scarf Distribution**



**Photo K: Waste Management**





