

H.6 Results of Site Visits to Pilot Project Areas

a. Monitoring Aspects of the Pilot Project Areas

During the second visit to the pilot project areas, questionnaires on the following points were handed out to the participants.

- General aspects of pilot project areas after clean-up activities in both communities.
- Participant's impression regarding people's awareness and community motivation (results of workshops).
- Results of classes in schools
- General impressions and comments.

b. Results of the Questionnaire

The form of the questionnaire used during the second site visit and the results are shown in the following table.

Table H-21: Questionnaire (site visit to pilot project areas)

No.	Questionnaire	Yes	No	Result
1	What is your impression of the area where clean-up activities were carried out compared with what you saw before and after the activities?	100%		Yes: Better than before No: Same
2	Do you think that the educational campaign for the community contributed to the improvement of sanitary conditions of the community?	100%		
3	Did you notice some positive change in the attitude of leaders and residents of the communities visited in relation to waste problems?	100%		
4	Do you think that the campaign and clean-up activities carried out in the communities contributed to increasing public awareness?	100%		
5	Others (write your comments or impressions)			

The survey only considered those people who attended both site visits (before and after the pilot projects). All interviewees (100%) completely agreed on questions 1 to 4.

Some comments expressed by the participants are described below:

Eduardo Alfredo Cruz Barberena	Municipality of Nejapa
<p>Positive experience, mainly regarding the commitment of the communities to maintain the area clean. This problem is a challenge faced by all the municipalities. I am grateful to JICA for their valuable cooperation to solve a problem that goes beyond the Municipal boundaries and concerns the whole country, and therefore it should be a challenge for the Salvadoran Government.</p>	
José Manuel Ramírez	Municipality of Cuscatancingo
<ul style="list-style-type: none"> • I worry about the continuation of this process, to guarantee the permanent cleaning maintenance in the areas where the pilot project has been carried out. • I take this opportunity to congratulate and to thank the JICA Study Team for its efficient work, support and assistance, which have been decisive for the achievement of positive results in the two involved communities, as much in Cuscatancingo as in San Marcos. • A message: it is worth valuing the harmony achieved in the communities starting from the clean-up activities carried out, especially in Maria Auxiliadora, Community of Cuscatancingo. 	
Iván Sosa Cardoza	Municipality of San Martín
<ul style="list-style-type: none"> • The integral education of the Salvadoran children and youth should be reinforced through "Cleansing Committees". These will play a very important role not only in schools but also in their respective communities. • It is recommended that the municipalities also form "Cleansing Committees" to be able to reach the communities through the open town councils. • An executing unit should be established in OPAMSS to take charge of monthly monitoring at AMSS level and for the continuity of the works. 	
Jorge Schafik Handal	Municipality of Soyapango
<p>The best thing as corollary of this project is the organization of a permanent organism that coordinates and plans the execution of clean up campaigns.</p>	

H.7 Results of Students' Opinions on the Video

a. Objectives of the Video

The main objectives for the production of the educational video are to raise the residents' awareness on the sanitary and environmental problems caused by SW in AMSS, and to encourage public participation in proper waste disposal and waste volume reduction activities.

The video is an effective educational tool as it can be shown to many people and used for long term, and people can learn being entertained as well.

This video explains in a general way the sanitary and environmental impacts of domestic solid waste discharged illegally or without appropriate treatment in the living environment, and helps residents understand the importance of changing discharge habits. It shows how people's improper habits and poor sanitary measures contaminate the living environment and watercourses of the metropolitan area and suggests countermeasures to prevent contamination.

The video was planned and produced for the general public (community residents) and especially for the young population (schoolchildren from 8 to 12 years old) of AMSS.

b. Results of the Questionnaire

The survey was carried out in two schools (Jorge Larde of San Martín and 10 de Octubre of San Marcos) where classes were implemented on sanitary education and on the public awareness promotion campaign in order to know the schoolchildren's opinions about the educational video produced by the Study Team.

92 students between 8 and 15 years old participated in this survey, which consisted of the following questionnaire:

Question 1	Answer	No. of students	%
Did you like the video? (Choose only one answer)	I did not liked it		
	I liked it	12	13
	I liked it very much	80	87

As shown in the answers given by the students, 87% of the interviewed children responded that they liked it very much and the remaining 13% liked it. These results demonstrate that the video was very satisfactory to them.

Question 2	Answer	No. of students	%
How would you evaluate the video? (Choose one or two answers)	Boring		
	Worrisome	82	89
	Educative	85	92

92% of the students said that the video was educative. It was surprising that a large proportion of children (89%) were worried about what they saw on the video. This showed that children were very concerned about the waste problems in AMSS. This also showed that two objectives had been achieved: conveying the message through the video without boring the children, and raising young people's awareness on waste issues.

Question 3	Answer	No. of students	%
This video has a message, what is it? (Choose only one answer)	It shows that waste problems are other people's problems.	2	2
	It makes people aware of the problems caused by inappropriate management of waste.	84	91
	It shows the beautiful side of San Salvador Metropolitan Area.	6	7

91% of the interviewed children captured the message of the video, 6% saw the beautiful side more than the message and two children responded that the waste problem is other people's problem.

Question 4	Answer	No. of students	%
What are the biggest problems that you have seen in the video? (Choose one or two answers)	The bad habits of people	58	63
	Air pollution	23	25
	Diseases caused by inappropriate waste management.	72	78

Most students responded that the biggest problems were diseases caused by inappropriate waste management (78%), followed by bad habit (63%) and air pollution caused by burning waste (25%). The answer of the majority of the students was consistent with the first reactions of the community residents interviewed in the pilot project.

Question 5	Answer	No. of students	%
How would you cooperate to solve the waste problems?	By carrying out clean-up activities.	51	55
	By requesting others to do it for me.		
	By placing waste in its proper place.	50	54

The children, aware of the waste problems, answered that they would carry out clean-up activities (55%) and place waste in its proper place (54%).

Question 6	Answer	No. of students	%
Do you think that the video helps to raise people's awareness about the importance of appropriate waste management? (Choose only one answer)	Yes	89	97
	No		
	I do not know	3	3

Almost all the interviewees (97%) responded that the video helps to raise people's awareness about the importance of appropriate waste management. Only 3 children answered that they did not know the answer.

c. Conclusion

The goal of sanitary education and the public awareness promotion campaign is to raise awareness and promote moral and changes in attitude, to increase the number of citizens who can make responsible decisions regarding their environment.

These changes require a certain time and their results cannot be seen in the short term. Therefore, it is necessary to begin these actions with children at an early age. It is necessary to take initiatives to impede environmental degradation, beginning at home, at school, in the streets, in the communities, in the municipalities, and in the whole AMSS.

In that sense, the video has achieved very satisfactorily all the proposed initial objectives. This was shown in the answers given by the interviewed children who expressed great concern for the future of AMSS. At the same time the students were motivated to participate in activities of appropriate waste management to improve sanitary and environmental conditions and to contribute to a clean and sound metropolitan area.

H.8 Evaluation of the Project

a. Sanitary/Environmental Education

The goal of public education and training is to develop a society that is aware of and concerned about the environment and its associated problems, and which has the

knowledge, skill, attitudes, motivations and commitment to work individually and collectively toward the solutions of current problems and the prevention of new ones.

Even though technical systems are well planned and then established, their merits will not be fully demonstrated unless the cooperation of the residents who actually use these systems are obtained. Judging from the results of the POS and the meetings and workshops in the pilot project areas, the importance and effectiveness of sanitary/environmental education to raise awareness and gain cooperation from the residents were fully recognized by people concerned. Moreover, improvement of the sanitary condition in these areas was confirmed.

b. Workshops in the Communities

The workshops carried out in both communities of Maria Auxiliadora (Cuscatancingo) and 10 de Octubre (San Marcos) gave the following results:

- Attendance of the community: good in both communities (130 people in Maria Auxiliadora and 160 people in 10 de Octubre) with a majority of women, almost 70% of the participants. The convocation by municipal officials and the respective community leaders were effective. In 10 de Octubre, the community center was already full before the starting time.
- The residents showed great interest in waste problems, especially those related to their daily lives. They were willing to assume responsibility for problems caused due to their bad habits without blaming the municipality for everything.
- During the exhibition of panels and the video, the residents were very attentive. These educational instruments could capture the attention and they facilitated the conveying message.

c. Evaluation of Teacher's Training Course

The teacher's training course was carried out for teachers and principals from two pilot project area schools of Cuscatancingo and San Marcos municipalities and another school from the Municipality of San Martin. After the implementation of the training course, an evaluation sheet was handed out to the teachers who evaluated the performance of the training course according to the following questionnaire:

Table H-22: Evaluation of the Training Course (by Teachers)

<p>a. Select from 1 to 5 to evaluate this training course:</p> <p>5 Excellent 4 Very good 3 Good 2 Fair 1 Insufficient</p>	<p>b. Choose between an affirmative and negative answer</p>
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1. Please evaluate the following contents developed in the training course					
Aspects to evaluate	1	2	3	4	5
In line with the Salvadoran reality					100%
Sufficient information					100%
Clear and comprehensible					100%
2. What do you think of the methods and educational materials used?					
Aspects to evaluate	1	2	3	4	5
Appropriateness for the proposed objectives					100%
Language used to convey the messages					100%
Illustrations and drawings				14%	86%
3. How would you evaluate the training course?					
Aspects to evaluate	1	2	3	4	5
Clear exposition					100%
Methodology					100%
Management of items				14%	86%
4. Could you disseminate knowledge and application tools to other teachers?					
Yes (100%)			No (0%)		
5. Do you consider that the duration of the training was appropriate?					
Yes (72%)			No (28%)		
6. How do you feel during the training?					
Mark your spirit condition during the training					
Cheerful	100%	Pensive	42%	Satisfied	100%
Fearful	0%	Surprised	100%	Angry	0%
Distrustful	0%	Nervous	0%	Distracted	0%

As shown in the table above, all teachers answered that the content developed in the training course is in line with the reality of El Salvador. The information provided was sufficient, clear and comprehensible, receiving a rating of excellent from all the teachers (100%).

The methods, materials and tools used in the training were also judged excellent (100%), as well as the proposed objectives and language used to convey the messages. Illustrations and drawings turned out to be excellent for 86% and very good for the remaining 14%.

The training course was also rated as follows: clear exposition and used methodology as excellent (100%) and thematic items between excellent (86%) and very good (14%).

100% of the teachers responded that they would be able to convey the knowledge and application tools to other teachers.

With regard to the duration of the training course (two hours), 72% answered that was adequate, while 28% desired more time.

All teachers were cheerful and satisfied with the development of the training course and surprised about the problem of waste in AMSS.

Teacher's training was provided taking into account "effective education method". In order for the sanitary/environmental education to be continuously provided to students

in AMSS and its effect are to be disseminated, the roles teachers play are very important. If teachers are aware of the importance of raising awareness of students on waste issues and obtain knowledge on waste, their knowledge will be widely disseminated not only to students but also to the community members through students. Considering the teachers' comments, it can be evaluated that teacher's training is very effective in disseminating knowledge on waste as well as sustainability can be expected.

d. Trial Lesson at School

- The students and teachers of three schools (Liceo Cristiano School in Cuscatancingo, Jorge Larde in San Martin and October 10 in San Marcos) who participated in the pilot project responded to the campaign with enthusiasm.
- The organization of the events was good, especially in the schools where the municipality participated actively in the preparations before the class.
- All schools showed initiatives and creativity in teaching methods. It was demonstrated that learning from experiences of previously demonstrated pilot project school would develop the teaching methods.
- The teachers were enthusiastic in teaching the lessons. They explained the issues as entertainingly as possible in order to arouse the students' interests. All the teachers encouraged the students' participation through question-answer sessions and practical exercises. Most students of Jorge Larde School and 10 de Octubre School participated in the practical exercises.
- The practical exercises and samples of recyclable materials were very creative, and had a strong impact on the students. All the participants were attentive, especially during the video. According to a survey carried out after showing the video, most of the students liked the video very much ("I liked it": 13%, "I liked it very much": 87%) and understood its message. They felt concerned about the environmental deterioration in AMSS due to inappropriate waste management. This supports the achievement of the goals of this educational tools, which are to raise awareness and promote values and change of attitudes among future generations.
- The students were especially interested in the issue of recycling, but its means of promotion is unclear as it depends much on entities or agencies, which are totally unrelated to the schools.
- There were technical problems in all three classes. In Liceo Cristiano School, the panels had to be moved during the explanations due to the lack of space, which distracted the students' attention. In Jorge Larde School (San Martin) and 10 de Octubre School (San Marcos), the TV and video equipment had a problem, although this did not hinder the development and achievement of the intended objectives.
- The classes were the most beneficial when they were taught by teachers who had attended the previous classes and who could teach based on this experience. For example, the class in Liceo Cristiano School (Cuscatancingo) was attended by teachers from San Martin and San Marcos and the one in Jorge Larde School (San Martin) was attended by a teacher of 10 de Octubre School (San Marcos). Also, a teacher and a student from another school near 10 de Octubre Community attended the class held in San Marcos. A definite progress was noticed as the program

proceeded.

- It is important to mention that parents were also invited in the last two educational centers. They listened and participated in the classes, showing great interest.
- The positive response of the students during the classes proved that the sanitary education program designed by the JICA Study Team can be very effective at schools.

e. Considerations for the Sustainability of the Pilot Project

- Education to communities should be accompanied with measures that the municipalities consider primordial to start and regulate the problems of waste; in such a way that the enthusiasm of the sanitary education and public awareness promotion campaign implemented be a bridge to establish commitments by both parties (municipality-community). For example, linking the campaign with the collection plan of the municipality (routes, schedules, disposal of waste, etc.).
- Activities in educational centers should be accompanied with a specific plan for SWM. Although it depends on the conditions of schools, it is desirable that the plan should cover measures for the implementation of the three "R". This plan should be carried out before the campaign in such a way that its development implies the promotion and commitment to the plan.
- A small recycling pilot project related to municipal waste should be included in the campaign and should be implemented jointly with several institutions in such a way that the people are presented with concrete alternatives and can see concrete results. However, the area to be selected for the pilot project should meet certain conditions, i.e., it should have a population between 3,000 and 5,000, be defined as a residential complex or delimited urban development area or standard social group, with a strong communal association, etc. The implementation of the pilot project would be the responsibility of the municipality with the cooperation of the private sector and the community (residents, schoolchildren) and relevant governmental organizations.

f. Evaluation of the Pilot Project

Taking into account of the result of POS and comments from the people involved in the pilot project, the evaluation of the pilot project and public awareness promotion campaign is summarized in the following table.

Table H-23: Evaluation of the Pilot Project

* 1. Poor, Insufficient 2. Fair 3. Good, Positive 4. Very good, Very positive

Before				Evaluation Items	After			
1	2	3	4		4	3	2	1
Evaluation of the Pilot Project								
Levels of understanding and public participation								
1				Public awareness	4			
1				Level of comprehension on SWM	4			
1				Level of participation	4			
1				Undertaking of responsibilities		3		
1				Self-respect	4			
Workshop and Training on SWM								
				Workshop in María Auxiliadora	4			
				Workshop in 10 de Octubre	4			
				Teacher's training course	4			
				Teachers' attendance to previous lessons developed in school centers	4			
				Classes and students' participation	4			
				Participation of counterpart personnel to workshops and trial lesson activities				1
Sanitary Education								
				Participation in sanitary education programs		3		
1				Sanitary conditions of the communities		3		
				Participation and coordination among institutions	4			
Clean-up Activities at Community Level								
				Level of participation (general)	4			
				General organization (for the municipality)		3		
				Participation of health institutions	4			
				Participation of the community	4			
				Technical aspect (equipment and materials)		3		
1				Condition of main clean-up activity areas (ravines)	4			
				Attendance of counterpart personnel to the activities of cleaning				1
Collection								
1				Condition and use of containers	4			
1				Conditions around containers and collection areas	4			
1				Compliance with the schedule of disposal into the containers		3		