

**JAPAN INTERNATIONAL
COOPERATION AGENCY**

**MINISTRY OF EDUCATION
THE DEMOCRATIC SOCIALIST
REPUBLIC OF SRI LANKA**

**ADDITIONAL STUDY
TO THE MASTER PLAN FOR THE DEVELOPMENT
OF SCIENCE AND MATHEMATICS IN THE
PRIMARY AND SECONDARY LEVELS
IN THE DEMOCRATIC SOCIALIST REPUBLIC
OF SRI LANKA**

**(EDUCATIONAL KAIZEN PILOT PROJECT
FOR TSUNAMI-AFFECTED SCHOOLS
AND ZONAL EDUCATION OFFICE, KALMUNAI)**

**FINAL REPORT
SUMMARY REPORT**



SEPTEMBER 2005

KRI INTERNATIONAL CORP.

HM

JR

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US\$ 1.00 = ¥ 112.46 = Rs. 101.32

PREFACE

In response to a request from the Government of the Democratic Socialist Republic of Sri Lanka, the Government of Japan decided to conduct the Master Plan Study for the Development of Science and Mathematics Education in the Primary and Secondary Levels (the Study) and entrusted the Study to the Japan International Cooperation Agency (JICA). JICA selected and dispatched a study team headed by Mr. Toshikazu Tai of KRI International Corp. from November 2002 to January 2005.

In the last stage of the Study, the Tsunami disaster attacked Sri Lanka on 26 December 2004. In the area affected by the Tsunami disaster, urgent measures for rehabilitation and reconstruction are desired in education sector as well as in other sectors.

Considering the situation, JICA decided to dispatch the study team for additional study activities from February to September 2005. The study team held various discussions with the officials concerned of the Government of the Democratic Socialist Republic of Sri Lanka and implemented a pilot project in Kalmunai Educational Zone to improve the situation applying the method developed through the Study. Based on the result of the pilot project, the final report with a proposed action plan for sustainable improvement in education management has been prepared.

I hope that this report will contribute to the rehabilitation and reconstruction in the education sector and to the enhancement of friendly relationship between the two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Democratic Socialist Republic of Sri Lanka for their close cooperation extended to the Additional Study.

September 2005

Kazuhisa MATSUOKA,
Vice-President,
Japan International Cooperation Agency

September 2005

Mr. Kazuhisa Matsuoka
Vice President
Japan International Cooperation Agency (JICA)
Tokyo, Japan

Dear Mr. Kazuhisa Matsuoka,

Letter of Transmittal

We are pleased to submit to you the Final Report on “The Additional Study to the Master Plan for the Development of Science and Mathematics in the Primary and Secondary Levels in the Democratic Socialist Republic of Sri Lanka”. Under the contract with your esteemed organization, the Additional Study was carried out for eight months from February to September 2005.

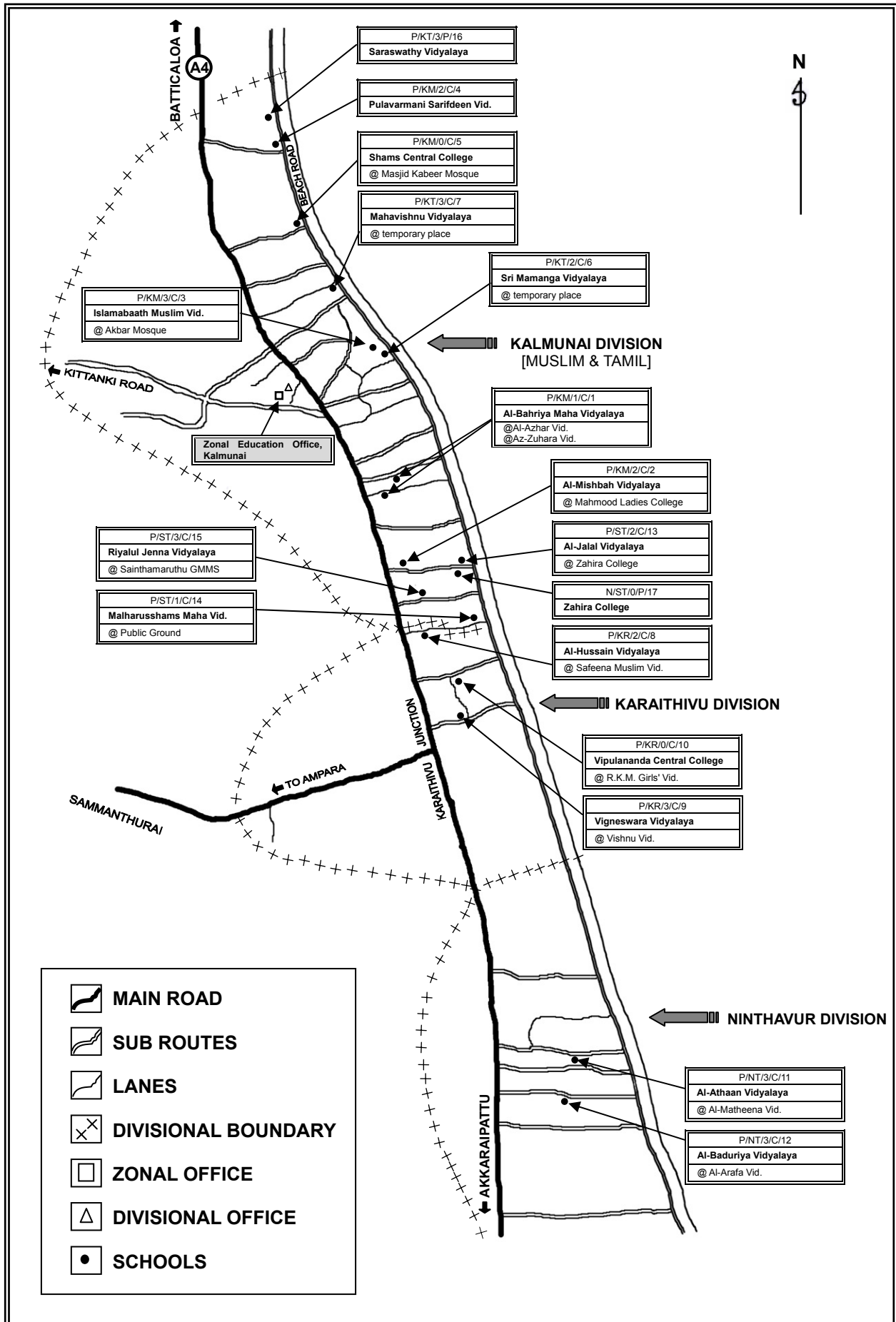
The Additional Study conducted a pilot project in the Kalmunai Educational Zone applying Educational Kaizen approach that was formulated and implemented in “The Master Plan for the Development of Science and Mathematics in the Primary and Secondary Levels”. Based on the lessons learnt from the pilot project, an action plan was formulated to expand Educational Kaizen Activities to all the schools in the Kalmunai Educational Zone.

We wish to take this opportunity to express our sincere gratitude to the Embassy of Japan and JICA. We also wish to express our deepest gratitude to the Ministry of Education and the Zonal Education Office, Kalmunai, and concerned officers of related agencies for the courtesies and cooperation extended to the team during the course of the Additional Study.

Very truly yours,

Toshikazu Tai
Team Leader

LOCATION MAP OF THE PILOT PROJECT



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ABBREVIATIONS

ADE	Assistant Director of Education
DDE	Deputy Director of Education
ISA	In-Service Advisor
JICA	Japan International Cooperation Agency
MOE	Ministry of Education
NGO	Non-Governmental Organization
QC	Quality Control
QE	Quality Education
QEC	Quality Education Circle
SEIKA	School Educational Initiative of Kaizen Activities
ZDE	Zonal Director of Education
ZEIKA	Zonal Education Initiative of Kaizen Activities
ZEO	Zonal Education Office

CHAPTER I INTRODUCTION

1.1 Study Objectives and Target Area

The objectives of the Additional Study to the Master Plan for the Development of Science and Mathematics in the Primary and Secondary Levels (the Additional Study) are:

- To verify and enhance the applicability of Educational Kaizen activities substantiated in the Master Plan Study
- To improve the environment and quality of education of the Tsunami-affected schools in Kalmunai Zone by mobilizing the school staff, students and community members through participation in Educational Kaizen activities
- To improve the capacity and administrative efficiency of Kalmunai Zonal Education Office by introducing Kaizen activities in the office
- To help strengthen the planning and implementing capacity of the Counterpart personnel in the Ministry of Education (MOE) through implementation of the Study

The Study covers the Educational Zone of Kalmunai in Ampara District, North and Eastern Province.

1.2 Overall Timeframe

Initially this Additional Study was planned for three months from the end-February to end-May 2005. However, further promotion of Educational Kaizen activities was found necessary and the Study was extended till the end of September 2005.

CHAPTER II PILOT PROJECT FOR TSUNAMI-AFFECTED SCHOOLS

2.1 Outline of the Pilot Project

The basic concept of the Pilot Project for the Development of Tsunami-Affected Schools in Kalmunai Zone is to apply Educational Kaizen activities to the Tsunami-affected schools. “Kaizen” means continuous improvement involving everyone – i.e., top management, managers and workers. Kaizen activities include various methodologies of participatory approach such as 5S¹, suggestion system and Quality Control (QC) circle.

In situations of a sudden disaster as in the case of a Tsunami attack, a massive amount of aid flows into the affected area, where a lot of relief items are provided to victims and survivors by the government and aid agencies. While certain items are provided sufficiently or even excessively, some of the priority needs are not being met. The concept of the pilot project is that such a gap could be identified and relief and development effort well coordinated at the school-level through Educational Kaizen activities.

Duration of the pilot project was initially two months from March to May 2005, but was later extended up to September 2005, as two months was too short to reap fruits from Educational Kaizen activities. The activities of the pilot project were continued for a total of six months.

2.2 Selection of the Pilot Schools

Of the 57 schools in Kalmunai Zone, 15 schools were totally destroyed and 2 were partly damaged by Tsunami. Through discussion with the Zonal Director of Education (ZDE), it was agreed that those 17 schools be the pilot schools of the project. The selection of the pilot schools were then approved by the MOE.

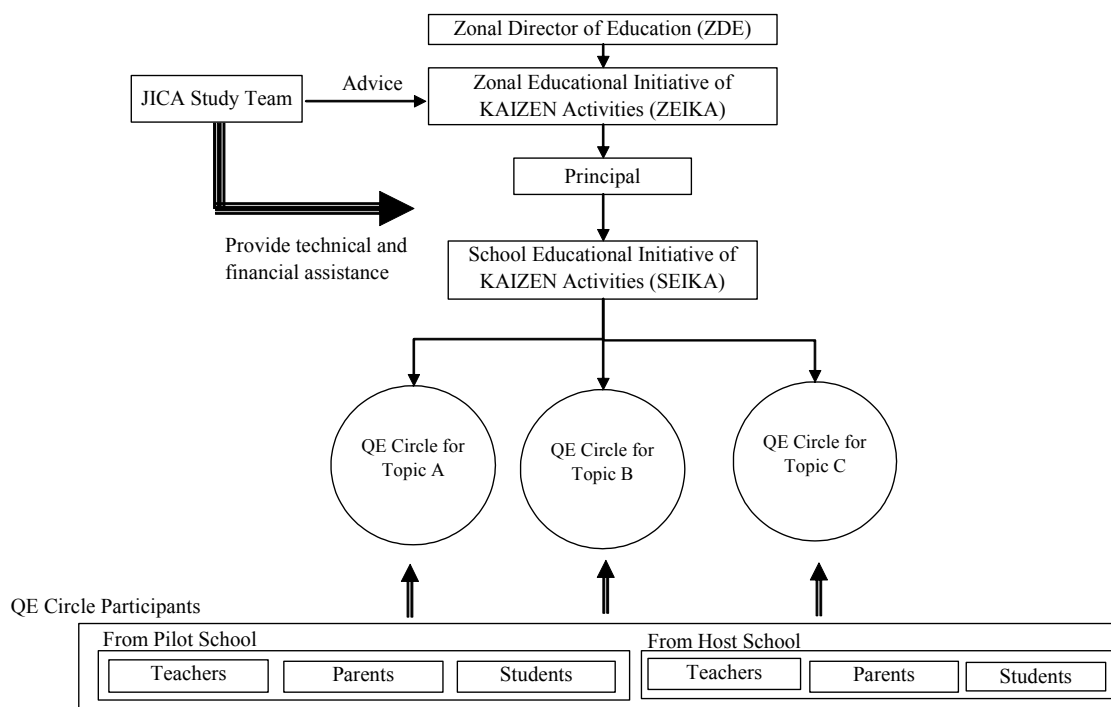
2.3 Implementation Structure of the Pilot Project

The pilot schools formed **SEIKA** (School Educational Initiative of Kaizen Activities) as the school-level decision-making body for Educational Kaizen activities. SEIKA consist of principal, teachers, parents as well as other resource persons. Where the school is operated in another school premises, it was requested that the representatives of the host school also be included in SEIKA.

Under SEIKA, each pilot school formed 2-3 **Quality Education Circles (QE circles)**. A QE circle consists of teachers, parents and students, totaling about 5-10 members.

¹ 5S originated in Japan and stands for five systematic steps of the process, that are SEIRI (Classify), SEITON (Clear), SEISOU (Clean), SEIKETSU (Continue, Standardize), and SHITSUKE (Commitment, Discipline). 5S aims to create a highly productive working environment.

The implementation structure is shown in Figure 2.1.



Source: JICA Study Team

Figure 2.1 Implementation Structure of the Pilot Project

2.4 QE Circle Activities

A total of 42 QE circles were formed at the 17 pilot schools. Topics of QE circles generally fall into the following three categories: (1) Improvement of school environment and management; (2) Improvement of quality of education; and (3) Development of basic infrastructure and facilities.

However, due to the rapidly changing actual situations on the ground, there was a need to amend some of the QE circle topics and activities. In such cases, it was the schools themselves that could best identify and address the newly-arisen, unmet needs at the school level.

In general, in the first half of the pilot project (March – May 2005), the pilot schools focused on setting up minimum basic infrastructure and environment based on their urgent needs, such as temporary classrooms and nutritious mid-day meals, which would encourage students to come back to school after the disaster. In the latter half of the project (June – August 2005), the activities were directed more towards management and educational activities, rather than infrastructure development and nutrition program.

2.5 Supporting Activities for the Pilot Schools

(1) Monitoring and Advisory Activities

The objectives of the monitoring and advisory activities for the pilot schools are:

- To provide on-site advice to the principal, SEIKA and QE circles on the implementation of Educational Kaizen activities, particularly on solving problems and overcoming constraints
- To assist SEIKA and QE circles in establishing a participatory and transparent decision making process
- To evaluate the progress of Educational Kaizen activities
- To monitor expenditure of the pilot schools

The monitoring team evaluated the progresses of activities at each pilot school, on the criteria of (i) principal's leadership, (ii) participation, (iii) communication, and (iv) outputs. The results of the monitoring evaluation, given in the letter grades of "A" to "C" rating, were informed to the pilot schools.

(2) Workshops

To facilitate the implementation of Educational Kaizen activities, the JICA Study Team organized various workshops and seminars throughout the course of the project, as listed in Table 2.5.1. Principals and teachers of the pilot schools as well as of the host schools participated in them. Officers of the Zonal Education Office were also invited.

Table 2.1 Workshops Conducted for Schools and Numbers of Participants

	<i>Workshop Title</i>	<i>Date</i>	<i>Total Number of Participants</i>		
			<i>Pilot Schools</i>	<i>Host Schools</i>	<i>Zonal Office</i>
(1)	Intermediate Workshop	3.22.2005	58	5	2
(2)	Seminar on 5S	4.25.2005	50	9	2
(3)	Model Experiment Workshop	5.7.2005	20	20	3
(4)	Intermediate Workshop II	5.12.2005	50	7	2
(5)	Model Experiment Workshop II	6.13-17.2005	103	51	8
(6)	Workshop on Healthy School Culture (1)	7.2-3. 2005	29	17	0
	Workshop on Healthy School Culture (2)	7.16-17.2005	31	14	0
(7)	Final Workshop	9.17-18.2005	239	26	13
	Total		580	149	30

Source: JICA Study Team

2.6 Results of the Pilot Project

Most of the pilot schools successfully implemented the pilot project based on the activity plans that they themselves developed. It shows that the school-based Educational Kaizen activities can be applied to the tsunami-affected schools in

the post-disaster phases to develop the school management, quality of education and infrastructure/facility. When the school staff and students are given the opportunity to play a major role in their day-to-day activities, be it work or study, the level of enthusiasm and commitment is raised, as is the level of achievement.

From the results of the six-month activities of the pilot project, following can be extracted.

(1) Need for an Own Place

The monitoring evaluation indicates that an important factor for early and smooth improvement is that Tsunami-affected schools should have a separate and autonomous place to run the school at an early stage of its recommencement after the disaster. Having to operate in an evening (afternoon) session is a disadvantage to them, as it is not suitable time for children to come to school and study because of the intense daytime heat and their customary lunch time. There are also various administrative problems (e.g., different time schedules, security and maintenance of facilities and equipment) as well as practical problems (shortened school hours), which hindered smooth and effective implementation of Educational Kaizen activities.

(2) Need for Change in School Culture

Though a notable change in school culture was seen in most of the pilot schools, it will take much more time for Educational Kaizen activities to take root in people's attitudes and thinking. As the monitoring evaluation indicates, the schools that showed achievement at an early stage of the project maintained high rating throughout the project, whereas those that had poor performance remained in the same group of rating. Changing school culture is never an easy task, but once it is achieved, some visible and sustainable impact can be attained on the school management as well as quality of education.

An important stimulus for changing the school culture was the introduction of mutual assessment system. It helps to enhance communication among the staff, which is the first step toward changing culture of the school. Also, sharing of experiences among the pilot schools through workshops and school visits was effective in inducing the change.

CHAPTER III PILOT PROJECT FOR THE ZONAL EDUCATION OFFICE

3.1 Outline of the Pilot Project

Zonal education office (ZEO) is responsible for administrative work of the government schools and teachers in the zone as well as quality improvement of teaching and learning in the schools. It is practically the closest point of contact for schools. However, there are a number of problems in the way that zonal offices are run, including the information management system and school monitoring system. In order for the enhancement of school management and education, strengthening of ZEO is an urgent requirement.

In this viewpoint, the Pilot Project for the Development of Kalmunai Zonal Education Office was implemented from June to September 2005 as a supplement to the project for Tsunami-affected schools that had started in March 2005. It was aimed that the capacity and efficiency of the day-to-day administration of ZEO would improve through Educational Kaizen activities.

3.2 Implementation Structure and Process of the Pilot Project

ZEIKA (Zonal Educational Initiative of Educational Kaizen Activities) was formed at ZEO as the decision-making body for Kaizen Activities at the zonal level. Under the Zonal Director of Education (ZDE) as Chairperson, ZEIKA consists of directors, officers, clerks of ZEO as well as the directors of the two neighboring zones. ZEIKA also nominated a principal and a teacher from the pilot schools as its members in order to better reflect the voices of schools on their services.

Kaizen topics were selected, and **QE circles** were formed. The members of the circles prepared a project proposal containing activity plans and cost estimates. The three QE circles are: (1) Administrative and management improvement; (2) Information management improvement; and (3) Promotion of model experiment and 100-box calculation through monitoring activities at schools.

3.3 QE Circle Activities

(1) 5S – Big Cleaning Day

As the first step of 5S, that is SEIRI, a Big Cleaning Day was organized at ZEO with the voluntary participation of 83 staff members of the office. A large amount of unnecessary items, such as old documents and broken furniture, were removed from the office. As a result, a lot of space was obtained in the office. In addition to the physical improvement of office, an important result of this activity was the team work spirit among the staff.

(2) Office Renovation and Re-Arrangement

Following the cleaning activities, renovation of the office was started, including repainting of walls and furniture, and repairing of toilet facilities. Also, new layout of desks was introduced so that staff would sit facing each other, as often seen in Japanese offices. The result of this was that space was saved and congestion eased. It also helped to enhance communication among the staff, and supervision of them has become easier.

(3) School Monitoring and Seminars

The members of QE Circle 3, mainly Assistant Director of Educations (ADEs) in charge of subjects and In-Service Advisors (ISAs), participated in the monitoring activities of the JICA Study Team and they gained understanding on the importance of improving school management. They also learned model experiments and 100-box calculation implemented at the pilot schools.

ADEs and ISAs then conducted seminars on model experiments and 100-box calculations for the teachers of non-pilot schools. It was an excellent opportunity to expand the activities of pilot project to all 57 schools in the zone.

3.4 Progresses and Results of the Pilot Project

Educational Kaizen activities introduced to the Zonal Education Office are still underway to see real results and outcomes. It will take much more time for the system to be established and maintained. Summarized below are the progresses achieved so far from the three-month activities of the pilot project.

5S activities started to bring a change, not only in the appearance of the office, but also in the attitudes of staff. One notable example is that, when their chairs and desks were being repainted and temporarily unusable, the staff worked on the floor to sort out the documents. If earlier, nobody would work and all would just go home saying they can not work because they do not have a desk.

New file covers were purchased to replace all the personal and school files that were old and split apart. The file code system was developed with serial numbers given to each file. However, due to the delay in office renovation and delivery of files, the file covers are yet being changed at the time of writing this report.

Joint monitoring activities provided an opportunity for on-the-job training for ADEs and ISAs on the proper monitoring activities that are expected of them. Having learned the model experiment and 100-box calculation through monitoring activities at the pilot schools, they conducted seminars for non-pilot school teachers to promote interactive teaching and learning. These seminars were then followed up on the routine school visits by the ADEs and ISAs as well. A positive response from the teachers gave a motivation and encouragement to these field officers to further promote the activities.

CHAPTER IV RESULTS OF THE ADITIONAL STUDY

4.1 Questionnaire Survey for Pilot Schools

In order to assess the impact of the pilot project, a questionnaire survey was conducted in all the 17 pilot schools.² Altogether 19 principals³, 290 teachers and 219 students responded. The result of survey is summarized in Table 4.1.

Table 4.1 Results of the Questionnaire Survey for the Pilot Schools

	Questions	Respon- dents	Not at all	Little	Hard to tell	Fairly	Very Much
(1)	Compared to Before Pilot Project, the enthusiasm or commitment of principal is improved:	Principal	0.0%	0.0%	0.0%	15.8%	84.2%
		Teachers	0.7%	7.9%	1.7%	32.8%	56.9%
		Students	2.3%	5.9%	2.7%	11.9%	77.2%
		Total	1.3%	6.8%	2.1%	23.5%	66.3%
(2)	Compared to Before Pilot Project, the enthusiasm or commitment of teachers is improved:	Principal	0.0%	0.0%	5.3%	57.9%	36.8%
		Teachers	0.3%	5.9%	2.8%	42.1%	49.0%
		Students	0.0%	4.1%	0.9%	24.2%	70.8%
		Total	0.2%	4.9%	2.1%	35.2%	57.6%
(3)	Compared to Before Pilot Project, students' enthusiasm and liking to attend school is improved:	Principal	0.0%	0.0%	0.0%	36.8%	63.2%
		Teachers	0.7%	5.5%	5.9%	40.0%	47.9%
		Students	2.3%	3.7%	3.2%	9.6%	81.3%
		Total	1.3%	4.5%	4.5%	27.3%	62.3%
(4)	Compared to Before Pilot Project, relationship between the school and parents is improved:	Principal	5.3%	5.3%	10.5%	52.6%	26.3%
		Teachers	8.3%	13.8%	14.1%	45.5%	18.3%
		Students	3.7%	15.1%	9.6%	32.4%	39.3%
		Total	6.3%	14.0%	12.1%	40.3%	27.3%
(5)	Compared to Before Pilot Project, relationship between the school and the community is improved:	Principal	0.0%	10.5%	0.0%	68.4%	21.1%
		Teachers	6.9%	16.9%	13.1%	47.9%	15.2%
		Students	4.6%	10.0%	13.2%	32.9%	39.3%
		Total	5.7%	13.8%	12.7%	42.4%	25.4%
(6)	The Pilot Project has contributed to rehabilitating or improving school facilities of your school.	Principal	0.0%	0.0%	0.0%	21.1%	78.9%
		Teachers	1.7%	7.2%	3.4%	33.1%	54.5%
		Students	0.0%	5.5%	4.1%	14.6%	75.8%
		Total	0.9%	6.3%	3.6%	25.0%	64.2%
(7)	The Pilot Project has contributed to rebuilding or improving morale among students, teachers and parents of your school.	Principal	0.0%	0.0%	5.3%	26.3%	68.4%
		Teachers	2.8%	7.9%	3.8%	37.9%	47.6%
		Students	0.0%	0.9%	2.3%	21.9%	74.9%
		Total	1.5%	4.7%	3.2%	30.9%	59.7%
(8)	The Pilot Project has contributed to improving the quality of education at your school.	Principal	0.0%	0.0%	0.0%	15.8%	84.2%
		Teachers	1.4%	4.5%	2.1%	31.4%	60.7%
		Students	0.5%	1.8%	1.8%	14.2%	81.7%
		Total	0.9%	3.2%	1.9%	23.7%	70.3%
(9)	In your opinion, what was the most helpful/effective resource item from the pilot project?						
	Principal	Teachers	Students				
	1. Regular Monitoring Visit	57.9%	1. Library	42.9%	1. Regular Monitoring Visit	43.4%	
	2. Library	42.1%	2. Regular Monitoring Visit	34.6%	2. Library	34.2%	

² Principals, teachers, and students of Grade 9 class, who were present and available on an agreed survey date and time, participated in the survey.

³ Deputy and Vice Principals are also classified as Principals.

	3. Sci. Laboratory	31.6%	3. Sci. Laboratory	28.0%	3. Sci. Laboratory	27.4%
	4. Classroom/office Furniture	26.3%	4. Temporary Shed	23.5%	3. Nutrition Program	27.4%
(10)	In your opinion, what was the most effective tool introduced by the pilot project?					
	Principal		Teachers		Students	
	1. 100-box Calculation	68.4%	1. 100-box Calculation	65.7%	1. 100-box Calculation	75.3%
	2. SEIKA/QEC System	52.6%	2. 5S	44.3%	2. 5S	41.6%
	3. 5S	42.1%	3. SEIKA/QEC System	27.7%	3. Suggestion System	35.2%
	4. Mutual Evaluation	21.2%	4. Suggestion System	24.6%	4. SEIKA/QEC System	20.1%
	5. Suggestion System	10.5%	5. Mutual Evaluation	18.3%	5. Mutual Evaluation	16.4%



Source: JICA Study Team

4.2 Questionnaire Survey for Zonal Education Office

For the zonal education office, 41 staff members (4 officers, 2 ISAs, 26 clerical staff and 9 others such as typist, store keeper, driver, etc.)⁴ responded the questionnaire. The result of the survey is summarized in Table 4.2.2 below.

Table 4.2 Results of the Questionnaire Survey for Zonal Education Office

	Questions	Respon- dents	Not at all	Little	Hard to tell	Fairly	Very Much
(1)	Compared to Before Pilot Project, the enthusiasm or commitment of ZDE/DDE/ADE is improved:	Officers	0.0%	0.0%	0.0%	25.0%	75.0%
		ISAs	0.0%	0.0%	0.0%	0.0%	100%
		Clerical	0.0%	0.0%	0.0%	28.0%	72.0%
		Others	0.0%	11.1%	0.0%	0.0%	88.9%
		Total	0.0%	2.5%	0.0%	20.0%	77.5%
(2)	Compared to Before Pilot Project, the enthusiasm or commitment of ISA is improved:	Officers	0.0%	25.0%	50.0%	25.0%	0.0%
		ISAs	0.0%	0.0%	0.0%	0.0%	100%
		Clerical	39.1%	30.4%	8.7%	21.7%	0.0%
		Others	0.0%	33.3%	11.1%	55.6%	0.0%
		Total	23.7%	28.9%	13.2%	28.9%	5.3%
(3)	Compared to Before Pilot Project, the enthusiasm or commitment of clerical staff is improved:	Officers	0.0%	0.0%	0.0%	75.0%	25.0%
		ISAs	0.0%	0.0%	0.0%	0.0%	100%
		Clerical	0.0%	3.8%	0.0%	30.8%	65.4%
		Others	0.0%	0.0%	0.0%	44.4%	55.6%
		Total	0.0%	2.4%	0.0%	36.6%	61.0%
(4)	Compared to Before Pilot Project, efficiency of office administration is improved:	Officers	0.0%	0.0%	25.0%	75.0%	0.0%
		ISAs	0.0%	0.0%	0.0%	100%	0.0%
		Clerical	0.0%	7.7%	3.8%	42.3%	46.2%
		Others	0.0%	0.0%	0.0%	88.9%	11.1%
		Total	0.0%	4.9%	4.9%	58.5%	31.7%

⁴ The survey was conducted on a Wednesday when all the staff is supposed to be present at the office including ISAs, who are normally out of office visiting schools. However, on the day of the survey an island-wide strike was held by ISAs, thus no ISAs were present on that day. Later two ISAs agreed to take part in the survey.

	Questions		Respon- dents	Not at all	Little	Hard to tell	Fairly	Very Much
(5)	Compared to Before Pilot Project, cleanliness of the office environment is improved:		Officers	0.0%	0.0%	0.0%	25.0%	75.0%
			ISAs	0.0%	0.0%	0.0%	50.0%	50.0%
			Clerical	7.7%	23.1%	11.5%	23.1%	34.6%
			Others	0.0%	44.4%	0.0%	22.2%	33.3%
			Total	4.9%	24.4%	7.3%	24.4%	39.0%
(6)	Compared to Before Pilot Project, relationship among office staff is improved:		Officers	0.0%	0.0%	25.0%	75.0%	0.0%
			ISAs	0.0%	0.0%	0.0%	0.0%	100%
			Clerical	0.0%	0.0%	3.8%	57.7%	38.5%
			Others	0.0%	0.0%	0.0%	77.8%	22.2%
			Total	0.0%	0.0%	4.9%	61.0%	34.1%
(7)	In your opinion, what was the most helpful/effective Kaizen activity introduced through the pilot project regarding to the improvement of Zonal Education Office?							
	Officers		ISAs		Clerical Staff		Others	
	1. Cleaning Day	100%	1. Cleaning Day	50.0%	1. Office Rearrang.	62.5%	1. Cleaning Day	77.8%
	2. Office Renov.	66.7%	1. Office Rearrang.	50.0%	2. Office Renov.	54.2%	2. Office Renov.	44.4%
	3. Sugg. System	33.3%	1. Working Time	50.0%	3. Cleaning Day	50.0%	3. Office Rearrang.	33.3%
			1. School Monitor.	50.0%			3. Filing System	33.3%



Source: JICA Study Team

4.3 Conclusion

Under this Additional Study, Educational Kaizen activities were implemented in 17 Tsunami-affected schools in Kalmunai Zone for about six months and in Kalmunai Zonal Education Office for the final three months. Based on the findings from regular monitoring throughout the pilot project as well as the results of the questionnaire survey conducted at the end of the project, the following are main conclusions of this study.

Educational Kaizen Activities at Tsunami-Affected Schools

The primary conclusion to be noted is that Educational Kaizen activities were effective and efficient in improving not only school facilities but also improving school culture and quality of education in most of the 17 pilot schools.

In the post-disaster/reconstruction period such as after the devastating Tsunami, the situation of each school changes considerably in a short period of time as various donors and non-governmental organizations (NGOs) are bringing or pledging different material support to school in a rather unsystematic, uncoordinated way. Under such condition it is important for the school to have its own prioritized needs and targets clear so that the school itself can utilize such external support in a more effective and efficient way for the benefit of the

school and its students. It is also necessary for the school to adjust and readjust its target and immediate actions according to the changing situation. For such environment, Educational Kaizen approach is most beneficial as it prepares schools for taking initiative, making decisions and mobilizing available resources to meet their own needs.

Regular School Monitoring and Capacity Development of ADEs/ISAs

To promote Educational Kaizen activities, regular monitoring is found essential, serving dual purposes of on-site advice/support and evaluation of progress.

On-site advice and support is especially important as each school often faces its unique problems and constraints. In various occasions pilot schools mentioned uniqueness of regular monitoring conducted throughout the pilot project as it is a new experience for most schools. Evaluation of school's progress using clear and transparent criteria through monitoring is also found effective in motivating the school for further progress. It also promotes healthy competition among schools which encourages them to further improvement.

For the expansion of Educational Kaizen activities to a larger number of schools, it is necessary to develop monitoring capacity of field officers (ADEs and ISAs) attached to zonal education office. They are expected to perform the activities of school monitoring and evaluation. However, currently there is no proper system to monitor the performance of these field officers. Some kind of incentive may need to be brought in for them to work effectively and efficiently.

Strengthening of Zonal Education Office

In order to further promote Educational Kaizen activities, capacity of zonal education office needs to be developed and administrative efficiency improved. Through the pilot project for the zonal education office, introduction of 5S and its various activities (cleaning, renovation and rearrangement of office, unified filing system, etc.) have encouraged different cadres of staff to work together and communicate more. Such group work may be useful as a first step towards better office culture which fosters Kaizen activities at the zonal education office.

The capacity and efficiency of zonal education office is tested especially at the time and aftermath of a disaster such as Tsunami. Donors and NGOs which are involved in the relief work and reconstruction in the area require accurate and timely information on schools and students from the zonal education office, which is expected to become a contact point and coordination body for such work. Efficient administrative capacity including information management is necessary for such a role.

CHAPTER V ACTION PLAN FOR SUSTAINABLE EXPANSION

Through the Pilot Project for the Tsunami-affected Schools in Kalmunai Educational Zone, commendable improvements have been achieved in school culture, quality of education, and school infrastructure/facilities in many of the 17 pilot schools. The momentum gained for Educational Kaizen in Kalmunai should be further accelerated and expanded. The Pilot Project for the Zonal Education Office has also set a motion for change at Kalmunai Zonal Office though many activities are yet to be implemented and its achievement evaluated.

Based on the lessons learned from the pilot project in Kalmunai, the JICA Study Team prepared an action plan for the sustainable expansion of Educational Kaizen activities in Kalmunai as well as its surrounding areas. This plan is to strengthen Kalmunai Zonal Education Office so that ZDE and ZEIKA can support school-based Educational Kaizen activities in the pilot schools and further expand them to non-pilot schools in the zone. The plan also includes expansion of Educational Kaizen activities to the neighboring Akkaraipattu zone.

This three-year action plan includes four objectives:

- Objective 1: Capacity and efficiency of Kalmunai Zonal Education Office will be further strengthened through Kaizen activities
- Objective 2: School management, quality of education, and school facilities will be improved in all schools in Kalmunai Zone through educational Kaizen activities
- Objective 3: Capacity of Akkaraipattu Zonal Office will be improved
- Objective 4: School management, quality of education, and school facilities will be improved in all schools in Akkaraipattu Zone through educational Kaizen activities

Activities to achieve each objective, organization/person in charge for each activity and timeframe are summarized in the following matrix.

ACTION PLAN FOR SUSTAINABLE EXPANSION OF EDUCATIONAL KAIZEN ACTIVITIES

Plan Period: January 1, 2006 – December 31, 2008
 Drafted: September 23, 2005

Objectives	Activities	Organization/ Person in Charge	Time Schedule		
			2006	2007	2008
<Objective 1> Capacity and efficiency of Kalmunai Zonal Education Office will be further strengthened through Kaizen activities	1.1	Continue existing QE circle activities	ZDE (K), QE circle leaders		
	1.2	Promote further QE circle activities	ZEIKA (K)		
	1.3	Award best practice QE circle every year	ZEIKA (K)	■	■
	1.4	Train Field Officers for effective school monitoring	ZDE (K)	■	
	1.5	Develop monitoring program to schools (method, monitoring criteria, schedule, etc.) and conduct regular monitoring	ZEIKA (K)	■	
	2.1	Organize half-day workshop for non-pilot schools in Kalmunai Zone to introduce Educational Kaizen concept utilizing principal and QE circle leaders who excelled under JICA Pilot Project	ZDE (K)	■	
<Objective 2> School management, quality of education, and school facilities will be improved in all schools in Kalmunai Zone through Educational Kaizen activities	2.2	Form SEIKA and QE circles, and start QE circle activities in non-pilot schools	Principal		
	2.3	Organize a series of half-day seminars on 5S, 100-box calculation, model experiment, etc.	ZEIKA (K)	■	■
	2.4	Conduct regular school monitoring	ZEIKA (K)	■	■
	2.5	Organize semi-annual workshop to share the progress of each school	ZEIKA (K)	■	■
	2.6	Award best schools and QE circles every year	ZEIKA (K)	■	■

