No.

BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
CONSTRUCTION OF PRIMARY SCHOOLS
IN
THE DEMOCRATIC REPUBLIC OF TIMOR-LESTE

August 2003

JAPAN INTERNATIONAL COOPERATION AGENCY
MOHRI, ARCHITECT & ASSOCIATES, INC.

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PREFACE

In response to a request from the Government of the Democratic Republic of Timor-Leste, the Government of Japan decided to conduct a basic design study on the Project for Construction of Primary Schools and entrusted the study to the Japan International Cooperation Agency (JICA).

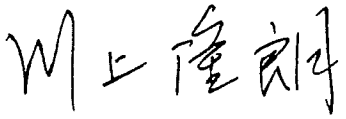
JICA sent to Timor-Leste a study team from March 17 to April 13, 2003.

The team held discussions with the officials concerned of the Government of Timor-Leste, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Timor-Leste in order to discuss a draft basic design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Democratic Republic of Timor-Leste for their close cooperation extended to the teams.

August, 2003



Takao Kawakami
President
Japan International Cooperation Agency

August, 2003

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Construction of Primary Schools in the Democratic Republic of Timor-Leste.

This study was conducted by Mohri, Architect & Associates Inc., under a contract to JICA, during the period from March, 2003 to August, 2003. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Timor-Leste and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

Nobuhiro Mohri
Project Manager
Basic design study team on the Project for
Construction of Primary Schools
Mohri, Architect & Associates, Inc.

SITE LOCATION MAP

Map No. 4111 Rev. 7 UNITED NATIONS
October 2002

Department of Public Information
Cartographic Section

No.	Name of School
ESCOLAS BASICAS	
EB-1	EPS P2 SUAI
EB-2	EPP CABIRA OAN
EB-3	EPS P3 VILA NOVA
EB-4	EPS P BALIBO NEGERI
EB-5	EPS P VASCO DA GAMA
EB-6	EPS P OE-SILO
PRIMARY SCHOOLS	
PS-1	LETEFOHO VILA
PS-3	DAUDERE
PS-5	REMEXIO
PS-6	TIBAR
PS-9	MAUBISSE
PS-11	BELULIK LETEN

PERSPECTIVE （1）

PERSPECTIVE （2）

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Abbreviations

AS	Australian Standard
CHB	Concrete Blocks
CMU	Reinforced Concrete Masonry Unit System
EB	Escola Basica
EN	Exchange of Notes
ESRP	Emergency School Readiness Project
FSQP	Fundamental School Quality Project
MDB	Main Distribution Board
MECYS	Ministry of Education, Culture, Youth and Sports
NDP	National Development Plan
NGO	Non Governmental Organization
P/Q	Pre-Qualification
PS	Primary School
PTA	Parent Teacher Association
RC	Reinforced Concrete Framing Structure
SMC	School Management Committee
TFET	East Timor Trust Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

Summary

In the “National Development Plan (hereinafter referred to as NDP)” formulated in May 2002, education is positioned as just as important a field for national development as health or agriculture. In addition, "increase in access to education", "improvement of educational quality", and "rationalization of educational provision in relation to the varying needs of different areas" are set as targets towards "improvement of the education status of the people of Timor-Leste", which is an educational development goal. In order to realize the above-mentioned objectives, the “achievement of universal primary school education” as a long-term (over a 5-10 year period) strategy, and the “rationalization of educational provisions, by building new schools, increasing school size, and closing redundant schools” as a short-term (over a 2-3 year period) strategy are also set. This Project contributes to these objectives.

In Timor-Leste, 95% of the educational facilities were burned at the time of the referendum in 1999. As a result, at least 3,012 classrooms needed construction and/or rehabilitation. Thus, through the Timor-Leste Trust Fund (hereinafter referred to as TFET), the World Bank implemented the “Emergency School Readiness Project” (hereinafter referred to as ESRP) to rehabilitate the schools in urgency. Then, the "Fundamental School Quality Project” (hereinafter referred to as FSQP) was put in place in May, 2002, to operate schools in Timor-Leste at the “fundamental quality level”. In the FSQP, it was planned to construct and rehabilitate 78 primary schools (hereinafter referred to as PS) and 14 Escola Basica (hereinafter referred to as EB) as large-scale integrated primary and junior secondary schools functioning as model schools in each District. In total, including the provision of construction materials by donors, 2,612 classrooms have been repaired, restored or otherwise rehabilitated.

However, it has become difficult to construct 10 out of the 14 EB for financial reasons and to start the EB school system in all the Districts as planned. Moreover, 400 classrooms[1] not covered by the FSQP or projects by other donors have been left with no plan for the construction or rehabilitation, so the needs for educational facilities are still high in the country.

[1] MECYS, 2003

Considering these situations, the “Preparatory Study of the Project for Support of Reconstruction of East Timor” was carried out in May 2002. In the Study, it was confirmed that the schools that were not covered by ERSP or FSQP need assistance and that the project regarding facility improvement of 12 PS was suggested. Based on the result of the Study and the policy dialogue held in November 2002, the Government of Japan dispatched the Basic Design Study Team (hereinafter referred to as the Team) regarding the improvement of school facilities of the 12 PS suggested in the above-mentioned Preparatory Study and an additional 14 EB.

The Team was dispatched from March 16 to April 14, 2003. The Team had discussions with representatives of the Ministry of Education, Culture, Youth and Sports (hereinafter referred to as MECYS) and other associated people to discuss Project feasibility and a detailed plan, while the Team conducted a site survey at each school and obtained other necessary information. After the Team came back to Japan, the relevance of the Project, maintenance and management systems, and effects of the Project were analyzed based on the results of the study. Then, the Japanese side set the appropriate facility components and the scale of the Project, selected materials, and calculated a rough cost estimate for implementation of the Project. In order to explain those outlines of basic design of the Project to the Timor-Leste side, the Draft Report Explanation Team was dispatched from July 6 to July 16, 2003.

As for the selection of Project schools, during the Basic Design Study, the replacement of all 12 of the PS suggested in the Preparatory Study by 12 other PS that are core schools of the cluster system[2], and the cancellation of 8 EB from the Project were requested by MECYS. Thus, 18 requested schools, 12 PS (core schools) and 6 EB, were selected.

Both the countries of Timor-Leste and Japan have agreed to follow the selection criteria shown below to select the final Project schools. As a result of site surveys of the Basic Design Study, 12 schools, 6 EB and 6 PS, were finally selected as the Project schools.

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[2] “Cluster” is the basic concept of the "100 School Project" which UNICEF is carrying out, and means a geographically close school group. Each cluster is organized with one main core school and other satellite schools, which share facilities and human resources within the cluster. The “cluster system” attempts to achieve an efficient use of resources.

① Escolas Basicas and primary schools officially selected by MECYS.
② Urgently needs reconstruction of the existing buildings or construction of additional classrooms (due to over aging of the existing buildings, damage of the existing buildings, overcrowding, etc).
③ The present and future demand for basic education facilities is quantitatively estimated by a set of data such as the number of school-aged children, the rates of population growth, enrollment ratio, etc.
④ Sufficient teachers, budget allocation, and necessary cooperation from concerned people for the proper operation and maintenance of the facilities are secured.
⑤ Topographically safe and appropriate-sized land for construction is secured.
⑥ The ownership of land for construction is legally secured, and the evidence of land ownership will be provided to Japanese side by early July 2003.
⑦ Access road for the movement of materials and for the construction works is properly constructed.
⑧ No restriction on conducting necessary demolishing works for construction.
⑨ Allocation of necessary temporary classrooms during construction is secured.
⑩ No other program or plan for new/undergoing classroom construction by the MECYS, local government, other donors, NGOs and so forth.
⑪ No foreseen natural and environmental or social hazard.

MECYS has adopted the basic school plan designed by FSQP as the standard school facility design (hereinafter referred to as the Design Standard) in the country of Timor-Leste. Therefore, the Project will plan and design the schools in the Project according to the Design Standard.

The facility component was determined on the basis of "the necessary minimum" for the school operation. For EB, classrooms, a teachers' room, two multi-purpose rooms, one of which can be mainly used as a laboratory and the other as a library, and toilets will be constructed. For PS, classrooms, a teacher's room, and toilets will be constructed.

As for the size of the facility component, based on the Design Standard, the minimum number of required classrooms is 9 classrooms for EB and 6 classrooms for PS (one classroom for each grade). The number of required classrooms at each Project school is calculated when the maximum number of students per classroom is 40 under the double-shift system. Then the number of classrooms to be built in this Project is

determined by subtracting the number of existing usable classrooms from the number of required classrooms.

The facility components for each Project school are shown in table 1.

Table 1 The Facility Components for each Project school

Name of School		Classrooms to be constructed			Type of Teachers' Room	Multi-Purpose Room ① (Library)	Multi-Purpose Room ② (Laboratory)	Toilet		Floor Area (㎡)
		Primary School	Junior Secondary School	Total				Toilet	Faucet	
EB-1	EPSP2SUAI	6	3	9	SA	1	1	12	6	803.76
EB-2	EPPCABIRAOAN	7	2	9	SA	1	1	12	6	790.36
EB-3	EPSP3VILANOVA	0	0	0	LA	1	1	12	6	331.56
EB-4	EPSPBALIBONEGERI	0	5	5	SA	1	1	12	6	620.16
EB-5	EPSPVASCODAGAMA	0	0	0	MA	1	1	16	8	321.84
EB-6	EPSPOE-SILO	3	6	9	MA	1	1	12	6	866.16
PS-1	LETEFOHOVILA	4	0	4	LR	0	0	18	9	366.44
PS-3	DAUDERE	3	0	3	R	0	0	4	2	216.2
PS-5	REMEXIO	5	0	5	LR	0	0	8	4	365.88
PS-6	TIBAR	2	0	2	R	0	0	8	4	179.68
PS-9	MAUBISSE	10	0	10	LR	0	0	14	7	668.96
PS-11	BELULIKLETEN	7	0	7	LR	0	0	6	3	472.28
Total		47	16	63	-	6	6	134	67	6,003.28

In the Project, basic educational furniture (shown in table 2) will be supplied on the basis of "the necessary minimum" for efficient use of the facilities.

As for the educational equipment, the country of Timor-Leste requested that materials for science experiments be provided for the junior secondary education levels of 6 EB. However, science equipment and related materials are not included in the scope of this Project, and it is regarded as a responsibility of the recipient country's own efforts to attain those items, for the following reasons: 1) UNICEF is planning to develop a program for the maintenance of basic teaching materials for primary schools all over the country; 2) the specific curriculum and syllabus regarding the requested

equipment are still being developed; and 3) the concrete details of the relationship between the equipment & materials requested by the recipient country and their actual use in the application of scientific experiments is unclear and undefined.

Table 2 The List of Furniture

	Room Name	Contents of Furniture
①	Classroom	Desks (one for two students) and Chairs for students, Desk and Chair for teachers, Blackboard, Bulletin Board
②	Multipurpose Room ① (also utilized as Library)	Desks (one for two students) and Chairs for students, Desk and Chair for a librarian, Bookshelf
③	Multipurpose Room ② (also utilized as Laboratory)	Desks (for two students) and Chairs for students, Desk and Chair for teachers, Blackboard, Bulletin Board, Experiment Sink (2)
④	Teachers' Room (EB)	Desk and Chair for principals (EB), Desk and Chair for staffs, Desk and Chair for teachers, Blackboard, Bulletin Board
⑤	Teachers' Room (PS)	Desk and Chair for teachers, Blackboard, Bulletin Board
⑥	Storage	Not Applicable

In addition, to fully accomplish the Project purpose and overall goals, the proper operation and maintenance of the schools is indispensable for long-term use of both the existing and newly constructed facilities of the Project. Considering this, the Project will, in parallel to construction, introduce a software component, which aims to motivate the schools to start appropriate maintenance and repair activities.

When this Project is implemented under the Grant Aid Scheme, the estimated Project cost is 622 million Japanese yen (Japanese side: approx. 602 million Japanese yen, Timor-Leste side: approx. 20 million Japanese yen). The whole implementation schedule requires approximately 21 months, including the period of Detail Design work.

The following effects can be expected upon implementation of the Project:

【Direct Effects】

① Improvement of the Educational Environment

By constructing 63 classrooms through this Project, the schools' accommodation capacity increases and the number of students per classroom[3] is reduced from 51.2 to 30.6, contributing to a better learning environment. Furthermore, by constructing multi-purpose classrooms at EB that can be used either as a science laboratory or as a library, an even better learning environment can be realized.

② Expansion of EB System

By constructing 6 EB in this Project, combining with 4 EB under the FSQP, 10 EB will then function in 10 Districts out of 13 total Districts.

③ Improvement of Sanitary Conditions

This Project will construct, according to the number of classrooms built, an adequate number of toilets with the appropriate plumbing facilities. As a result, toilet shortages will be significantly alleviated and the sanitary conditions at each Project school will be greatly improved.

④ Acquisition of skill and knowledge regarding school maintenance

By introducing a software component, the basic skills and knowledge regarding maintenance will be acquired at each Project school. Furthermore, the appropriate implementation of the maintenance activities enables sustainable use of the existing facilities as well as Project facilities, decreasing the maintenance cost in the long run.

【Indirect Effects】

① Use of Facilities by the Community

The Project facilities will be used not only for basic education but also for social-educational activities such as adult education (e.g. Portuguese learning programs) or literacy education, as well as for non-educational purposes such as community activities.

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[3] The number of students per classroom = The total number of students at all the Project schools / (The total number of classrooms for one-shift schools + The total number of classrooms * 2 for double-shift schools)

In this way, the Project facilities will greatly contribute to the surrounding communities.

② Promotion of the Active Cluster System

6 PS in this Project have been selected as core schools in the cluster system. At these schools, Project facilities will be used for cluster meetings and relevant activities, bringing together teachers from neighboring schools. It is expected that activities of the cluster to which the Project schools belong will be promoted, contributing to further improvement in the quality of education.

In conclusion, this Project will help to realize the many benefits mentioned above, and in a broader sense, contribute to the improvement of BHN (Basic Human Needs) of local communities. Thus, the implementation of the Project through the Japanese grant aid scheme is legitimized. To this end, if the items mentioned below are improved, the Project will be implemented more smoothly, and thus more effectively contribute to improving the general educational environment.

① Governmental Support for the Implementation of Maintenance Activities

In this Project, a software component is introduced with an objective to improve the skills and knowledge regarding maintenance at Project schools, and it is expected that the Project schools will implement appropriate maintenance activities utilizing those skills and that knowledge. However, for the continuous and effective maintenance activities, it is indispensable that the government establish a follow-up system to advise and support schools through regular monitoring after completion of the software component. Moreover, it is necessary that MECYS make a budget allocation so that each Project school can secure budget for its facility maintenance.

② Active Participation of the Local Community

In order to operate and utilize facilities, both existing and Project facilities, it is important that the local community support the schools (not only through financial donations but also through various other forms of contribution). In order to promote this support from the community, it is important that schools have a plan based upon a clear vision regarding school operation and maintenance along with the accountability to explain it regularly to the local community. At the same time, a close partnership between the schools and the community incorporating voices of those outside the schools in the processes of decision-making and evaluation is of great importance.

③ Operational Support for EB

At 6 EB, the new schools will begin operation as integrated primary and junior secondary schools due to the streamlining of neighboring schools. In order to achieve a smooth start to EB school activities upon completion of construction, it is necessary to make sufficient preparations such as planning the reassignment of teachers and students, and establishing a management system for the school operation. Furthermore, after the EB begin operating, it is necessary to establish a support system from the governmental side.

④ Multiple Use of the Project Facilities

In designing the Project facilities, several considerations have been taken into account such as electrical outlets and fixtures as well as movable partitions, so that the Project facilities can also be used by the community for the other purposes, such as emergency shelters or as places for meetings or other non-formal education classes, etc.

To promote the facilities' active and effective use, it is essential that MECYS and the Project schools promote frequent use of the Project facilities to the local community, informing local citizens of the openness and flexible characteristics of the facilities.

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Chapter 1 Background of the Project

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[1] MECYS, 2003