

BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR THE RECONSTRUCTION OF
THE XAI-XAI PRIMARY TEACHER TRAINING CENTER
IN
THE REPUBLIC OF MOZAMBIQUE

AUGUST, 2003

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
YAMASHITA SEKKEI INC.
MOHRI, ARCHITECT & ASSOCIATES, INC.

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PREFACE

In response to the request from the Government of the Republic of Mozambique, the Government of Japan decided to conduct a basic design study on the Project for the Reconstruction of the Xai-Xai Primary Teacher Training Center in the Republic of Mozambique, and entrusted the study to the Japan International Cooperation Agency (JICA).

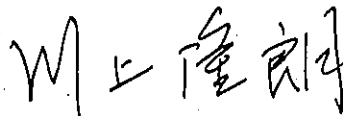
JICA sent to Mozambique a study team from February 19 to March 15, 2003.

The team held discussions with the officials concerned of the Government of Mozambique, 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 Mozambique 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 Republic of Mozambique for their close cooperation extended to the teams.

August 2003



Takao Kawakami

President

Japan International Cooperation Agency

August 2003

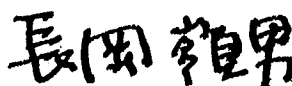
LETTER OF TRANSMITTAL

We are pleased to submit to you the basic design study report on the Project for the Reconstruction of the Xai-Xai Primary Teacher Training Center in the Republic of Mozambique.

This study was conducted by the joint venture between Yamashita Sekkei Inc. and Mohri, Architect & Associates Inc., under a contract to JICA, during the period from February, 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 Mozambique 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,



Mineo Nagaoka

Project Manager,
Basic design study team on the Project for the
Reconstruction of the Xai-Xai Primary Teacher
Training Center in the Republic of Mozambique
The Joint Venture between
Yamashita Sekkei Inc. and
Mohri, Architect & Associates, Inc.



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ABBREVIATIONS

AfDB	African Development Bank
CFPP	Centro de Formação de Professores de Primários
CIDA	Canadian International Development Agency
DANIDA	Danish International Development Assistance
EP1	Ensino Primário 1° ciclo
EP2	Ensino Primário 2° ciclo
ESG1	Ensino Secundário 1° ciclo
ESG2	Ensino Secundário 2° ciclo
ESSP	Education Sector Strategic Plan
EU	European Union
FINNIDA	Finnish International Development Agency
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IAP	Instituto de Aperfeiçoamento de Professores
IMAP	Instituto de Magistério Primários
IMP	Instituto de Meio Pedagógico
INDE	Instituto para o Desenvolvimento Educacional
JICA	Japan International Cooperation Agency
NP	Núcleos de Pedagógica
NUFORPES	Núcleos de Formação de Professores
PARPA	Plan d'action pour la Réduction de la Pauvreté Absolue
SIDA	Swedish International Development Cooperation Agency
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organization.
UNFPA	United Nations Fund for Population
WFP	World Food Programme
ZIP	Zonas de Influência Pedagógica

Summary

SUMMARY

In Mozambique, primary education system consists of five years of first level education (EP1) and two years of second level education (EP2) and net enrollment for primary school is 62.6 percent (2002). Only 46.2 percent of enrolled schoolchildren move up to the final grade of EP1 (first to fifth grades)(1998-99). Many problems have to be solved so that all children may have the opportunity to finish primary education. It should be noted that the country's annual population growth rate is 2.2 percent (2000). In view of the increase in enrollment of primary schools (average for the period from 1998 to 2002)--every year nearly 190,000 children reach school age, and therefore it is necessary to increase 3,800 primary teachers every year. In actuality, however, the annual number of graduates of teacher training institutions is less than 1,800. In addition, the percentage of unqualified primary teachers is on the increase (38.6 percent in 2002). It is urgently necessary, therefore, to enhance the country's primary education system, both in quantity and in quality.

Under such circumstances, the Government of the Republic of Mozambique gives the highest priority to education sector in its "National Five-Year Plan 2000-2004." It has set "Gradual shift from the CFPP¹ to the IMAP²", "Establishment of Teacher Support Resource Centers" and "Continuous support for the IMAP System" as its goals in the field of training for primary school teachers.

The Government of the Republic of Mozambique intends to establish an IMAP in each province and train about 2,200 new students every year through the "Education Sector Strategic Plan 1999-2003."

At present, there are three provinces-- Niassa Province, Manica Province and Gaza Province-- which still do not have an IMAP. In Gaza Province, for which the project is proposed, in particular, the situation has been improved considerably, as the number of primary school pupils per teacher is 59.2 (2002), while the target ratio set by the Ministry of Education of the Republic of Mozambique is 50. On the other hand, however, the percentage of unqualified primary teachers in the province is 52.2 percent (EP1/2002), 52.1 percent (EP2/2002) which is the highest in the country. This represents a continuing serious shortage of qualified teachers.

Consequently, the Government of the Republic of Mozambique made a request to the Government

¹ First level (first to fifth grade) teacher training center: 3-year course for students completed 7year primary education

² Dual level (first to seventh grade) teacher training center: 2-year course for students completed 7year primary education and 3year secondary education

of Japan for grant aid cooperation on the project to rehabilitate the existing facilities of the Xai-Xai CFPP and construct necessary facilities in order to reorganize the CFPP into the Xai-Xai IMAP and thereby enlarge the capacity of the institution and improve the quality of primary school teacher training in the province.

In response to the request, the Government of Japan had a basic design study conducted in Mozambique from 19 February through 15 March, 2003. The basic design study team prepared a basic design of the facilities and equipment based on the results of the analysis of the collected data. From 2 June, through 7 June, 2003, the basic design study team explained the draft report of the basic design study to the representatives of the Government of the Republic of Mozambique.

The facilities plan, which concerns primarily rehabilitation of the existing facilities, is designed basically to create an educational environment as defined by the IMAP standard. The equipment plan is designed to procure a minimum number of necessary items of equipment --mainly those which are necessary for teaching and training students. As regards the items of equipment for use in training, it is assumed that they should be consistent with the actual conditions of practical training in music, art and craft, physical education and natural science. And those existing items of equipment which are still usable should be used after completion of the project.

In deciding the scale of each facility, the total number of students was set at 400 on the basis of the proper capacity of the classroom buildings which can be used after they are rehabilitated, and the necessary number of teachers at 30 on the basis of number of lectures as specified in the IMAP standard curriculum. The results of the inspection work to determine the degree of superannuating of the existing facilities, which was conducted as a part of the field study, show that all the existing facilities face such problems as leaks in the roofs, damages to doors and windows, and breakdowns of plumbing equipment. A structural abnormality was found only in one of the existing female accommodation buildings. It is, therefore, concluded that all the other existing facilities could be reused after they are rehabilitated.

On the other hand, some of the facilities are required to be included in the project in accordance with the IMAP standard. Thus, new facilities will be built if there are no available similar facilities on the site. It is, therefore, necessary to construct a laboratory building, a toilet building, a multi purpose building, female accommodation buildings, a guard building, a garage, a pump building and an electrical building.

Since the load bearing capacity at the underground structure of the existing buildings is unknown, therefore partition walls can be removed but additional partition cannot be built. The floor area of each building to be constructed is determined in accordance with the IMAP standard, and that of the electrical building in accordance with the standard of Mozambique Electric Power Public Corporation (EDM). The numbers of sanitary fixtures were determined in accordance with the National Plumbing Code (NPC) of the United States for the sake of rationality.

Shown below is the outline of the facility for this project.

Building	Room	Renovation	Construction	Total
Administration Building	Office(1)-(2),Head Master's Office, Pedagogical Head Office, Accounting Head Office, Toilets,	224.83 m ²		224.83 m ²
Teachers Building	Teacher's Room (1)-(4),Small Meeting Room, Teaching Material Room, Library, Book Storage, Clinic, Toilets	558.60 m ²	78.40 m ²	637.00 m ²
Classroom Building(1)	House Master Room, Classroom(1)-(4), Storage, Toilets	421.34 m ²	73.92 m ²	495.26 m ²
Classroom Building(2)	Classroom(5)-(8), Storage(1)-(2), Teaching Material Room, Custodial Room	510.86 m ²		510.86 m ²
Classroom Building(3)	Classroom(9)-(12), Storage(1)-(2), Teaching Material Room, Custodial Room	510.86 m ²		510.86 m ²
Laboratory Building	Musical Education Room, Preparation Room (1)-(3),Natural Science Education Room, Technology Education Room, Visual Education room		649.80 m ²	649.80 m ²
Teacher Support & Resource Center Building	Teacher Support & Resource Center Room, Teaching Material Production Room		108.24 m ²	108.24 m ²
Toilet Building	Male Toilet, Female Toilet		122.21 m ²	122.21 m ²
Multi Purpose Building	Multi Purpose Hall, Teacher's Room, Storage(1)-(3),Male Toilet, Female Toilet		577.44 m ²	577.44 m ²
Canteen Building	Canteen(1)-(2), Equipment Room(1)-(2), Storage(1), Wait on Room, Pantry, Food Storage(1)-(2), Toilet, Kitchen, Washing	334.26 m ²	167.81 m ²	502.07 m ²
Male Accommodation building (1)	Bedroom(1)-(8), Storage (1)-(2), Lavatory Room, Shower Room, Toilets	406.74 m ²	82.77 m ²	489.51 m ²
Male Accommodation Building (2)	Bedroom(1)-(8), Storage (1)-(2), Lavatory Room, Shower Room, Toilets	406.74 m ²	82.77 m ²	489.51 m ²
Female Accommodation Building (1)	Entrance Hall, Bedroom(1)-(9), Shower Room (1), Toilet (1)		714.53 m ²	714.53 m ²
Female Accommodation Building (2)	Bedroom(10)-(17), Shower Room (2), Toilet (2)		589.93 m ²	589.93 m ²
Teacher Accommodation (1)-(7)	Living Room, Bed room, Kitchen, Back Room, Toilet, Washing	639.39 m ²	840.00 m ²	1,479.39 m ²
Guard Building			8.00 m ²	8.00 m ²
Garage(1)		50.19 m ²		50.19 m ²
Garage(2)			42.75 m ²	42.75 m ²
Electrical Building (1)		24.00 m ²		24.00 m ²
Electrical Building (2)			3.36 m ²	3.36 m ²
Pump Building			35.00 m ²	35.00 m ²
Total Floor Area		4,087.81 m²	4,176.93 m²	8,264.74 m²

Since all items of equipment to be installed in an IMAP are procured in accordance with the IMAP standard list of items of equipment, the items of equipment to be procured under this project were selected on three basic criteria of selection--1) basic item for use in teaching and training, 2) item necessary for maintaining an educational institution, and 3) item which is consistent with the IMAP curriculum. The quantity of each item was determined after fully examining the use(s) of each item to ensure smooth teaching and training and then classifying individual items into four groups--student's desk/chair, general items for use in education, items for use in training and items of equipment for use in weather observation. The main items are as shown in the following table.

Building	Equipment
Administration Building	Personal Computer (2), Manual Typewriter (2), Work desk/chair
Teachers Building	Photocopier, Cassette tape recorder (3), 35mm camera set, Slide Projector, Overhead projector (2), Screen (3), TV set and video cassette deck, Boiling sterilizer, Consulting/first aid equipment, Work desk/chair
Classroom Buildings	Student's desk/chair, Black board
Laboratory Building	Educational equipment(mathematics • natural science • craft • art • music • physical), laboratory table, desk/chair
Teacher Support and Resource Center Building	Personal computer system(2), Photocopier, Binding machine, Work desk/chair
Multi Purpose Building	Physical education equipment, Storage cabinet, Rack, Stackable chair(100),
Canteen Building	Canteen table, Canteen seat(200), Storage cabinet, Storage rack(6), Wagon
Male/Female Accommodation Buildings	Bed(double decker)(200), Mattress (400), Locker(68), Table(33), Bench seat(66)
Garage(1)	Mini-bus

Judging from the contents and scale of the project, the actual situation of the local construction industry, and the budgetary system of the both governments, the project will take 5 months for the detail design work and tender procedure, 12 months for the construction work. Thus, the total period to complete the project will be 17months. And the project costs are estimated as Japanese Yen 874.5 million. (the costs to be borne by Japanese Government are Japanese Yen 758.7 million, the costs to be borne by Mozambique Government are Japanese Yen 115.8 million).

When this project is implemented, it is expected the following improvement and positive effects. At the same time, indirect beneficiaries will be 380,000 primary schoolchildren in the Gaza Province.

- At the establishment of IMAP in Gaza Province, the number of annual graduates in teacher training institute will be increased from 100 in the year 2002 to 200 in the year 2008.
- At the establishment of IMAP in Gaza Province, the number of annual graduates in IMAP will be increased from 0 in the year 2002 to 200 in the year 2008.

- In Gaza Province, the number of primary school pupils per qualified teacher (CFPP and IMAP) will be decreased from 123.9(in the year 2002) to 85.8 (in the year 2008).
- In Gaza Province, percentage of unqualified teachers for primary school will be decreased from 52.2% (in the year 2002) to 33.4% (in the year 2008).
- Through the renovation of the existing facilities and the construction of necessary facilities and the procurement of equipment, the educational and living environment of the Xai-Xai CFPP will be improved as a boarding school.
- Through the procurement of the necessary training equipment, training will be carried out in accordance with the IMAP standard curriculum.

The project will contribute in the field of education and bring benefits to the people in Mozambique. Therefore, it is expected that the grant aid cooperation for the project will be extended by the Government of Japan.

After completion of the project, estimated increment of personnel expenses to be born by Mozambique side are estimated as 1,794,000,000MT (8,970,000 Japanese Yen) per year and maintenance and operation expenses to be born by Mozambique side are estimated as 1,300,000,000MT (6,500,000 Japanese Yen) per year. The budgetary allocation for the IMAPs is considerate and the budget for the education sector is taking a good part of the National budget. Then, it can be said that the appropriation of the necessary budget for maintenance and operation will be secured for the Xai-Xai IMAP.

It is essential for the Government of Mozambique to secure the budget for operation and maintenance of the facilities/equipment sustainedly and sufficiently and to continue supporting the Directorate of Education, Gaza Province.

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Chapter 1 Background of the Project

CHAPTER 1. BACKGROUND OF THE PROJECT

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Consequently, the Government of the Republic of Mozambique made a request to the Government of Japan for grant aid cooperation on the project to rehabilitate the existing facilities of the Xai-Xai CFPP and

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construct necessary facilities in order to reorganize the CFPP into the Xai-Xai IMAP and thereby improve the quality of primary school teacher training in the province.

Outline of the request made by the Government of Mozambique is as shown below;

(1) Facilities

Administration Building, Classrooms, Laboratory, Library, Kitchen, Canteen, Laundry, Multi Purpose Hall, Female Accommodation, Male Accommodation, Teacher Accommodation, Teacher Support and Resource Center, Sport Field, Sewer System, Drainage, Water Tank, Exterior Lighting, Grassing and Landscaping.

(2) Equipment

Educational Equipment (Chemistry, Biology, Physics, Art, Music, Physical Education, Homemaking) AV Equipment, Vehicle and Fittings.