

(9) Equipment planning

After detailed study based on the Basic Design, contents of planned equipment is listed on Table 2-29 “Planned Equipment List”. The usage and general short specification on each equipment are summarized on the Table 2-30 “The Purpose & Specification of Equipment”. All planned equipment will be installed in the new facility. The place where each equipment installed is tabulated on Table 2-29 “Planned Equipment List”.

Table 2-29 Planned Equipment List

		Planned Q'ty	Bulk Store	Issuing Store	Receiving Area	Receiving Office	Issuing Office	Packing Area	Dispatching Area	Holding Area	Dispatching Office	Chief Pharmacist Office	Assistant Chief Pharmacist Office	Procurement Office	BED Office	IRA Office	Administration Office	Computer Room	BPS Office	Warehouse Manager Office	Conference Room	Library	Garage
1	Personal Computer	8units				1	1				1	1		1	1			1	1				
2	File Server	1unit																1					
3	Printer (Dot-matrix type)	4units					1				1			1					1				
4	Printer (Laser type)	3units				1						1						1					
5	LAN system	1unit																1					
6	FAX	1unit																1					
7	Cabinet	16units				1	1				1	1	1	1	1	1	2	1	2	1		2	
8	File Cabinet	20units				1	3				2	1	1	2	2	2	3		2	1			
9	Photocopy machine	1unit																1					
10	Cart	2units		2																			
11	Cage Cart	20units								20													
12	Power Hand Lift	2units	2																				
13	Medical Refrigerator	1unit							1														
14	Cooling Box (L)	4units							4														
15	Cooling Box (S)	5units							5														
16	Truck (7.5t)	1unit																					1
17	Truck (2t)	1unit																					1
18	Electrical Fork Lift	2units	2																				
19	Picking Cart	10units							10														
20	Roller Conveyer (Movable type)	2units			1				1														
21	Working Table	2units						2															
22	Desk & Chair Set	37sets				3	3				5	1	1	4	4	5	7		3	1			
23	Pallet	1,380pieces	1,380																				
24	Slide Projector	1unit																			1		
25	Video Presenter & Projector	1set																			1		
26	TV/VTR Set	1set																			1		

Table 2-30 The Purpose &amp; Specification of Equipment

No.	Description	Q'ty	Usage	Specification
1	Personal Computer	8	For use of inventory management	CPU : P 866MHz or equivalent, HDD : 30GB, RAM : 128MB Monitor : 17"XGA
2	File Server	1	For use of data management	CPU : P 1GHz or equivalent, HDD : 60GB(RAID 5+0) RAM : 1GB Monitor : 17"XGA
3	Printer (Dot-matrix type)	4	For use of printing slips	Max. Printing Paper Size: A4, Bin Nos.: 24bin
4	Printer (Laser type)	3	For use of printing documents	Type: monochrome Max. Paper Size: A4 Printing Speed : 16PPM or more
5	LAN System	1	Network among the PCs	Composition : 24 port HUB, LAN cable X 1set, LAN connector x 30 pis.
6	FAX	1	For use of communication with clients & others	Type: Table top Laser type Paper Size: A4
7	Cabinet	16	For use of keeping documents	Dimension: approx. 1,200(W) x 450(D) x 1,800(H)mm, Type: Upper Glass Slide Door, Lower Steel Slide Door
8	File Cabinet	20	For use of keeping files	Type: 4 Drawer type Max. Paper Size: A4
9	Photocopy Machine	1	For use of documents duplication	Type: Table Top type Max. Copy Paper Size: A3, Copy Speed : 22PPM( A4) or more
10	Cart	2	For use of moving goods in the warehouse	Type: Plat form type Max. Loading Cap.: approx. 350kg
11	Cage Cart	20	For use of temporally storage at shipmenting area	Type: Folding type Dimension: approx. 1,100(W) x 800(D) x 1,700(H)mm
12	Hand Power Lift	2	For use of lifting heavy items	Type: Hydraulic type Max. Loading Capacity: 1.5t, Max. Lifting Height: approx. 500mm
13	Medical Refrigerator	1	For use of temporally storage of refrigerated drugs at shipment dep.	Type: Front Slide Glass Door type Capacity: approx. 980 litter
14	Cooling Box (L)	4	For use of transporting drugs	Type: Ice Pack type Capacity: approx. 20 litter
15	Cooling Box (S)	5	ditto	Type: Ice Pack type Capacity: approx. 9 litter
16	Truck (7.5t)	1	Transfer drugs for customer	Engine Type: Deasel, 4x2, Transmission : Manual, Max. Loading Capacity: approx. 7.5t, Loading Space: Aluminum Canopy
17	Truck (2t)	1	ditto	Engine Type: Deasel, 4x2, Transmission : Manual, Max. Loading Capacity: approx. 2t, Loading Space: Aluminum Canopy
18	Electric Fork Lift	2	For use of lifting pellet	Type: Reach Standing type Max. Loading Capacity: 1.5t or more, Max. Lifting Height: 5m or more
19	Picking Cart	10	A cart with selves. Use for picking ordered item from shelf	Type: Steel made 2 shelves type Dimension: approx. 500(W) x 1,000(D) x 900(H)mm
20	Roller Conveyer (Movable type)	2	For use of transferring drugs at receiving & shipping dep.	Type: Manual, Movable type Max. Loading Capacity: 100kg or more, Length of Conover: approx. 15,000mm, Width of Conover: approx. 670mm
21	Working Table	2	For use of sorting out drugs	Dimension: approx. 3,000(W) x 1,500(D) x 750(H)mm
22	Desk & Chair Set	37	For use of administration area	Dimension: approx. 1,500(W) x 800(D) x 750(H)mm, Chair: with Caster
23	Pallet	1,380	Pellet to stock drugs	Dimension: approx. 1,100(W) x 1,100(D) x 145(H)mm, Material : Plastic
24	Slide Projector	1	For presentation purpose at conference, meeting & others	Type: Portable type Lamp: 250W Halogen Lamp or equivalent, Slide Holder: Circular type
25	Video Presenter & Projector Set	1	ditto	Video Projector: TFT LCD type XGA 750ANSI lumen or more Visual Presenter: CCD type 450TV line or more
26	TV/VTR Set	1	ditto	TV: CRT multi system, 29" VTR: VHS multi system

(10) Soft Component

1) Dispatch schedule and work contents

( Logistics Management Engineer )

- will visit site at the start of construction. survey and discuss with counterpart in order to formulate detailed operational program
- analyze at home office and formulate the operation program and support soft components.
- explain a operational program at site and revise if necessary as the result of discussion with counter parts.
- formulate a moving plan from old to new facility
- training according to new program until it is operable by themselves.

( Software Engineer for Inventory Control )

- will visit site at the start of construction. survey and collect the data in order to develop soft program which is most suited for the operation
- analyze at home office and formulate the soft program
- explain a soft program at site and revise if necessary as the result of discussion with counter parts.
- During installation of computer, software will be installed in the computer.  
If necessary, adjustment and modification to be made.
- training on how to operate a soft program must be conducted

2) Products

Each expert shall prepare followings

( Logistics Management Engineer )

- control manual based on the new environment





( Software Engineer for Inventory Control )

- Software program
- Users operation manual

3) Schedule

Implementation schedule for expert is shown in the next page.

Table 2-31 Implementation Schedule of Soft Component

Responsibility	level	2002	2003	2004	M/M (Total)
Engineer for Distribution Control	3	 1.0 1.5	 0.5 4.83		7.83
Engineer for Developing Inventory Control Software	3	 0.9 2.6	 0.5 1.73		5.73

## Chapter 3    Implementation Plan

### 3-1    Implementation Plan

#### 3-1-1    Implementation Concept

#### 3-1-2    Implementation Conditions

#### 3-1-3    Scope of Works

#### 3-1-4    Consultant Supervision

#### 3-1-5    Procurement Plan

#### 3-1-6    Soft Component

#### 3-1-7    Implementation Schedule

### 3-2    Project Cost Estimation

#### 3-2-1    Obligations of Fiji Government

### 3-3    Operation and Management Cost

## Chapter 3 Implementation Plan

### 3-1 Implementation Plan

#### 3-1-1 Implementation Concept

The elements of this project include facility construction work, supply and installation of equipment, soft component with respect to the physical distribution control system, etc., and the scope of cooperation in the project by the Japanese side will be implemented in a framework of Japanese grant aid.

Implementation of this plan shall be initiated officially only after it is approved by governments of both countries and the exchange of notes (E/N) is signed. Immediately after signing of the E/N, the Fiji organization which is responsible for implementation of this project and the Japanese consultant firm shall enter a contract and initiate the detail design work of the project. When the design is completed, the Japanese construction companies and equipment supply and installation companies participate in the tender for their works. The successful tenderers for construction of facilities and supply and installation of the equipment proceed to their work.

The basic principles and items to be considered for implementation of this project are described below.

#### (1) Executing organization

The implementing entity in the project is Fiji's Ministry of Health and Social Welfare, and Fiji Pharmaceutical Services will be responsible for operation and maintenance of the facilities constructed by Japan and the physical distribution control system based on the equipment and soft component furnished by Japan.

#### (2) Consultant

After signing of the E/N, the Japanese consultant firm and the Fiji Government enter a consultant contract according to the formal procedure for the Grant Aid System of Japanese Government. This consultant firm executes the following activities under this Contract.

- 1) Detail design of the project: To prepare the design document (specifications and technical reference materials on the facilities and equipment included in the project).
- 2) Tender: To cooperate in selection of the construction firm(s) and equipment supply and installation firm(s) through the tender and in transaction of procedures required under the contract.
- 3) Construction supervision: To supervise so that instructions for construction of facilities, delivery and installation of the equipment, operation and maintenance are given properly.

- 4) Soft component: Simultaneously with the working design work, design of an optimum physical distribution control system and commencement of development of inventory control software as well as carrying out of program installation at the time of equipment installation. Provision of guidance for operation of the new system and developed programs after handing over of the facilities and equipment

In the detail design stage, the consultant determines the construction plan and the equipment supply plan in detail based on the basic design investigation of the project, reviews the equipment, and prepares the tender document consisting of specifications of the project plan, tender terms and conditions, draft of the contracts required for the construction work and procurement of equipment, and their estimated costs as well.

Cooperation to the tender procedure means to observe selection of the construction firm(s) and the equipment supply and installation firm(s) through the tender and to help them transact the formal procedures required for execution of their contracts and preparation of the reports to be submitted to the Japanese Government/

Construction supervision means to check whether or not each work item done by the construction firm and the equipment supply and installation firm as specified in each contract and to confirm that the contents of their contracts are executed appropriately. In addition, to promote smooth implementation of the project, the consultant shall, in the neutral position, provide related parties with advise and guidance and serve as a coordinator among them.

Listed below are major items in the scope of the construction supervision work.

- 1) Procedures required for verification and approval of the work implementation plan, implementation drawings, equipment specifications and other document submitted by the construction firm(s) and equipment supply and installation firm(s).
- 2) Inspection and approval prior to shipment of the construction materials, supply, installation and handling of the equipment.
- 3) Confirmation of instructions for the construction machines and materials, supply, installation and handling of the equipment.
- 4) Checking and reporting the progress of the construction.
- 5) Observation of handing over the completed facilities and equipment.

What is meant by soft component is the minimum technical cooperation needed for smooth startup of the other side's project to be implemented making use of the facilities built and equipment procured with the Japanese grant aid. Such soft component is for smooth transition to the new physical distribution and inventory control system to be introduced in connection with relocation of the pharmaceuticals supply center. Specifically, such soft component is planned in the following three areas:

- 1) Logistics Management Guidance : Technical guidance in building introduction and operation of an optimum physical distribution and inventory control system.
- 2) Inventory Control Software Development : Development of optimum inventory control software and guidance in operation and use thereof.

The consultant shall execute above items and report to the related authorities of the Japanese Government about the progress of this project, the payment procedure and handing over of the completed facilities.

(3) Construction firm(s) and equipment supply and installation firm(s)

The construction firm(s) and the equipment procurement firm(s) shall be selected through the open tender for the Japanese corporations that are qualified to the specific requirements. In principle, the lowest Health and Social welfare.

The construction firm(s) and the equipment supply and installation firm(s) shall construct the facilities, supply, deliver and install necessary construction materials and equipment according to the terms and provisions of contracts, and provide technical guidance for operation, maintenance and management of the installed equipment to the Fiji side.

Furthermore, besides providing guidance for securing a system of supply by suppliers, manufacturers and agencies of spare parts and consumables needed for the different equipment for continuous use of it after it is provided, providing of support to make it possible to receive services such as gratis repair during the period of guarantee, paid repair after the period of guarantee, technical guidance, etc.



#### (4) Japan International Cooperation Agency

The Grant Aid System Division of Japan International Cooperation Agency shall give due guidance to the consultant, construction firm(s) and equipment supply and installation firm(s) so that the project is implemented in conformity with the Grant Aid System. Also, it shall hold consultations with the executing organizations of this project as necessary for untroubled implementation of the project.

#### (5) Preparation for implementation plan

The representatives of the executing organization on the Fiji side and the consultant shall review the implementation plan during the implementation design period. They shall make clear the scopes of the construction work Japan and Fiji take charge, confirm through consultations the starting time and the method of each work and discuss so that all the works carried out smoothly according to the implementation schedule in this report.

In particular, the Fiji side has to be sure to carry out, at its own expense before commencement of the facility construction work, not only the work for provision of the road in front of the construction site and a drainage channel but also accomplishment of linkage of the site and the road through installation of a sturdy structure that makes it possible for heavy vehicles to access the site from the latter.

### 3-1-2 Implementation Conditions

Described below are those items to be noted for implementation of the project. They should be fully taken into consideration when making the implementation plan.

#### (1) Schedule Management

In order to avoid the rainy season the foundation work will be started, if at all possible, before November. In the work scheduling adequate consideration will also be given to the fact that if the rainy season is avoided for the finishing work, that will ensure better quality thereof.

#### (2) Sending of technicians for equipment installation

It is extremely important to impart knowledge and skills regarding appropriate operation and maintenance of the equipment so as to contribute to pharmaceuticals physical distribution work through continuous proper operation of the supplied equipment after implementation of the project. That being the case, technicians who are thoroughly familiar with the operation of the different equipment will be selected as the equipment installation technicians, and sufficient time will be allotted for them to explain operation thereof (operation techniques, simple repair techniques, inspection methods, etc.) and to make sure that those concerned on the receiving side acquire sufficient understanding concerning its operation and maintenance.

(3) Sending of technicians for the soft component aspect

Since the goal of the soft component is nothing less than support of the other side's self-reliance, the technicians sent for that purpose will formulate support implementation plans that take into full account the degree of acquisition of the necessary knowledge and skills on the part of the technicians on the other side.

3-1-3 Scopes of Works

It is mutual cooperation between Japan and Fiji that makes implementation of this project successful. When this project is implemented under the Japan's Grand Aid, it is advisable that the governments of Japan and Fiji undertake the scopes of works as described below respectively.

(1) Undertakings borne by Japanese Government

Japanese Government undertakes consultation of this project and the works related to construction of the facilities, procurement and installation of equipment as described below.

1) Consultation

To prepare implementation design document for the facilities and equipment subject for this project and their tender terms document.

To cooperate in selecting the construction firm(s), and equipment supply and installation firm(s) and executing contracts for the project.

To supervise the instructions for the construction of the facilities and delivery, installation, operation and maintenance of the equipment.

Building of the physical distribution control system and provision of soft component concerning operation thereof.

Development of inventory control software and provision of soft component concerning operation and use thereof.

2) Construction of facilities, supply and installation of equipment

To construct facilities subject to this project.

To procure construction materials and equipment subject to this plan, transport and deliver them to the site.

To instruct installation of the equipment subject to this project, conduct a trial run and make adjustments.

To explain and instruct operation and maintenance methods for the equipment subject to this project.

(2) Work for which the Fiji Government is responsible

The Fiji Government is to bear the cost of, and implement, the following work concerning, among other things, preparation of the facility construction site,

- 1) Preparation of the construction site  
Weeding and other ground preparation work at the scheduled construction site.  
Removal of obstacles to the facility construction existing both above and below the ground on the scheduled construction site.
- 2) Outdoor work  
Boundary fence work  
Security Gate  
Landscape planting, etc.  
Front access road work. (for heavy vehicles)
- 3) To purchase furniture and equipment as well as transfer of the existing machines, furniture and equipment.
- 4) To make measures so that Japanese firms will be exempted from the tax, local tax and various financial loads imposed by Fiji Government on purchase of goods and provision of services executed according to the formally approved contracts.
- 5) To provide measures to facilitate speedy custom clearance and surface transportation procedure for the equipment and materials to be exported from Japan and other foreign countries according to the approved contracts.
- 6) To provide measures to facilitate procedures for those Japanese who enter Fiji and stay here to carry out their roles for the project.
- 7) To issue approvals and permissions required for implementation of this project.
- 8) To pay all the necessary expenses other than those borne by Japanese Government.

#### 3-1-4 Consultant Supervision

##### (1) Implementation supervision policy

Under the policy of the Grant Aid System of Japanese Government, the consultant forms, based on the concept of the basic design, a team that is responsible to execute the project including preparation of the implementation design to achieve smooth and successful implementation. The implementation supervision policy for this project is outlined below.

- 1) To keep close contact with those who are in charge of the project representing related organizations of both countries so that construction of the facilities and installation of equipment will be completed without delay.
- 2) To provide quick and appropriate advice and suggestions from the neutral standpoint to the construction firm, equipment supply and installation firm and others concerned.
- 3) Provision of appropriate guidance and suggestions regarding suitable equipment layout and adjustment of tie-in with facilities as well as operation and management after handing over. To confirm that implementation has been completed and terms of each contract are fulfilled, to observe handing over the facilities and equipment and obtain an approval of receipt from Fiji side.

(2) Construction supervision plan

As the types of construction works involved in this project are versatile, a resident supervisor (in charge of construction) is appointed and the following engineers are dispatched from time to time, keeping step with the progress of the construction works. The technicians sent for the physical distribution control guidance aspect of soft component will stay for a period of 5 months after handing over of the facility in order to be able to cover both commencement of operation of the new facility and the work there throughout the year.

- Manager of general affairs (Overall coordination, process control)
- Engineer in charge of construction (Confirmation of construction methods, design concept, construction drawings, specifications of materials, etc.)
- Engineer in charge of structure (Verification of the ground conditions, foundation work. framework)
- Engineer in charge of electrical installation (Power supply & distribution system, electric service and substation, etc.)
- Engineer in charge of mechanical installation (Utility supply and processing system, air conditioning, water supply, drainage and hygiene system, etc.)
- Engineer in charge of equipment (Instruction for equipment installation, adjustment with the facility, confirmation of operation instructions, etc.)
- Soft component (development of inventory control software)
- Soft component (building of physical control system and provision of guidance concerning operation thereof)

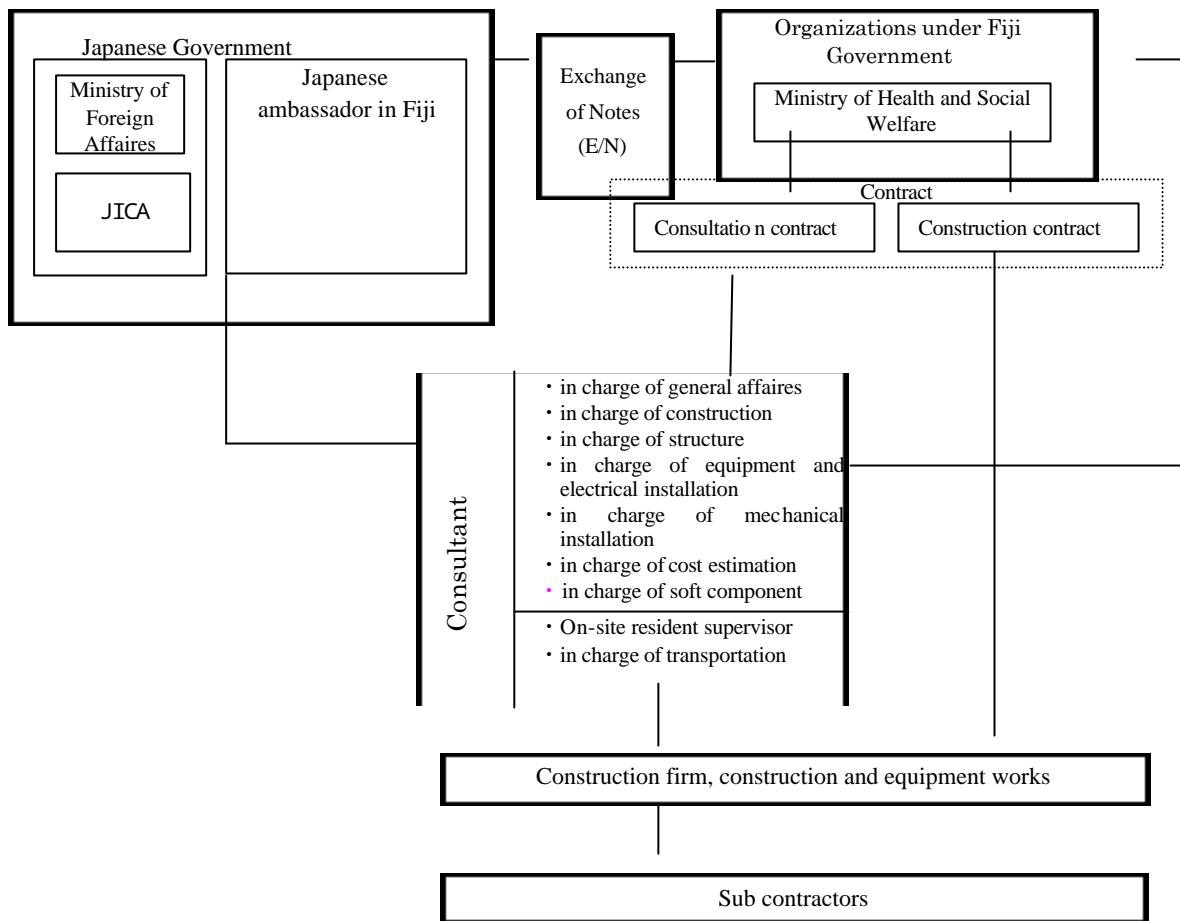


Figure 3-1 Construction Administration System

### 3-1-5 Procurement Plan

#### (1) Construction material

In principle, construction materials are procured locally. However, Fiji products among them are sand and gravel as solidification material for concrete, bricks, wood, concrete products, logs for support and other than these are imported. Those item that are difficult to procure and those that are necessary to assure the required quality and level for the project are procured from Japan, Australia and New Zealand. The table below shows how each construction material is procured.

Table 3-1 Procurement of construction and equipment materials

Material	Procurement Plan			Remarks
	On-spot	Japan	Third Countries	
(Construction)				
1. Solidification material for concrete (gravel, sand)				
2. Cement				
3. Reinforcing rods				
4. Steel-frame structure				
5. Concrete blocks				
6. Lumber				
7. Corrugated Sheet Metal				
8. Tiles for floor and wall				
9. Wooden fittings				
10. Metal fittings				On-spot knock-down products
11. Fixtures for fittings				
12. Paint (general material)				
13. Paint for protection against rust				
14. Glass				
15. Concrete products				
16. Racks				
17. PVC cable tubes				
18. Wires, cables				
19. Control panels				
20. Transformer				
21. Special control panels				
22. Lighting equipment				
23. Generator equipment				
24. Telephone system equipment				
25. Weak electricity equipment				
26. Sanitary earthen ware				
27. Pumps				
28. Air-conditioning system				
29. Fans				
30. Refrigerator				
31. FRP water storage tank				
32. Septic tank equipment				
33. Piping				
34. Filters				
36. Hose reel (for fire hose)				

(2) Equipment

Basically, the equipment is to be procured locally.

(3) Method of transportation and place of delivery

Regarding transportation of the equipment and materials, basically the construction materials are to be shipped by maritime transportation in wooden crate packing or containers, and the equipment by maritime transportation in containers. There is liner service from Japan to Fiji's main cargo receiving port, Suva, the voyage taking 23 weeks. Overland transportation is necessary from the port of Suva to the site, but there is no problem regarding that since the condition of the roads is good. The procurement plans will also take about 1 week into account for unloading and customs clearance and other formalities so that there will be plenty of time leeway.

3-1-6 Soft Component

The work content of the soft component is as follows:

[ Logistics Management Engineer ]

- (1) Building of a suitable inventory control system that is perfectly geared to the actual work at the center
- (2) Guidance for effective operation of the new control system that has been built
- (3) Control and guidance of moving from the existing facility to the new facility

[ Software Engineer for Inventory Control ]

- (1) Development of appropriate inventory control software perfectly geared to the actual work at the new center
- (2) Explanation and guidance of concerning how to use the developed software

### 3-1-7 Implementation Schedule

#### (1) Project implementation schedule

Implementation is carried out in two main stages. One is the detail design stage in which the tender document is prepared and the main stage in which the tender and construction are executed. After signing of the Exchange of Notes (E/N) for the detail design stage, the tender document is prepared and after signing the T/N for the main stage, construction and equipment procurement works are carried out. The soft component for operation and control of physical distribution of pharmaceuticals will be provided to coincide with completion of facility construction.

The table below shows the specific time schedule for each period.

Table 3-2 Implementation Schedule

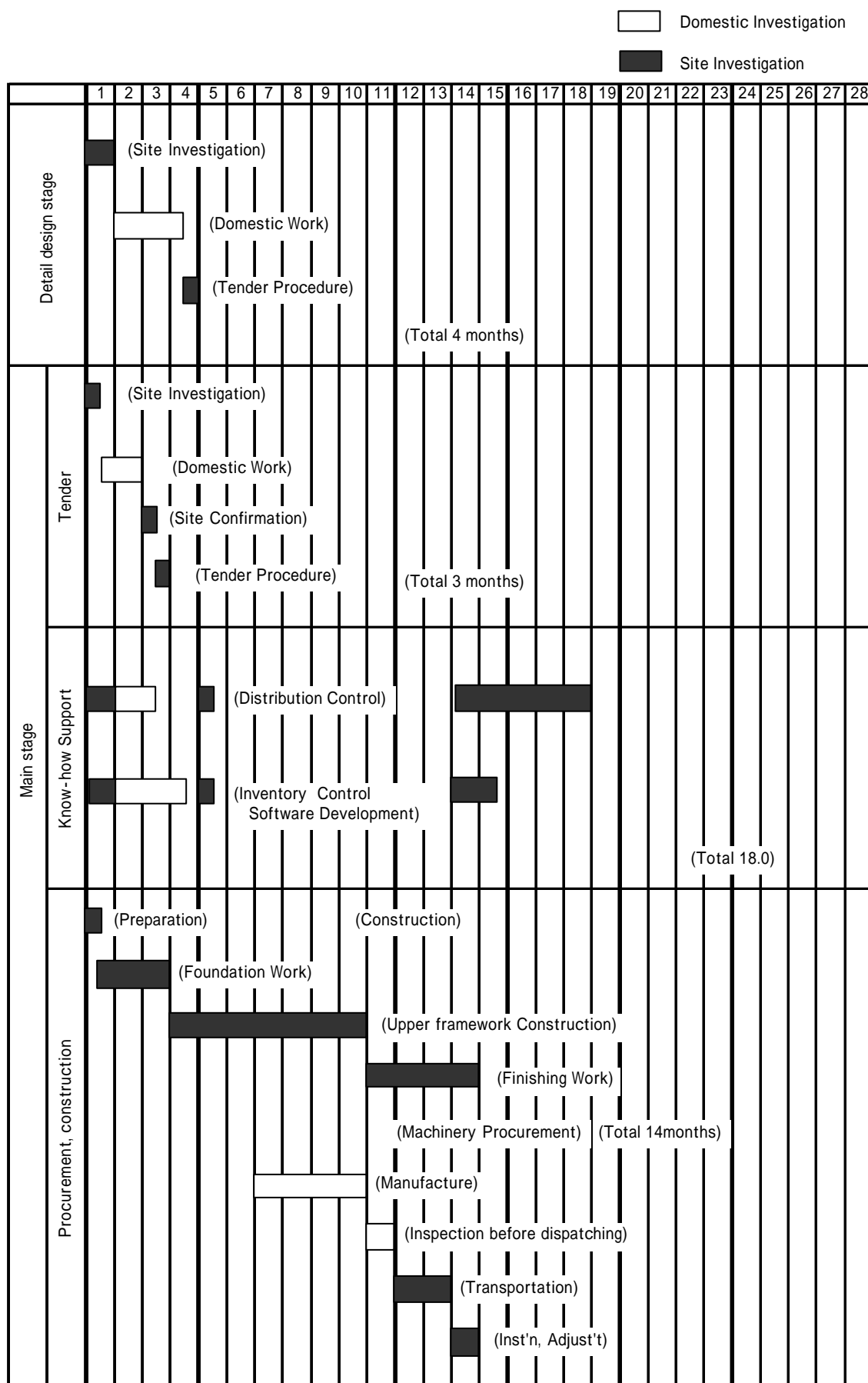
	Detail design stage	Main stage
Detail design period	4.00 months	---
Tender period		3.00 months
Construction, Equipment procurement period		14.00 months
Soft component		5.00 months (Excluding overlapping 13 months)
Total	4.00 months	22.00 months

#### (2) Project implementation Plan

The table below shows Project Implementation Plan.



Table 3-3 Implementation Schedule



## 3-2 Project Cost Estimation

### 3-2-1 Obligations of Fiji Government

#### (1) Obligations of Fiji Government

Undertakings borne by Fiji Government are described below. The estimated expenses are expected to be 228,300 F\$ (11,816,000 ¥).

Table 3-4 Undertakings borne by Fiji Government

Scope of works	Amount (F\$)	Amount (1000 ¥)
Preparation of construction site	2,500	
Outdoor work		
Boundary fence work	90,000	
Security Gate	27,000	
Landscape planting, etc.	25,700	
Front access road work. (for heavy vehicles)	34,800	
Moving expenses	40,300	
Expense of purchase of furniture and fittings	8,000	
Total	228,300	11,816

Existing furniture and fittings are to be moved to make use of them, which cause 20% increase in moving expenses. The cost for connection the infrastructures such as electricity, telephone, water supply, sewerage, etc. is not included.

#### (2) Cost Estimation

##### 1) Cost Estimation

April, 2001

##### 2) Exchange rate

US\$=117.65¥

FJ \$ 1 = 0.44US\$

F\$1 = 51.76Yen

##### 3) Implementation period

Implementation period and construction period are as described in Table (2) Project Implementation Plan 2-1-6 Project Implementation Schedule.

##### 4) Other

Implementation is to be held in accordance with the Grant Aid System.

### 3-3 Operation and Maintenance Cost

#### (1) Maintenance and Administration Organization

##### 1) Maintenance system and methods

###### For facilities

The PWD, which is in charge of maintenance of all government facilities, will do all of the facility maintenance work except for everyday janitor work. Periodical inspections will be carried out, and if any trouble is noted, the PWD technician in question will report the fact to the FPSC for advice on how to deal with the problem, and the PWD will carry out the instructions that the FPSC gives it.

As the entity responsible for maintenance after completion of the facility, the PWD will give the counterpart on the Fiji side advice starting from the planning stage of the project, and in the implementation stage it will give direct advice to the consultant as the entity responsible for technical matters on the Fiji side.

###### For vehicles

The facility presently has three vehicles, including an ordinary car and a transport truck. They are regularly taken to a garage for routine checks and maintenance. Since in Fiji there are agencies of automobile manufacturers of different countries that have maintenance and repair garages, including those of Japanese car makers such as Toyota, Nissan and Isuzu, there is no problem regarding the vehicle maintenance situation.

Since detailed records have been kept of how the existing vehicles have been operated and maintained, it is considered that there is no problem at all regarding vehicle maintenance capabilities.

###### For equipment

Of the equipment to be supplied in this project, that which will require maintenance is the computers, copying machines and other office equipment, pharmaceutical refrigerators, fork lifts, trucks and audio-visual equipment. Except for the fork lifts and audio-visual equipment, which will be newly introduced, that equipment is already owned by the facility and utilized on an everyday basis. That being the case, there is considered to be no problem at all as regards operation and maintenance, since these are ordinarily common equipments. Nor should there be any big problem in maintenance of the audio-visual equipment since many of the employees of the facility have experience in use thereof. As for the fork lifts, besides adequate explanation of how to operate them at the time of introduction, there will be maintenance and repair work based on support provided by the local agencies of manufacturers. Furthermore, such equipment is generally available commercially in Fiji, and there are several manufacturers' agencies with repair garages. That being the case, it is not considered that there will be any particular problems concerning operation and maintenance of such equipment. As for procurement plans, basically it is intended to

procure all of the equipment locally, and the manufacturers' agencies can be relied on in that respect.

On things like inventory control software

Regarding inventory control software, there can be expected to be frequent occurrence of need to revise master tables, printed forms, etc. along with change in content of pharmaceuticals handled, change in suppliers and other changes in business content. Regarding such revision, it is considered that basic revision can be coped with by the other side's computer control technicians on the basis of software introduction training included in the soft component. Furthermore, in the local survey it has been confirmed that there are stores specializing in computers at several places in Fiji that have system engineers on their staffs, and because of that in case of occurrence of need for drastic revision by specialists, it should be possible to cope with the situation on the basis of utilization of the services of the software technicians of those stores. Moreover, if necessary, it would also be possible to enlist the help of technicians sent to Fiji in the framework of soft component.

## 2) Maintenance Costs

For facilities

As indicated below it is estimated that the FPSC's lighting, heating and similar costs and facility maintenance costs resulting from implementation of the project will be 120,400 F\$ (6,231,000 yen).

Table 3-5 Lighting, Heating and Similar Costs and Facility Maintenance Costs

Item	Amount
• Electricity charges	85,950 F\$
• Water Supply charges	5,170 F\$
• Telephone charges	18,340 F\$
• Facility maintenance cost	10,630 F\$
Total	120,400 F\$ ( = 6,231,000 yen )

For equipment

It is estimated that the FPSC's annual operation costs for the equipment supplied in the project will be approximately 29,760 FJ\$ (1,595,000 yen), not including depreciation or electricity. The following table gives details on such estimated costs.

Table 3-6 Operation Cost of the Procured Equipment

No.	Designation of the equipment	Quantity	Monthly operation cost per unit	Annual operation cost	Assumed conditions
1	Printers (dot matrix type)	4	F\$38	F\$1,824	Ink ribbon replaced once a month
2	Printers (laser type)	3	F\$280	F\$5,040	Ink toner replaced once every 2 months
3	FAX	1	F\$240	F\$1,440	Monthly cost of gasoline and maintenance
4	Trucks	2	F\$864	F\$20,736	Monthly cost of gasoline and maintenance
5	Fork lifts	2	F\$60	F\$720	Average monthly cost of electricity
Total				F\$29,760	(1,595,000 yen)

For things like inventory control software

Since, basically, the necessary cost of maintenance of inventory control software is included in the personnel costs of the facility, implementation of the project will not result in occurrence of a new cost burden.

## (2) Analysis of FPS Finances

We have analyzed the increase in maintenance costs, lighting, heating and similar costs, etc. that will result from introduction of new equipment that will be needed in the first 10-year period after opening of the new FPS (2004-2013), doing so on the basis of FPS figures for cost of purchase of pharmaceuticals and operating costs in 1998-2000.

### 1) Operating and maintenance costs of the present FPS

The figures for personnel costs, maintenance costs, etc. in operation of FPS in the period 1998-2000 are given below. The cost of purchasing pharmaceuticals accounts for more than 90% of the total, the next biggest items being personnel costs and lighting, heating and similar costs. As one can see, there has not been very much change in the breakdown of expenditures over the last three years.

Table 3-7 Breakdown of FPS Expenses (in FJ\$) and Percentages (%) of Total Operating Cost Represented by Those Figures

		1998	1999	2000
Cost of purchasing pharmaceuticals		10,567,733 93.80%	10,178,921 93.20%	12,093,878 93.90%
Expenses	Personnel costs	504,296 4.50%	530,052 4.90%	586,012 4.50%
	Communications and transportation costs	37,039 0.30%	42,872 0.40%	40,478 0.30%
	Maintenance costs	4,587 0.00%	8,074 0.10%	22,220 0.20%
	Lighting, heating and similar costs	23,383 0.20%	28,346 0.30%	33,732 0.30%
	Other costs	127,867 1.10%	130,076 1.20%	106,907 0.80%
Total operating cost		11,264,906 100%	10,918,341 100%	12,883,228 100%

Source: Based on the material supplied by FPS.

## 2) Operating Cost of the New FPS

The operating cost of the new FPS for the 10-year period after it is established (2004-2013) has been estimated on the basis of the conditions indicated below and indicated in Table 3-8, "Projection FPS Operating Cost".

### Preconditions:

Rate of rise in prices : 4.0% (1999)  
Rate of increase in population : 0.9% (1993-99)

### Items of operating cost and the assumed conditions :

Personnel cost	: part corresponding to rate of rise in prices	4.0%
	: Personnel reduction effect of rationalization of operations (5-year period after completion of construction)	2.2% Note 1
Cost of purchasing pharmaceuticals	: Part of increase in purchasing cost due to coming to warehouse in installments (after completion of construction)	0.07% Note 2
	: Rate of increase in population	0.9%
Maintenance costs	: Total of rate of rise in prices and rate of increase in population	4.9%
Communications and transportation costs	: Total of rate of rise in prices and rate of increase in population	4.9%
Lighting, heating and similar costs	: Total of rate of rise in prices and rate of increase in population	4.9%
Other expenditures:	: Total of rate of rise in prices and rate of increase in population	4.9%

Note 1: The plan for allocation of personnel at the new pharmaceuticals warehouse calls for a 11% reduction in personnel costs. That is based on the assumption of gradual reduction of personnel by 2.2% a year over the 5-year period starting from commencement of construction.

Note 2: On the basis of the estimates of the plan for installment delivery of Paracetamol 500 mg to the warehouse the percentage increase in purchase price in the case of delivery in 2 installments a year and 6 installments a year instead of 1 delivery a year has been determined to be 0.73% and 2.20%, respectively. The items considered are 58 of the total of 2,000, and the effect on expenditures for purchase of pharmaceuticals is only a 0.07% increase.

Table 3-8 Projections of FPS Operating Costs

Classification		2000 (Results)		2001		2002*-1		2003		2004*-2		2005		2006		2007
		Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount
		FJ\$	(% )	FJ\$	(%)	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$
【FPS Management Costs】																
Medications Purchase Expenses		12,093,878.03	1.0097	12,211,188.65	1.0097	12,329,637.18	1.0097	12,449,234.66	1.0097	12,569,992.24	1.0097	12,691,921.16	1.0097	12,815,032.80	1.0097	12,939,338.62
Expenses	Personnel Costs	586,012.49	1.040	609,452.99	1.040	633,831.11	1.040	659,184.35	1.040	671,049.67	1.018	683,128.56	1.018	695,424.87	1.018	707,942.52
	Communication Transportation Costs	40,478.25	1.049	42,461.68	1.049	44,542.30	1.049	46,724.87	1.049	59,186.94	1.049	62,087.10	1.049	65,129.37	1.049	68,320.71
	Maintenance, Supervision Costs*-4	8,074.44	1.049	8,470.09	1.049	8,885.12	1.049	9,320.49	1.049	52,471.49	1.049	55,042.59	1.049	57,739.68	1.049	60,568.92
	Lighting, Heating Costs	33,732.14	1.049	35,385.01	1.049	37,118.88	1.049	38,937.71	1.049	91,120.00	1.049	95,584.88	1.049	100,268.54	1.049	105,181.70
	Other Expenses	106,906.56	1.049	112,144.98	1.049	117,640.08	1.049	123,404.44	1.049	129,451.26	1.049	135,794.37	1.049	142,448.29	1.049	149,428.26
Total Management Costs	Increase Rate	12,869,081.91	-	13,019,103.40	1.012	13,171,654.67	1.012	13,326,806.52	1.012	13,573,271.60	1.018	13,723,558.66	1.011	13,876,043.55	1.011	14,030,780.73
Total Expenses	Increase Rate	775,203.88		807,914.75	1.042	842,017.49	1.042	877,571.86	1.042	1,003,279.36	1.143	1,031,637.50	1.028	1,061,010.75	1.028	1,091,442.11
Expenses / Total Management Costs		6.0%		6.2%		6.4%		6.6%		7.4%		7.5%		7.6%		7.8%

Classification		2008		2009		2010		2011		2012		2013*-3	
		Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate	Amount	Increase Rate
		FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )	FJ\$	(% )
【FPS Management Costs】													
Medications Purchase Expenses		13,064,850.20	1.0097	13,191,579.25	1.0097	13,319,537.57	1.0097	13,448,737.08	1.0097	13,579,189.83	1.0097	13,710,907.97	1.0097
Expenses	Personnel Costs	720,685.49	1.018	749,512.91	1.040	779,493.43	1.040	810,673.17	1.040	843,100.10	1.040	876,824.10	1.040
	Communication Transportation Costs	71,668.42	1.049	75,180.17	1.049	78,864.00	1.049	82,728.34	1.049	86,782.03	1.049	91,034.35	1.049
	Maintenance, Supervision Costs	63,536.80	1.049	66,650.10	1.049	69,915.95	1.049	73,341.83	1.049	76,935.58	1.049	80,705.42	1.049
	Lighting, heating Costs	110,335.60	1.049	115,742.04	1.049	121,413.40	1.049	127,362.66	1.049	133,603.43	1.049	140,150.00	1.049
	Other Expenses	156,750.24	1.049	164,431.00	1.049	172,488.12	1.049	180,940.04	1.049	189,806.10	1.049	199,106.60	1.049
Total Management Costs	Increase Rate	14,187,826.75	1.011	14,363,095.47	1.012	14,541,712.470	1.012	14,723,783.12	1.013	14,909,417.07	1.013	15,098,728.44	1.013
Total Expenses	Increase Rate	1,122,976.55	1.029	1,171,516.22	1.043	1,222,174.90	1.043	1,275,046.04	1.043	1,330,227.24	1.043	1,387,820.47	1.043
Expenses / Total Management Costs		7.9%		8.2%		8.4%		8.7%		8.9%		9.2%	

\*-1 Scheduled commencement of construction

\*-2 Scheduled completion of construction

\*-3 10th year after establishment of the new FPS

\*-4 Since the figure for 2000 includes the repair costs of a truck accident, the figure for 1999 is used.



### Projected Operating Cost

In 2000 FPS operating costs not including the cost of purchasing pharmaceuticals accounted for about 6% of total expenditures, but by the 10th year after establishment of the new FPS that percentage will rise to 9.2% on account of the effect of increase in maintenance cost owing to the new equipment introduced, such as air conditioning equipment and vehicles.

Table 3-9 Percentage of Total Operating Cost Represented by Operating Costs Other Than the Cost of Purchasing Pharmaceuticals (FJ\$)

Year	2000	2004	2013
Total operating cost (A)	12,869,081.91	13,577,736.48	15,105,595.79
Operating costs other than cost of purchasing pharmaceuticals (B)	775,203.88	1,007,744.24	1,394,687.82
B/A	6.0%	7.4%	9.2%

As for the annual rate of increase in operating cost including the cost of purchase of pharmaceuticals, it is expected to average 1.1-1.3%. That being the case, operation of the new FPS will be financially feasible if the rate of increase of the budget allocation from the Ministry of Health and Social Welfare is higher than that. Since the Fiji Government's expenditure in FPS has so far increased at an annual rate of 1.9% (1998-2000), it is considered that it will be able to cope with such an increase in operating cost.

Although at the present time the FPS supplies pharmaceuticals to public medical care entities free of charge, a possible future option is that of collecting fees for purchases of pharmaceuticals to be used to cover operating costs such as those indicated in Table 3-8, "Projection of FPS Operating Costs" (personnel costs, communications and transportation costs, maintenance costs, lighting, heating and other similar costs and other costs).

### Overall Result

Since more than 90% of both the income and the expenditures of FPS concern purchases of pharmaceuticals, the measure for improvement of balance between income and expenditures that will have the greatest gross effect is either reduction of cost of purchase of pharmaceuticals or introduction of handling fees for such purchases.

Regarding the amount of money used to purchase pharmaceuticals, future increase in volume of pharmaceutical purchases of PIC countries should have the effect of reducing the cost of such purchases over the medium term. On the other hand, early introduction of charging of such handling fees would be difficult in view of the need first to enhance cost consciousness at medical care facilities and to undertake wide-scope, long-term health policy and financial policy reforms, including reform of the financial systems of such facilities and introduction of a system of footing of a part of medical care expenses by the patients themselves. That being the case, it is considered that for the time being what is needed is to work for reduction of expenditures by reduction of personnel expenses through rationalization of operations and by holding down maintenance costs through establishment of a maintenance system within FPS.

### (3) Financial Analysis of the BPS Section

#### i) Income department

The pharmaceutical sales of the BPS Section increased in 1999 over 1998, but they declined again in 2000 by 20% because of a political crisis and cooling of domestic demand as a result thereof. Sales of the BPS Section in 2001 should recover to at least their 1999 level in view of expectations of recovery of domestic demand.

Table 3-10 Income of the BPS Section in Recent Years (FJ\$)

Classification	1998	1999	2000
Sales (A)	2,871,231	3,423,889	774,304
Consumption of pharmaceuticals (B) (B)=(a)+(b)-(c)	2,583,709	3,179,209	668,210
Value of inventories at beginning of the year (a)	533,278	152,176	464,941
Value of pharmaceutical purchases during the year (b)	2,202,607	3,491,973	341,948
Value of inventories at year's end (c)	152,176	464,941	138,679
Gross profit = (A)-(B)	287,522	244,680	106,093

ii) Expenditures department

As an effect of temporary doing away with value-added tax as one of the policy measures for boosting the national economy that were taken in 2000, expenditures of the BPS Section were reduced by a whopping 40% in comparison with the previous year.

Table 3-11 Expenditures of the BPS Section in Recent Years (FJ\$)

Item	1998	1999	2000
Personnel costs	33,837	39,985	40,205
Communications costs	3,814	8,816	4,308
Transportation costs	9,189	6,943	7,148
Miscellaneous and other expenses	3,698	6,322	2,811
Lighting, heating and similar expenses	950	1,121	1,188
VAT input charges	13,424	53,146	80
Total expenditures	98,749	156,318	95,945

iii) Financial analysis

As can be seen from the above table, in the period 1998-2000 the sales of the BPS Section turned downward after 1999. That was the result mainly of chilling of the demand market by Fiji's policy crisis in 2000 and the profits, too, drastically declined (see the table below).

Table 3-12 Net Profit of the BPS Section in Recent Years (FJ\$)

	1998	1999	2000
Net profit (gross profit - total expenditures)	188,773	88,362	10,148

**Income-Expenditure Balance Projection**

Although the basic trend of the income and expenditures balance of the BPS Section has been a surplus in recent years, its net profit has been declining. However, in the long run improvement of the pharmaceuticals storage conditions of the FPSC as a whole and increase in the pharmaceuticals handled are expected to result in increase in the volume of sales in the PIC and domestic markets.

**Overall Result**

Besides expanding its network of pharmaceutical sales to the private sector, once domestic demand has recovered the BPS Section will be aiming in the coming years to increase its profits and own funds through promotion of sales to PIC countries that have not yet joined the JBPS.

## Chapter 4    Project Evaluation and Recommendation

4-1    Project Effect

4-2    Technical Assistance and the  
Cooperation with other Donors

4-3    Subjects and Recommendations

## Chapter 4 Project Evaluation and Recommendations

### 4-1 Project Effect

#### (1) Actual Proof on Relevance and Evaluation on Beneficial Effect

The target of the Project is to provide with the system to supply pharmaceuticals stably to the domestic public medical organization and to the private medical organization ( including pharmaceutical suppliers and wholesale traders ), as well as to the peripheral Pacific Island Countries. After rearranging the actual proof and verification on the appropriateness from the standpoint both of hardware and software in order to provide the system, the result will be described as follows, and the necessity to implement the Project is regarded as quite high.

##### 1) Hardware

The circumstance of the existing warehouse gets worse as the pharmaceutical stockyard, due to the superannuation of the facility such as rain leakage, extreme accumulation of bulky goods, inadequate temperature control and the lack of unloading and temporary spaces. Furthermore, it causes the deficiency of managing the Lot / Inventory control due to the inefficient pharmaceutical management, and accelerates the quality deterioration of the supplied pharmaceutical. The dispersion to two facilities also causes the deterioration of work efficiency.

##### 2) Software

###### Relation of the Project to the JBPS with PICs

Pacific Island Countries including Fiji, depend on importing pharmaceuticals and consumables used in the countries. However, they have major problems in stable supplying of pharmaceuticals, being obliged to purchase them in rather expensive price system.

Therefore, Fiji made up the Yanuca Declaration with PICs under the support of WHO in 1995, Rarotonga Agreement in 1997, and the Joint Bulk Purchase Scheme based in Fiji in 1998. There is actual record of periodical purchasing from Fiji to five countries, such as Tuvalu, Nauru, Kiribati, Cook Islands and Vanuatu so far.

In April, 2001, the JBPS Workshop expanding the frame of participant countries was held in Fiji, in the presence of eight countries, Fiji, Tuvalu, Cook Islands, Tokelau, Marshal Islands, Nauru, Kiribati and Vanuatu and the concrete measures for the future was discussed among those countries.

The plan for stable supplying pharmaceuticals to PICs through JBPS 'at low price' with 'safety and reliance' was confirmed as the agreed matter among PICs in the Workshop of April, 2001, continuously after the said Yanuca Declaration by WHO support in 1995, and the Rarotonga Agreement in 1997.

## Conformity with the Overall Goal of Fiji's National Health Plan

The Ministry of Health (MOH) is promoting the 'Fiji Health Management Reform : 1999-2004', conforming to the 'Development Strategy for Fiji:1997 and 'National Health Plan:1998-2002. In this project, the duty of the responsible agency or Fiji Pharmaceutical Services of MOH is clearly designated to improve the pharmaceutical services, such as stabilized supply of the 'Essential Drugs' at the proper price to Fiji. As the concrete policy of the execution agency or Fiji Pharmaceutical Services, the subscription of consumables; dentals and laboratories being bought separately at private medical organization, will be centralized into the Services, in addition to the ordinary pharmaceuticals,

Therefore, the construction and the move of new FPSC contributes to the improvement of the pharmaceutical services for the stable supply of Essential Drugs to Fiji, and conform to the Development Strategy and the National Health Plan.

### (2) Evaluation of Outputs

There are some pre-conditions for the continuous improvement of the pharmaceutical supplying services by FPSC, such as : The medical activities of Fiji's domestic and PIC's medical organizations not to get worse, FPSC to keep the function of supplying base to Fiji and PIC's as before, The trained employee of FPSC not to quit, The procurement price of pharmaceuticals not to rise sharply, The concerned aid organizations and the recipients not to oppose against the promotion of the Project, etc.

#### 1) Verifiable Indicators of the Outputs

The listed items below deem as the 'Verifiable Indicators of the Outputs'.

The make-up of electric data concerning the inventory record of the FPSC

The inventory record should always be stored in electric data.

The number of items controlled under proper temperature at FPSC

The number of items controlled under proper temperature should increase by 90 items.

The lost amount of pharmaceuticals

The lost amount of pharmaceuticals by expiration per annum should decrease from current 2.1% to less than 1.0%.

The deficient amount of pharmaceuticals at FPSC

The out-of-stock rate should decrease from current 32% to less than 16%.

The lead time from the order to dispatch at FPSC

The lead time for domestic public health organization should decrease from current 60 days to 14 days. The lead time for domestic private health organization should decrease from current 7 days to 1 day. The lead time for peripheral island countries should decrease from current 7 days to 3 days.

The sales figures by JBPS

The sales figures by JBPS to domestic private health organization and peripheral

island countries should increase remarkably from the status quo.

The number of clients and traders by JBPS

The numbers of clients and traders of domestic private health organization and peripheral island countries should increase remarkably from the status quo.

## 2) Timing for Evaluation

Three years after the hand-over of the facility and equipment will be scheduled as the timing for evaluation.

## (3) Effect of Benefit

The effects described hereinafter will be obtained after the implementation of the Project, and on the assumption that the new FPSC will be properly operated by the Fiji side.

### 1) Direct Effect

The benefit target of the Project is approximate 800,000 Fijian people and the PICs who purchases pharmaceuticals from FPSC.

The total number of population in five Pacific Island Countries like Tuvalu, Nauru, Kiribati, Cook Islands and Vanuatu, who has experienced in purchasing from Fiji amounts to 280,000. In addition to these five countries, three more countries of Niue ( absent from the Workshop, but declared the intension for participation ), Tokelau, Marshal Islands declared the participation in the Workshop on pooled bulk procurement with the Bulk Purchase Scheme held in Fiji on April, 2001. And the total number of population in eight countries amount to 350,000.

The shortage of area for storing pharmaceuticals, the rain leakage and insufficient temperature control due to superannuation of the existing warehouse will be solved.

As a result, the storing environment for pharmaceuticals will be improved by the construction of the new FPSC. As a result, the credibility of storing pharmaceuticals will be improved and the increment in sales of pharmaceuticals and in number of customers in BPS of not only Fiji but PIC's will be expected.

By implementing the Soft Component of 'Guidance of Logistic Management' and 'Development of Inventory Control Software', the insufficient pharmaceutical lot and the inventory management will be improved.

As a result, the quality deterioration of drugs due to its expiration will be avoided and the reduction of out-of-stock rate due to the insufficient management will be expected, and thus the efficient management will be realized.

## 2) Indirect Effect

By implementing the Project, pharmaceutical BPS will expand both in quality and quantity, the stable supplying system for pharmaceuticals at low cost with safety and credibility will be established. As a result, the medical activities in Fiji and PICs will expand both in quality and quantity, the medical and health environment will be expected to be improved.

Table 4-1 Effects and the improvement for the status quo by implementing the Project

Status Quo and Problems	Countermeasures in the Project (Cooperation Target)	Effect and Improvement by the Project
1. The existing warehouse managed by FPS has problems in area shortage for pharmaceuticals, superannuation of the facility and insufficiency in temperature control. In addition, the warehouses are dispersed in two locations and the work efficiency is not good.	• The New FPSC will be constructed and the Pallet Rack system will be introduced. The equipment (Personal Computers, Electric Forklifts, Pallets ) will be granted.	• The loss of pharmaceuticals due to loading and unloading work will be reduced. The items under proper temperature control will increase. The loss of drugs will be decreased. As a result, the credibility by the PICs will be improved.
2. The out-of-stock and expiration of drugs due to insufficient lot management and inventory control, unstable supplying system will be the priority issues to be solved.	• Building of the new logistics management system by utilizing computers and pallets, and the guidance. The development of Inventory Control software and the guidance of operation.	• Stock records as FPSC in electric data files, and the inventory of pharmaceuticals will always be grasped. The rate of out-of-stock and expired drugs will reduce, and the lead time between receiving an order and dispatching will be shortened. As a result, the credibility from PICs will be improved.

## 4-2 Technical Assistance and the Cooperation with other Donors

The implementation of the Project will be recommended in cooperation with the concerned organizations, such as WHO, UNICEF, AusAID, considering that they are major Donors to Fiji in the field of Medical and Health Cares.

### (1) WHO

WHO technically has been supporting the promotion of the Joint Bulk Purchase Scheme among PICs, and has also supported Yanuca Declaration (1995 ), Rarotoga Agreement (1997), the Workshop on Pharmaceutical Information (1999) and the Workshop on JBPS for pharmaceuticals (2001) held in Fiji were also supported by WHO. In order to promote JBPS as one goal of the Project, the continuous openings of the Workshop will be needed to communicate with the JBPS participant countries and expected countries to JBPS, by keeping the technical assistance and cooperation with WHO.



## (2) UNICEF

UNICEF shares the major role in supplying vaccines to both Fiji and peripheral island countries. Although the role borne by UNICEF should be transferred to the government of Fiji, it is considered rather difficult for them to bear all the services at the moment. The relation with UNICEF will be needed to realize the management of vaccines by the Fiji government in the future.

## (3) AusAID

AusAID technically supports the building of District Health Administration and the Decentralization of Authority on Health Administration in order to offer the Health service reflecting the needs of people and the region, according to the Health Reform Project (1999 – 2004: 7.55 million Australian dollars).

The relation with AusAID should be kept regarding the operation of the future FPSC, since the introduction of computers for the centralization of functions of purchasing, storing and supplying pharmaceuticals as the directly related matter to the Project.

## 4-3 Subjects and Recommendations

The following measures will be recommended so that the stable system be established and improved for supplying pharmaceuticals to public and private medical organizations (including wholesale shops and pharmacies) in Fiji and the peripheral PICs, by the full usage of the new building and equipments implemented for the Project.

### (1) Subjects and Recommendation on the Improvement of the Pharmaceutical Supplying Service

The continuous maintenance and improvement of the pharmaceutical supplying system will be recommended by settling the Objectively Verifiable Indicators of the Project, by checking the results, and by maintaining the Safety Stock of pharmaceuticals, in order to contribute to Fiji and PICs by making full use of the building and equipment involved in the Project.

The recheck of the improvement of the pharmaceutical supplying services will be recommended by implementing the field survey to the customers at the same time.

The positive activities of JBPS Workshop with PICs will be recommended in order to promote the stable supply of pharmaceuticals at low price, by making an early agreement between PICs with Fiji in cooperation with WHO on the decision for JBPS handled by FPSC as the center.

## (2) Subjects and Recommendation on the Improvement of Management

All the FPS budget including procurement of pharmaceuticals is expended from MOH budget. The ratio reaches to about 14 – 16 % of the total budget, and the growth rate is reported approximately 1.9 % per annum( year 1998 – 2000 ). Therefore, the increment of the maintenance cost for the implementation of the Project is expected to be dealt with the arrangement within the range of annual growth rate of the budget by MOH.

The Moving Plan upon the completion of the New FPSC deems quite important for the proper commencement and the management of this Distribution Facility, it is highly recommended to establish the Moving Plan by keeping adequate relation with the Soft Component technicians provided by Japanese Government prior to the completion.

The effort to minimize the amount of expired pharmaceuticals will be recommended by managing the pharmaceuticals properly by the development of the Inventory Control Software and the Logistics Management Guidance utilizing computers implemented in the Project.

It is recommended that the budget would be kept in case the building equipment such as Air Conditioners and computer system provided in the Project come to the renovation necessity in the future.

Although the pharmaceutical are supplied to the public medical organization by FPSC by free of charge, it is considerable as a future operation to collect mark-ups for purchasing drugs for its expenditure. It is also recommended to take it in sight as a future operation, despite the difficulty in early introduction, since the long-term reform of Health and Finance Policy is inevitable.

The evaluation and treatment for the effort of increasing the sales by BPS section will be recommended with reviewing the current of system of paying all the BPS income in order to increase sales in domestic market and with PICs, along with the increment of number of handled pharmaceuticals and the improvement of storing environment of all FPSC in the long run.

## (3) Subjects and Recommendation on the Maintenance

It is planned that the maintenance of the building will be executed by PWD, who regularly inspects the facility. It is recommended for FPSC to select the person in charge of keeping contact with PWD.

The effort to keep the cleanness for storing the pharmaceuticals, such as everyday – floor

sweeping by the maintenance clue will be recommended as well as the daily inspection of the facility in order to avoid the damage or trouble by the regular check – up by PWD.

The implementation of the regular check-up of the vehicles procured in the Project will be recommended the same way as the existing vehicles checked in the maintenance shop in order to prevent the accident due to bad maintenance. On the other hand, there are no staff who owns the driving license of newly introduced forklifts, and thus the training of the forklift operating staff deems necessary.

As for the Computer operation, though some administrative staff has the basic knowledge, all the administrative staff and some handling staff will be required the Computer operating ability in the future. It is recommended to implement the adequate basic training for learning the Inventory Control Software involved in Soft Component.

And the maintenance contract with the computer maintenance firm will be recommended in case of damage of computer system, as well as the back-up of data through standard software.

The medical goods have been disposed in the CWM incinerator until 1999, and are now dumped to the dumping ground in Lami district the same way as the ordinary garbage ( twice in 2001 ). It is recommended for FPSC to stop the current dumping treatment and to make up codes on the disposal of medical goods, and to entrust Port Authority to incinerate the garbage.