

# **Chapter 3**

## **Implementation Plan**



## **Chapter 3 Implementation Plan**

### **3-1 Implementation Plan**

#### **3-1-1 Implementation Concept**

The Project will be carried out after the signing of the Exchange of Notes (E/N) by the two governments concerned in accordance with Japan's Grant Aid Scheme.

After signing of the E/N, the entire scope of the Project, from design, installation, and inspection to procurement, should be completed smoothly and promptly. Therefore, plans involving work and personnel should be formulated so that each stage of the Project can be executed efficiently and effectively.

To ensure smooth execution of the Project, a time and location should be arranged for representatives from the relevant organizations of the government of Macedonia (e.g. the Ministry of Health and Ministry of Foreign Affairs) and from Bitola Hospital to meet with staff from a Japanese consulting firm and supplier of the equipment, so as to discuss plans and other details.

After the project is approved by the governments of both countries involved and the Exchange of Notes is concluded, a Japanese consulting firm that is currently under contract with the Macedonian Government will oversee the plan's execution as well as actual procurement of the equipment. Also, a supplier of the equipment will be determined on the basis of open tender as specified in the official notes, and this supplier will be responsible for procurement and installation of the equipment.

#### **(1) Party responsible for the implementation of the Project**

The responsible party in the Recipient Country is the Ministry of Health. The Ministry of Health will act as the contracting party of the Recipient Country, and shall be responsible for implementing the Project. The Ministry of Health is required to cooperate in regard to the appointment of the responsible persons concerned for the Bitola Hospital and work necessary for unpacking, delivery, and assembly/trial run of the equipment.

The Ministry of Foreign Affairs and the Ministry of Health shall be responsible for customs clearance, internal transportation, and so forth.

## **(2) Consultant**

Following the signing of the E/N between two governments concerned, the Ministry of Health shall sign a consultant agreement with a Japanese national consulting corporation for the detailed design of the equipment to be procured. The work will also be associated with tendering and supervision of project implementation. The agreement will be verified subject to approval by the Japanese Government. The consultant shall be responsible for implementation of the following work under the agreement:

### **1) Detailed design phase**

The final confirmation of the Project, reviewing the equipment specifications, preparation of tender documents, supervision of tender procedure, and evaluation of the contents of the tender

### **2) Implementation phase**

Supervision of project implementation including control of the work schedule, inspections of equipment, supervision of transportation, supervision of installation work, and issuance of certificates

## **(3) Suppliers of the equipment**

Based on the E/N and in accordance with the "Guidelines for Procurement" under Japan's Grant Aid Scheme, the Ministry of Health shall sign a procurement agreement with Japanese national suppliers that shall be determined on the basis of open tenders on the equipment to be provided. The agreement shall be verified subject to the approval of the Japanese Government. The suppliers shall implement the following tasks under the agreement:

- Procurement, transport, and delivery of the equipment
- Installation of the equipment, and technical guidance concerning operation, maintenance, and repair

### **3-1-2 Implementation Conditions**

All possible measures shall be taken to ensure the implementation and a complete procedure for installation, which will conduct the quick and efficient completion of the procurement, transport, delivery, and installation of the equipment. As the project site is

in the rural area of Macedonia, plans for transport and installation of the equipment and materials shall be carefully drafted. Therefore, consultations with officials concerned are essential prior to customs clearance, internal transportation, and removal of old equipment, storage area for the procured equipment, route for carrying them in, etc.

### **3-1-3 Scope of Work**

The work provided for the Project by the Recipient Country and covered by Japan's Grant Aid will be described below. The Project is intended primarily to replace obsolete equipment, the installation site is nearly prepared, and basic conditions for the installation of utilities have been met. The expenses for the work performed by the Recipient Country amounts to be approximately 5,200 Deutsche Mark (DM), which was estimated by the Team.

#### **1) Work to be carried out by the Recipient Country**

- Removal of existing equipment
- Connection of utilities at the designated points for the equipment to be procured
- Preparation of storage area for the equipment to be procured until the time of installation
- Preparation of the route for carrying the equipment to the room from the storage area

#### **2) Work to be covered by Japan's Grant Aid**

- Procurement of the new equipment
- Transport of the equipment to be procured
- Delivery, installation, and trial run of the equipment to be procured
- Technical transfer on operation and maintenance of the equipment to be procured
- Modification of the rooms (Remote control fluoroscopy and Sterilizer)

### **3-1-4 Consultant Supervision**

A Japanese national consulting corporation shall provide fair guidance, advice, and coordination throughout the detailed design phase and implementation phase of the Project. Furthermore, this consulting firm shall do whatever is necessary in order to ensure the smooth implementation of the Project in accordance with the Japan's Grant Aid Scheme

and the Basic Design Study Report. The consultant will be deemed to have completed its work when the equipment is completely installed, it is confirmed that all conditions of the contract have been met, the official delivery of the equipment is witnessed, and the approval of the Recipient Country is obtained.

#### **(1) Framework of Implementation Supervision**

- 1) Management of the completion dates for installation, maintaining close contact among all parties concerned
- 2) Supervision of installation work
- 3) Suggestions for maintenance after the official delivery of equipment

#### **(2) Personnel Plan**

The consultants required for the supervision of detailed design and implementation shall be as follows:

- 1) Project Manager One (1)  
This project manager shall be responsible for the comprehensive supervision of work.
- 2) Equipment Planner One (1)  
This person shall be responsible for the re-examination of the Project and the confirmation of the equipment specification, and for the preparation of tender documents and evaluation of the contents of the tender.
- 3) Equipment Procurement Planner One (1)  
This person shall be responsible for the preparation of tender documents and the estimation of project costs.

### **3-1-5 Procurement Plan**

#### **(1) Procurement of the equipment**

Most of the equipment will be procured within Japan, but certain items that will require regular maintenance, frequent procurement of spare parts and consumables, or those that come with doctors' convenience such as operating instruments, may be acquired

from third-party countries. Also, following the official delivery of the equipment, the Ministry of Health shall be promptly provided with technical service, spare parts, and consumables at a reasonable price. The procurement plan for the equipment shall be drafted so as to favor either manufacturers that have agents capable of providing technical service (repair and maintenance services) in the Recipient Country or in neighboring countries, or those that have a sufficient stockpile of spare parts and consumables.

## **(2) Inland transportation route**

The inland transportation route currently under consideration extends from the port of Thessaloniki in Greece to Bitola. It is the shortest route and is adequately maintained. In case the equipment is transported by air, Skopje International Airport will be available.

As most equipment consists of precision instruments and requires measures to prevent damages from the shocks and moisture, special packing methods will be designed to accommodate long-distance transportation.

## **(3) Plan of the dispatch of engineer**

Personnel, including laborers required for the installation of equipment, shall be secured in the vicinity of Bitola Hospital, in principle, while engineers shall be dispatched from Japan and other countries to supply equipment requiring special skills and techniques. The procedure for test runs and adjustment of the equipment will be planned to allow enough time for technical transfer to the doctors and engineers concerned at Bitola Hospital. Concerning the technical transfer, advance consultations with the Ministry of Health and Bitola Hospital will be required.

### **3-1-6 Implementation Schedule**

When the time arrives for the Project to be carried out, the consulting firm will investigate the specifications of the equipment. Then, the supplier of the equipment, who will be decided through open tender, will procure the equipment.

The Project implementation schedule is given in **Table 3-1**.

**Table 3-1 Project Implementation Schedule**

	1	2	3	4	5	6	7	8	9	10	11	12
<b>Detail Design</b>	<div> <div>▨ (Consultation Agreement &amp; Final Project Confirmation)</div> <div>□ (Preparation of Tender Document)</div> <div>▨ (Approved by the Recipient Country)</div> <div>□ (Preparation for Tendering)</div> <div>▨ (Tendering &amp; Evaluation)</div> <div>(Total 3.70 months)</div> </div>											
<b>Procurement</b>	<div> <div>(Procurement in Japan and/or third-party countries)</div> <div>▨ (Transportation)</div> <div>▨ (Installation)</div> <div>(Total 7.80 months)</div> <div> <div>□ Works in Japan</div> <div>▨ Works in the Recipient Country</div> </div> </div>											

### 3-1-7 Obligations of the Recipient Country

The Recipient Country shall perform the following in accordance with the Exchange of Notes (E/N), for the smooth implementation of the Project.

- 1) To exempt customs duties, internal taxes, and other fiscal levies that may be imposed in the Recipient Country with respect to the supply of the equipment and the provision of services under the verified contracts;
- 2) to ensure both prompt customs clearance in the Recipient Country and a procedure for internal transportation therein of the medical equipment brought from Japan and third-party countries;
- 3) to provide Japanese nationals and third-party country engineers working on the Project with every convenience to facilitate their entry into the Recipient Country and their stay therein;
- 4) to ensure the issuance of permits required by the laws of the Recipient Country for the implementation of the Project, and other permits, including tax exemptions;
- 5) to ensure that the equipment procured under the Grant Aid Scheme is maintained and used properly and effectively for the Project; and
- 6) to confirm that the Recipient Country bears all expenses except for those agreed to be covered by the Japanese government.



## 3-2 Operation and Maintenance Plan

### 3-2-1 Expenses Borne by the Recipient Country

The Project is intended primarily to replace obsolete equipment. The installation site is nearly prepared, and basic conditions for the installation of utilities have been met. The work needed to the Project by the Recipient Country are; i) removal of existing equipment and ii) supply water, drainage, and electricity required for the operation of the equipment to be procured up to the designated points of connection. The expenses for this work by the Recipient Country amounts to be approximately 5,200DM, which estimated by the Team.

### 3-2-2 Operation and Maintenance Plan

Bitola Hospital has a sufficient number of doctors, engineers, and nurses having the technical expertise necessary to operate the equipment to be procured. Furthermore, the dedicated staffs of the administrative and accounting departments, which are managed separately from the medical departments, are making every effort to ensure sound administration.

The costs of operation and maintenance, including spare parts and consumables, are expected to increase with the introduction of the new equipment. **Table 3-2** summarizes the provisional estimation of the total management costs of main items. The estimation period is for eight years from 2000 to 2007; the operating ratio is 50% for 1999, 70% for 2000, 90% for 2001, and 100% for 2002 and thereafter. The annual management costs fluctuate because of the irregular maintenance service and replacement of the equipment parts (every three years).

**Table 3-2 Operation and Maintenance Cost**

(thousand Denar)

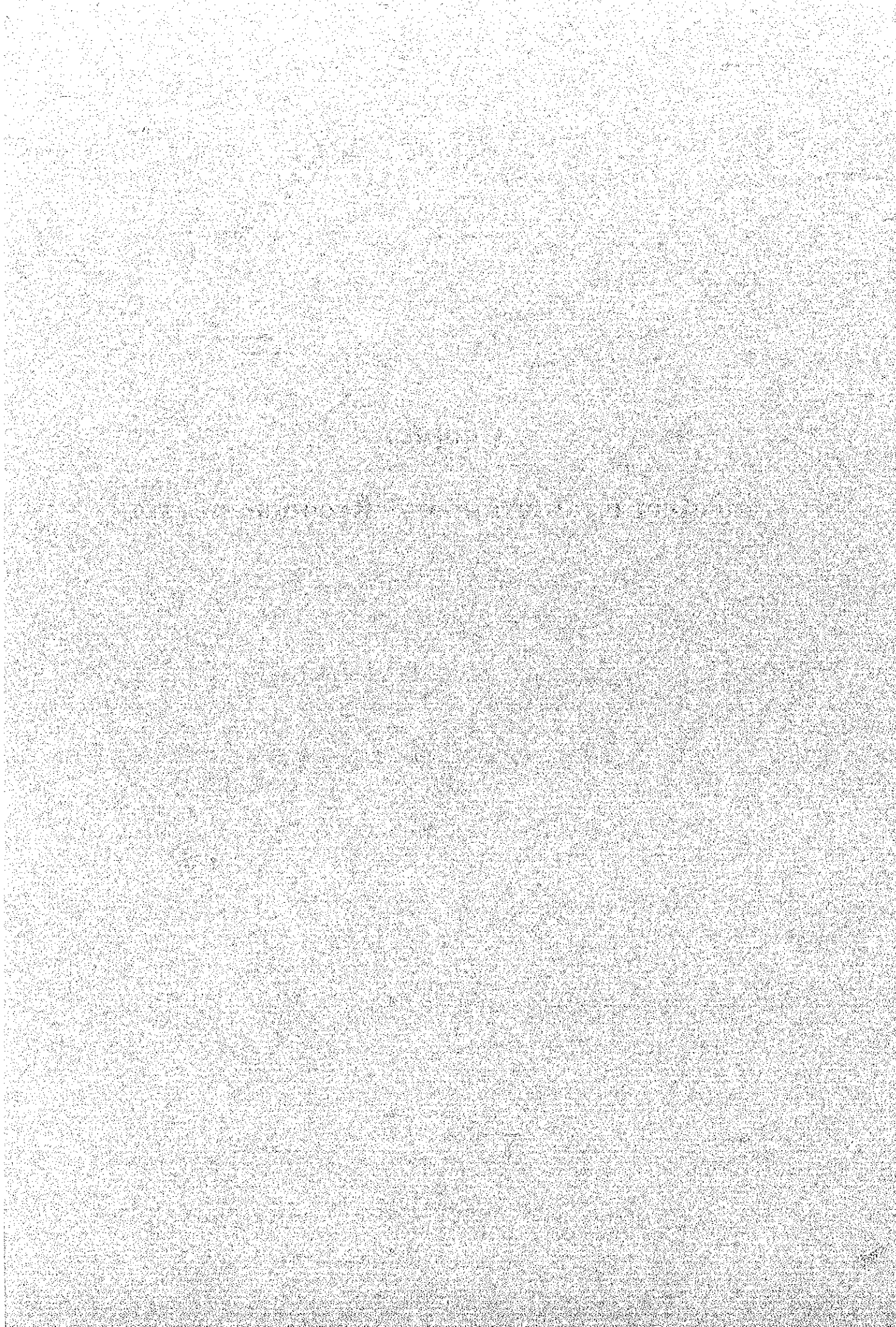
Year	2000	2001	2002	2003	2004	2005	2006	2007	Total
Maintenance cost	0	939	838	2,508	838	939	2,406	939	9,407
Spare parts	0	562	562	1,622	562	562	1,622	562	6,053
Consumable	0	11,807	15,180	16,867	16,867	16,867	16,867	16,867	104,951
Total	0	13,308	16,580	20,996	18,267	18,368	20,895	18,368	120,411

Provisional calculations indicate that the management cost can be comfortably covered by the income expected after the installation of new equipment. However, this all depends on the efforts of Bitola Hospital. It is therefore necessary to ensure maintenance and supply systems by taking account of the geographical conditions of Bitola.

Moreover, sound management will strengthen the financial self-reliance of Bitola Hospital as well as facilitate the improvement of medical service throughout the southwestern region of Macedonia.

## **Chapter 4**

# **Project Evaluation and Recommendation**



## **Chapter 4 Project Evaluation and Recommendation**

### **4-1 Project Effect**

Based on the results of the Basic Design Study, the following effects are expected from the realization of the Project.

#### **(1) Enhancement of diagnosis and treatment capability of Bitola Hospital**

Once the necessary medical equipment is procured or improved by this project, diagnosis and treatment capabilities at Bitola Hospital will be enhanced. Consequently, most of the patients who have been transferred to the hospitals in Skopje for diagnosis, due to insufficient medical equipment, can be diagnosed and treated at Bitola Hospital, which makes adequate treatment possible. Furthermore, although accuracy of surgical operations has been a matter of concern due to lack of the equipment, the procurement and upgrading of the equipment assures high safety for surgical operations.

Over 1,500 patients have been referred to the hospitals in Skopje annually. However, if the majority of them can be diagnosed and treated locally at Bitola Hospital, they can be relieved of the physical, psychological, as well as financial burdens of having to go to Skopje. Furthermore, the concentration in the patient population at the tertiary medical care in Skopje will be relaxed, and the facility can re-concentrate on its original functions.

#### **(2) Contribution to the Improvement of Medical Standards in Macedonia**

In order to improve the public health and medical services, the Ministry of Health of Macedonia is proceeding with distribution of human resources and repair and renovation of medical facilities and equipment on the primary health care with cooperation from the World Bank and WHO. Once the diagnosis and treatment capabilities are enforced at Bitola Hospital, which is the secondary care hospital, by improving medical equipment introduced by the Project, it can contribute to improve the medical standard of the southwestern region of Macedonia. Moreover, the level of medical services of the entire country of Macedonia will be greatly increased in the synergic effect with the other Japanese Grant Aid project for Stip Hospital (secondary care hospital in the East), for Skopje City Hospital-Surgical Clinic (secondary care hospital in North), and for Medical Faculty of Skopje University (tertiary care hospital).

## **4-2 Recommendation**

### **(1) Improvement of diagnostic and treatment systems**

With the introduction of new equipment, diagnostic ability at Bitola Hospital will be greatly improved and diverse diagnostic and treatment needs are expected to arise. Although there is a sufficient number of personnel having a high level of technical skill, in order to provide a more effective and efficient treatment system, reallocation of human resources is crucial. In addition, improvement of technical level, effected by training those who are engaged in medical practices in cooperation with the Medical Faculty of Skopje University, is required.

### **(2) Improvement of maintenance system**

Maintenance expense is one of the major factors that oppresses hospital management. The hospital is located in a local city of Macedonia, and it is difficult for manufacturers to provide prompt repair services in case of the equipment failures at the hospital. Such geographical handicaps may lead to interruption of medical services when medical equipment breaks down. To prevent such circumstances, it is necessary to have maintenance staff and a workshop for self-maintenance in order to reduce the maintenance and management fees for medical equipment at the hospital and to enable quick response to equipment problems.

### **(3) Review of the Health Insurance Fund (HIF) system**

Because the administrative budget of Bitola Hospital depends largely on the Health Insurance Fund (HIF), efficient and secure transference of funds from the HIF is necessary in order for the hospital to function normally. After implementation of the Project, the diagnosis and treatment capability will be enhanced and number of medical treatment will be increased. Therefore, it will be a crucial for HIF to increase the financial burden due to the rise in operating expenses of Bitola Hospital. To ensure the long-term success of the improvements introduced by the Project, therefore, it is necessary to improve management of the HIF. Total reevaluation of the health insurance fund system must be conducted as soon as possible including revenue stabilization by reviewing the insurance rate or diagnostic fee as well as decreasing the expenditures by laying off over populated medical practitioners.

## Appendices





### Appendices-1 Member List of the Study Team

#### (1) Field Survey

1	Yasujiro SUZUKI	Leader	Grant Aid Project Study Department, Japan International Cooperation Agency
2	Makiko KINOSHITA	Technical Adviser	International Medical Center of Japan, Ministry of Health and Welfare
3	Naomi TOYOSHI	Project Coordinator	Grant Aid Project Study Department, Japan International Cooperation Agency
4	Keiji IIMURA	Project Manager	CRC Overseas Cooperation Inc.
5	Hiroshi NAITO	Equipment Planner	CRC Overseas Cooperation Inc.
6	Shoji MATSUOKA	Facilities Planner	CRC Overseas Cooperation Inc.
7	Manabu KOSHIMA	Cost Planner	CRC Overseas Cooperation Inc.

#### (2) Explanation of Draft Report

1	Makiko KINOSHITA	Leader	International Medical Center of Japan, Ministry of Health and Welfare
2	Naomi TOYOSHI	Project Coordinator	Grant Aid Project Study Department, Japan International Cooperation Agency
3	Keiji IIMURA	Project Manager	CRC Overseas Cooperation Inc.
4	Hiroshi NAITO	Equipment Planner	CRC Overseas Cooperation Inc.

## Appendices-2 Study Schedule

### (1) Field Survey

	Date	Movement	Activities	Accom.
1	Sep.28 (Mon.)	Tokyo 10:45→Vienna 16:10 (OS556)		Vienna
2	Sep.29 (Tue.)	Vienna 13:30→Skopje 15:15 (OS863)	Courtesy call on the Embassy of Japan	Skopje
3	Sep.30 (Wed.)		Courtesy call on the MOFA, MOH Visit the Medical Faculty of the Skopje University	Skopje
4	Oct.1 (Thu.)	Skopje→Bitola	Courtesy call on Bitola Hospital	Bitola
5	Oct.2 (Fri.)		Discussion and site survey at Bitola Hospital	Bitola
6	Oct.3 (Sat.)		Site Survey at health stations around Bitola and Ohrid Hospital, meeting with the study team	Bitola
7	Oct.4 (Sun.)		Site Survey at the port of Tessaloniki in Greece	Bitola
8	Oct.5 (Mon.)		Meeting with the Bitola Hospital, workshop	Bitola
9	Oct.6 (Tue.)		Meeting with the Bitola Hospital	Bitola
10	Oct.7 (Wed.)	Bitola→Skopje	Report to Minister of Health and discussion	Skopje
11	Oct.8 (Thu.)		Discussion of M/D, visit the City Hospital-Surgical Clinic and UNICEF	Skopje
12	Oct.9 (Fri.)	*Skopje 17:00→Vienna 18:50 (OS864)	Signing of M/D, visit the MOFA	Skopje
13	Oct.10. (Sat.)	Visit Stip Hospital		Skopje
14	Oct.11 (Sun.)	*Skopje 17:00→Vienna 18:50 (OS864)		* Vienna Skopje
15	Oct.12 (Mon.)	*Vienna 17:40→Frankfurt 19:10 (OS125) Frankfurt 20:50→ (JL408) (A,B,C,D)Skopje→Bitola	*Visit the Embassy of Japan / JICA Office in Vienna (Report on the study in Macedonia) Site Survey	(A,B,C,D)Bitola
16	Oct.13 (Tue.)	*→Tokyo 15:00 (JL408)	Site Survey	(A,B,C,D)Bitola
17	Oct.14 (Wed.)	(A,C)Bitola→Skopje	Site Survey	(B,D)Bitola (A,C) Skopje
18	Oct.15 (Thu.)	(C)Skopje 17:00→Vienna 18:50 (OS864)	(A)Visit MOH and IPU (B,D)Site Survey	(A)Skopje (B,D)Bitola (C)Vienna
19	Oct.16 (Fri.)	(C)Vienna 13:30 (OS555)	(A)Visit MOH and WHO (B,D)Site Survey	(A)Skopje (B,D)Bitola
...	...	(B,D)Bitola→Skopje	(A,B,D) Site Survey	(A)Skopje (B,D)Bitola
27	Oct.24 (Sat.)		Visit the Minister of Health (Report on the Site Survey)	(A,B,D) Skopje
28	Oct.25 (Sun.)			(A,B,D) Skopje
29	Oct.26 (Mon.)		(A,B,D) Visit MOH and IPU	Skopje
30	Oct.27 (Tue.)	(A,B)Skopje→Bitola	(A,B,D)Research on the manufacture's agents and inland transportation	Bitola Skopje
31	Oct.28 (Wed.)	(A,B)Bitola→Skopje	(A,B)Confirmation of the result of Site survey (D) Visit MOH	(A,B,D)Skopje
32	Oct.29 (Thu.)	Skopje 17:00→Vienna 18:50 (OS864)	(A,B,D)Visit MOH (Report on the study)	(A,B,D)Vienna
33	Oct.30 (Fri.)	Vienna 13:30→(OS555)	Visit JICA Office in Vienna (Report on the study in Macedonia)	
34	Oct.31 (Sat.)	→Tokyo 08:05		

(\*) Official Team (A) Project Manager (B) Equipment Planner (C) Facility Planner (D) Cost Planner

## (2) Explanation of Draft Report

	Date	Movement	Activities	Accom.
1	Jan.18 (Mon.)	Tokyo 10:45→Vienna 16:10 (OS556)		Vienna
2	Jan.19 (Tue.)	Vienna 13:30→Skopje 15:15 (OS863)	Courtesy call on the Embassy of Japan/JICA Office in Vienna	Skopje
3	Jan.20 (Wed.)	<sup>(A,B)</sup> Skopje→Bitola	Courtesy call on the MOAF, MOH	Bitola
4	Jan.21 (Thu.)	<sup>(A)</sup> Bitola→Skopje	Courtesy call on Bitola Hospital and Discussion	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
5	Jan.22 (Fri.)		<sup>(A)</sup> Discussion at MOH <sup>(B)</sup> Discussion at Bitola Hospital	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
6	Jan.23 (Sat.)		Site survey	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
7	Jan.24 (Mon.)		Site survey	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
8	Jan.25 (Tue.)		<sup>(A)</sup> Discussion at MOH <sup>(B)</sup> Discussion at Bitola Hospital	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
9	Jan.26 (Wed.)		<sup>(A)</sup> Discussion at MOH <sup>(B)</sup> Discussion at Bitola Hospital	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
10	Jan.27 (Thu.)		<sup>(A)</sup> Discussion at MOH <sup>(B)</sup> Discussion at Bitola Hospital	<sup>(A)</sup> Skopje <sup>(B)</sup> Bitola
11	Jan.28 (Thu.)	<sup>(A)</sup> Skopje→Bitola	<sup>(A,B)</sup> Discussion at Bitola Hospital	Bitola
12	Jan.29 (Fri.)	<sup>(A,B)</sup> Bitola→Skopje	<sup>(A,B)</sup> Discussion at Bitola Hospital	Skopje
13	Jan.30 (Sat.)	*Tokyo 10:45→Vienna 16:10 (OS556)	Meeting within the team	*Vienna Skopje
14	Jan.31 (Sun.)	*Vienna 13:30→Skopje 15:15 (OS863)	Meeting within the team	Skopje
15	Feb.1 (Mon.)	Skopje→Bitola	Courtesy call on the MOH	Bitola
16	Feb.2 (Tue.)	Bitola→Skopje	Discussion at Bitola Hospital	Skopje
17	Feb.3 (Wed.)		Discussion of M/D	Skopje
18	Feb.4 (Thu.)	Skopje 17:00→Vienna 18:50 (OS864)	Signing of M/D	Vienna
19	Feb.5 (Fri.)	Vienna 13:30→	Courtesy call on the Embassy of Japan/JICA Office in Vienna	
20	Feb.6 (Sat.)	→Tokyo 08:05 (OS555)		

(\*) Official Team <sup>(A)</sup> Project Manager <sup>(B)</sup> Equipment Planner

### Appendices-3 List of Party Concerned in the Recipient Country

Affiliation	Position & Specification	Name
Ministry of Health	Present Minister	Prof. Dr. Stojan Bogdanov
	Ex-Minister	Dr. Petar M. Ilievski
	Deputy Minister	Dr. Muarem Nexhipi
	Present Undersecretary	Prof. Dr. Tane Markoski
	Ex-Undersecretary	Dr. Ilija Petrusevski
	Undersecretary	Ms. Violetta Petrusevska
	Director of Health Insurance Fund	Ms. Snezana Stojanovska
	Director of International Project Unit	Ms. Gordana Pecelj
Ministry of Foreign Affairs	Deputy Minister	Mr. Jordan T. Panev
	Asia and Middle East Department	Ms. Ana Trajkovska
Ministry of Development	Undersecretary	Mr. Tahir Shakiri
Bitola Hospital	Present Director	Dr. Dimitar Veljanovski
	Ex-Director	Dr. Ghorgievski Jovan
	Assistant Director	Dr. Bosev Kiril
	Assistant Director	Dr. Zlatko Delov
	Advisor	Mr. Sekulovski Dimitar
	Assistant Director of Department of Finance	Ms. Lucia Lazarevska
	Chief of Dept. of Anesthesia	Dr. W. T. Ivanoski
	Chief of Dept. of Blood Bank	Dr. Najdovska Elena
	Chief of Dept. of Clinical Lab.	Dip. eng. Ivanov Risto
	Chief of Dept. of Dental & Maxillofacial	Dr. Jobif Dimitrovski
	Chief of Dept. of Dermatology	Dr. Natka Grozdanovska
	Chief of Dept. of Emergency	Dr. Vaso Radivojevic
	Chief of Dept. of GY. OB.	Dr. Ivanov Jovan
	Chief of Dept. of ICU	Dr. Ivanovski Trajan
	Chief of Dept. of Infectious D.	Dr. Eli Dimitrovska
	Chief of Dept. of Internal Medicine	Dr. Haziev Vlado
	Chief of Dept. of Mental Health	Dr. Sulejman Omer
	Chief of Dept. of Neonatology	Dr. Marijana Pejuovska
	Chief of Dept. of Neurology	Dr. Mihojlovski Sime
	Chief of Dept. of Endocrinology	Dr. Snezana Mihajlovska
	Chief of Dept. of Ophthalmology	Dr. Cipurovski Dimes
	Chief of Dept. of Orthopedic	Dr. Niko Jankov
	Chief of Dept. of Otorhinolaryngology	Dr. Talevski Ratko
	Chief of Dept. of Pediatric	Dr. Venera Mitreva
	Chief of Dept. of Physiotherapy	Dr. Stanko Ristovski
	Chief of Dept. of Pulmology	Dr. Mihail Nasen
	Chief of Dept. of Surgery	Dr. Jovanov Nikola
	Chief of Dept. of Urology	Dr. Jankovski Victor
	Chief of Dept. of X-ray Unit	Dr. Veljanov Dimitar
	Chief of Dept. of Infusion Room	Ms. Elena Najdovska
	Chief of Dept. of Legal Medicine	Dr. Kotevski Zoran
	Chief of Dept. of Pathology	Dr. Georgievska Cvetanka
Faculty of Medicine Skopje Univ.	Chief of Dept. of X-ray Unit	Dr. Miodrag Vrcakovski
City Hospital-Surgical Clinic	Director	Dr. Blagoja Petokovski
UNICEF	Director	Mr. Edmond McLoughney
WHO	Director	Dr. Marija Kisman

#### **Appendices-4 Minutes of Discussion**



October 7, 1998

**Dr. Petar M. ILIEVSKI**  
**Minister of Health**

**Dear Dr. ILIEVSKI**

*I have the honor to refer to our recent discussions regarding the Project for Equipment Supply for the General Hospital of the Medical Center of Bitola (hereinafter referred to as "the Project").*

*In response to the request of the Government of the Former Yugoslav Republic of Macedonia (hereinafter referred to as "the Recipient Government"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA"). JICA sent to Macedonia a study team headed by myself for examining the viability of the Project from September 28 to October 31, 1998.*


*The team held intensive discussions with the officials concerned and also conducted field surveys at the study area with the helpful assistance of the Ministry of Health.*

*In the course of discussions and field surveys, I believe that the main items described on the attached sheets have been confirmed. The team will proceed to further works and prepare the Basic Design Study Report.*

*On behalf of all the members of the team, I wish to express my sincere appreciation to the officials concerned of your government for their kind assistance and close cooperation extended to the team.*

*I hope that the Project will contribute to the enhancement of friendly relations between our two countries.*

*Yours Sincerely,*



**Yasujiro SUZUKI**

**Leader**

**Basic Design Study Team**

**JICA**

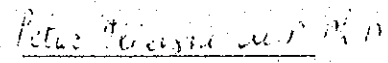
*October 7, 1998*

**Mr. Yasujiro SUZUKI**  
**Leader**  
**Basic Design Study Team**  
**JICA**

**Dear Mr. SUZUKI**

*I have herein acknowledged your letter dated October 7, 1998, and have confirmed the contents of the attachment of the letter.*

*Yours Sincerely,*

  
**Dr. Petar M. ILIEVSKI**  
**Minister of Health**  
**Republic of Macedonia**



## **ATTACHMENT**

### **1. Objectives of the Project**

The objective of the Project is to improve the quality of the medical services in the General Hospital of the Medical Center of Bitola through upgrading the medical equipment.

### **2. Project Sites**

General Hospital of the Medical Center of Bitola (the Bitola Hospital)

### **3. Responsible Ministry and Executing Agency**

Responsible Ministry : Ministry of Health - Department of Hospital Care

Executing Agency : General Hospital of the Medical Center of Bitola

### **4. Items requested by the Recipient Government**

- (1) After the discussions with the team, the items described in **Annex-1** are finally requested by the Recipient Government. However, the final items of the Grant Aid will be decided after further studies.
- (2) The equipment will be selected by the criteria attached as **Annex-2**.

### **5. Japan's Grant Aid System**

- (1) The Recipient Government has understood the system of Japanese Grant Aid as described in **Annex-3**.
- (2) The Recipient Government will take necessary measures, as described in **Annex-4**, for smooth implementation of the Grant Aid, on condition that the Grant Aid by the Government of Japan is extended to the Project.

### **6. Schedule of the Study**

- (1) The consultants will proceed to further studies in Macedonia until October 29, 1998.
- (2) JICA will prepare a draft report in English and dispatch a mission in order to explain its contents around January, 1999.
- (3) In case the contents of the draft report are accepted in principle by the Recipient Government, JICA will complete the final report and send it to the Recipient Government around March, 1999.

### **7. Other Relevant Issues**

- (1) Both sides confirmed that background including existing problems, objectives and benefits of the Project by means of the Participatory Planning workshop. The results of the workshop were compiled into the Project Design Matrix (PDM) through a consensus of workshop participants (See **Annex-5**).
- (2) The Ministry of Health has responsibility to conduct periodical monitoring and evaluation of the progress of all phases of the Project such as allocation of funds and distribution, operation and maintenance of the equipment, manpower development of the Bitola Hospital.

- Annex-1 Equipment List**
- Annex-2 Criteria for Selection of Equipment**
- Annex-3 Japan's Grant Aid System**
- Annex-4 Necessary Measures to be taken by the Recipient Government**
- Annex-5 Project Design Matrix (PDM)**

# Equipment List (1/4)

Annex-1

No	Site	Equipment	Quantity	Priority
1	Anesthesia	Anesthetic device with ventilator	10	A
2	Blood Bank	Centrifuge	1	A
3	Blood Bank	Microscope	1	B
4	Clinical Labo.	Analytical balance	1	A
5	Clinical Labo.	Biochemical analyzer	1	A
6	Clinical Labo.	Blood cell counter	1	A
7	Clinical Labo.	Blood gas analyzer	1	A
8	Clinical Labo.	Densitometer	1	A
9	Clinical Labo.	Electrolytes analyzer	1	A
10	Clinical Labo.	Electrophoresis apparatus	1	A
11	Clinical Labo.	Flamephotometer	1	C
12	Clinical Labo.	Fumehood	1	A
13	Clinical Labo.	Glucometer	1	A
14	Clinical Labo.	BUN analyzer	1	B
15	Clinical Labo.	Incubator	1	A
16	Clinical Labo.	Microscope	2	A
17	Clinical Labo.	Spectrophotometer	1	A
18	Clinical Labo.	Washer for pipet	1	B
19	Coronary care unit	CCU monitor for 10 beds	1	A
20	Coronary care unit	Defibrillator	1	A
21	Coronary care unit	ECG	1	A
22	Coronary care unit	Holter ECG set (3 recorders)	1	C
23	Coronary care unit	Infusion pump	10	B
24	Dental & Maxillofacial	Dental unit	1	A
25	Dental & Maxillofacial	Dental chair for maxillofacial operation	1	B
26	Dermatology	Black light	1	A
27	Dermatology	Infrared/ultraviolet lamp	1	A
28	Dermatology	Microscope	2	B
29	Emergency	Blood gas analyzer	1	C
30	Emergency	Pulseoxymeter	2	B
31	Emergency	Defibrillator	2	A
32	Emergency	ECG (multi-channel)	2	A
33	Emergency	Reanimation set	4	A
34	Emergency	Laryngoscope	4	B
35	Emergency	Patient monitor	2	B
36	Emergency	Stretcher	4	B
37	Emergency	Wheel chair	4	B
38	Emergency	Ultrasound	1	B
39	Emergency	Suction pump	5	B
40	Emergency	Blood pressure apparatus	10	B
41	General (Ope. room)	Cabinet for instruments	12	A
42	General (Ope. room)	Electrocauter (bi/mono-polar)	10	A
43	General (Ope. room)	Multi purpose operation table	9	A
44	General (Ope. room)	Operation lamp (ceiling type)	11	A
45	General (Ope. room)	Mobile light	7	B
46	General (Ope. room)	Operation microscope (multi-purpose)	1	A
47	General (Ope. room)	Patient monitor for operation	10	A
48	General (Ope. room)	Suction pump	12	A
49	General (Ope. room)	Washing machine for surgical instrument	4	A
50	General (Ope. room)	Table top autoclave	5	B
51	General (Ope. room)	CO2 monitor	2	B
52	General (Ope. room)	Neuromuscular transmission monitor	2	B

# Equipment List (2/4)

Annex-1

No	Site	Equipment	Quantity	Priority
53	GY.OB.	Colposcope	1	A
54	GY.OB.	Delivery monitor CTG	2	A
55	GY.OB.	Gynecology examination table	2	A
56	GY.OB.	Laparoscope set	1	A
57	GY.OB.	Mobile light	1	A
58	GY.OB.	Ultrasound with vaginal probe	1	A
59	GY.OB.	Vacuum extractor	2	A
60	GY.OB.	Curettage instrument set	3	B
61	GY.OB.	Amnioscopy instrument set	2	B
62	GY.OB.	Instrument set for episiotomy	3	B
63	GY.OB.	Abdominal hysterectomy instrument set	2	B
64	GY.OB.	Vaginal hysterectomy instrument set	2	B
65	GY.OB.	Cesarean section instrument set	2	B
66	GY.OB.	Cusco vaginal speculum	10	B
67	GY.OB.	Microscope	1	B
68	GY.OB.	Delivery bed	3	B
69	GY.OB.	Operation table for gynecology	1	B
70	ICU	Blood gas analyzer	1	C
71	ICU	Pulseoxymeter	2	B
72	ICU	Bronchofiberscope	1	C
73	ICU	Laryngofiberscope	1	B
74	ICU	Central patient monitor system (8 beds)	1	A
75	ICU	Critical care bed	8	A
76	ICU	ECG	1	A
77	ICU	Defibrillator	1	A
78	ICU	Infusion pump	12	A
79	ICU	Mobile ventilator for transport of critical ill patient	1	A
80	ICU	Mobile X-ray apparatus	1	A
81	ICU	Suction pump	8	A
82	ICU	Ultrasound	1	A
83	ICU	Ventilator	6	A
84	ICU	Blood pressure apparatus	8	B
85	Infectious D.	ECG	1	A
86	Infectious D.	Microscope	1	A
87	Infectious D.	Rectoscope	1	A
88	Infectious D.	Ultrasound	1	A
89	Infectious D.	X-ray film illuminator	1	A
90	Infectious D.	Table top autoclave	1	B
91	Infectious D.	Suction pump	2	B
92	Internal Medicine	Bronchofiberscope	1	A
93	Internal Medicine	Cabinet for endoscopy	1	A
94	Internal Medicine	Cleaner for endoscopy	1	A
95	Internal Medicine	Colonofiberscope	1	A
96	Internal Medicine	Duodenofiberscope	1	A
97	Internal Medicine	ECG (multi-channel)	2	A
98	Internal Medicine	Gastrofiberscope	2	A
99	Internal Medicine	Haemodialysis apparatus	5	A
100	Internal Medicine	Rectoscope	1	A
101	Internal Medicine	Ultrasound (Doppler)	1	A
102	Internal Medicine	Ultrasound	1	B
103	Internal Medicine	Video monitor system for endoscopy	1	A
104	Internal Medicine	Spirometer	1	B

# Equipment List (3/4)

Annex-1

No	Site	Equipment	Quantity	Priority
105	Internal Medicine	Stress test system	1	B
106	Internal Medicine	Microscope	1	B
107	Mental Health	Audiometer	1	C
108	Mental Health	EEG	1	A
109	Neonatology	CO2 gas analyzer	1	C
110	Neonatology	Blood gas monitor	1	B
111	Neonatology	ECG for neonate	1	A
112	Neonatology	Incubator	4	C
113	Neonatology	Infant warmer	2	A
114	Neonatology	Infusion pump	3	A
115	Neonatology	NICU monitor	4	A
116	Neonatology	Phototherapy unit	2	A
117	Neonatology	Ventilator for neonate	1	A
118	Neonatology	Laryngoscope for neonate	1	B
119	Neonatology	Ultrasound for infant/neonate	1	B
120	Neurology	EEG	1	C
121	Neurology	Electromyography (multi-channel)	1	B
122	Endocrinology	Ultrasound	1	B
123	Endocrinology	ELISA	1	B
124	Ophthalmology	Autorefractometer	1	A
125	Ophthalmology	Ophthalmic ultrasonoscope (B mode)	1	C
126	Ophthalmology	Perimeter	1	A
127	Ophthalmology	Phaco	1	C
128	Ophthalmology	Argon laser	1	B
129	Ophthalmology	Slit lamp with tonometer	2	A
130	Orthopedic	Bone drill set	1	A
131	Orthopedic	Operating table with extension	1	A
132	Orthopedic	Mobile X-ray apparatus with TV (C-arm)	1	B
133	Orthopedic	Arthroscope	1	B
134	Otorhinolaryngology	Audiometer with silent room	1	A
135	Otorhinolaryngology	Bronchoscope set (rigid)	1	A
136	Otorhinolaryngology	Laryngostroboscope set	1	A
137	Otorhinolaryngology	Oesophagoscope	1	A
138	Otorhinolaryngology	Rhino septoplastic set	1	A
139	Otorhinolaryngology	Sinus scope	1	A
140	Otorhinolaryngology	Examination chair	3	B
141	Otorhinolaryngology	head light	2	B
142	Pediatric	CO2 gas analyzer	1	C
143	Pediatric	Pulseoxymeter	1	B
144	Pediatric	ECG for pediatric use	2	A
145	Pediatric	Infant incubator	2	A
146	Pediatric	Milk warmer	1	A
147	Pediatric	Patient monitor	2	A
148	Pediatric	Suction pump for pediatric use	2	A
149	Pediatric	Ventilator	2	C
150	Pediatric	Infusion pump	2	B
151	Pediatric	Spirometer	1	B
152	Physiotherapy	Electromyography	1	A
153	Physiotherapy	Electrostimulator	1	A
154	Physiotherapy	Modern equipment for kinesi therapy	1	A
155	Physiotherapy	Short wave therapy	1	A
156	Physiotherapy	Whirlpool	1	A

# Equipment List (4/4)

Annex-1

No	Site	Equipment	Quantity	Priority
157	Pulmology	Bronchofiberscope	1	A
158	Pulmology	ECG	1	A
159	Pulmology	Microscope	1	A
160	Pulmology	Spirometer	1	A
161	Pulmology	Mobile X-ray apparatus	1	B
162	Pulmology	Stretcher	2	B
163	Pulmology	Wheel chair	2	B
164	Pulmology	Apparatus for developing X-ray films	1	B
165	Sterilization	Sterilizer	4	A
166	Sterilization	Sterilizer (formalin)	1	A
167	Surgery	Mobile operating light	1	A
168	Surgery	Recto-sigmoidoscope	1	A
169	Surgery	Table top autoclave	2	A
170	Surgery	Duodenofiberscope	1	B
171	Surgery	Gastrectomy instrument set	2	B
172	Surgery	Cholecystectomy instrument set	2	B
173	Surgery	Thoracic surgery instrument set	2	B
174	Surgery	Pediatric surgery instrument set	1	B
175	Urology	Cystoscope set	1	A
176	Urology	Endoscopy table for urology	1	A
177	Urology	Resectoscope set	1	A
178	Urology	Uretero-renofiberscope set	1	A
179	Urology	Ureteroscope with stone punch	1	A
180	Urology	Video monitor system for endoscopy	1	A
181	Urology	Ultrasound	1	B
182	X-Ray unit	Angiography	1	C
183	X-Ray unit	Apparatus for developing X-ray films	2	A
184	X-Ray unit	DSA unit	1	C
185	X-Ray unit	Mammography	1	A
186	X-Ray unit	Remote control fluroscopy	1	A
187	X-Ray unit	Ultrasound	2	A
188	X-Ray unit	Ultrasound (Doppler)	1	B
189	X-Ray unit	X-ray apparatus	1	A
190	X-Ray unit	X-ray film illuminator	2	A
191	X-Ray unit	Panoramic dental radiography	1	B
192	General	Washing mashine for cloth	4	B
193	General	Drying machine for cloth	4	B
194	Infusion room	Fumehood	2	B
195	Infusion room	Analytical balance	2	B

(Note) A: Equipment shall be procured in the Project  
 B: Equipment shall be provided in case of the budget allowance  
 C: Equipment shall be excluded from the Project

## Criteria for Selection of Equipment

### 1. Criteria for giving high priority

- Equipment that is to be replaced for existing old/deteriorated equipment
- Equipment that is to be a supplement for the equipment lacking distinctly in its quantity
- Equipment that is required for basic hospital treatment/diagnosis.
- Equipment that is easy to operate and maintain
- Equipment that may give much benefit/effect to hospital
- Equipment that highly cost-effective
- Equipment that is proven for its medical usefulness (necessity)
- Equipment that can be operated by hospital's current technical capabilities.
- Equipment that can be operated/maintained by hospital staff
- Equipment that matches with hospital's social position/function (referral system, local needs)
- Equipment that can be expected to be useful with other donor's assistance

### 2. Criteria for giving low priority

- Equipment that required expensive operation/maintenance cost
- Equipment that has limited benefit/effect to hospital
- Equipment that is lowly cost-effective
- Equipment that is not for treatment/diagnosis use, but for academic research purposes
- Equipment that can be substituted with simple ones
- Equipment that may cause environmental pollution by its medical waste etc.
- Equipment that is not proven for its medical usefulness (necessity)
- Equipment that is for personal usage by hospital staffs (not medical use)
- Equipment that has more than minimum required quantity (inefficient, repetitive equipment)
- Equipment that is difficult to locally procure its spare parts and consumables
- Equipment that cannot be operated by hospital's current technical capability
- Equipment that seems to be difficult to operate/maintained by present hospital's staff
- Equipment that does not match with hospital's social position/function (referral system, local needs)
- Equipment that requires large scope of infrastructure work (water, electricity supply, drain, etc.) for its installation
- Equipment that can be substituted by efficient usage of existing equipment