

## **Chapter 3. Implementation Plan**

## CHAPTER 3. IMPLEMENTATION PLAN

### 3-1 Implementation Plan

#### 3-1-1 Implementation Concept

This project will be implemented officially in accordance with the grant aid framework of the Government of Japan after approval of both Japanese and Uzbek Governments and the conclusion of the Exchange of Notes (E/N). Prior to the implementation, a Japanese consulting company will be selected by the Uzbek side, and the approval of tender documents of equipment will start. After completion of tender documents, a Japanese equipment procuring company which will be chosen by tender for the project will implement actual work of equipment procurement and installation. The contracts on the consultation and the equipment procurement will come into effect after approval of the Government of Japan.

For the implementation of the project conducted within the framework of the Japan's grant aid, the following items should be considered:

- (1) The work schedule should be confirmed by both Japanese and Uzbek staff in charge. Both sides should clarify the scope of work and the starting and completion dates to avoid setting complicated construction plans.
- (2) In order to shorten the construction period as much as possible, the equipment procuring company must investigate project facilities two months before delivery of equipment. The company also must check delivery routes, power supply, water supply and drainage, and prepare a bringing-in schedule.
- (3) It is considered to take about one month for installation and

bringing-in, and if the construction work takes longer time than expected and is done in the coldest season, it may be difficult to do foundation work including ground concrete work. Therefore, two installation teams will be sent in order to shorten the construction period.

- (4) As for foundation work for X-ray machines and laundries which should be covered by Uzbekistan, accurate estimates of installation work should be submitted to the Uzbek Government immediately after types of equipment are decided so that the Uzbek side can make a budget plan, and any delay of the work due to unfixed budget can be avoided.
- (5) An instruction and training seminar will be held for Uzbek engineers, at which the procuring company will teach operation and maintenance methods for main equipment.
- (6) As for large-size medical equipment such as X-ray machines, ultrasound apparatus and biochemical analyzers procured by a third party which need maintenance, each manufacturer of the equipment or sales engineers of the procuring agents will give instruction in installation and maintenance.
- (7) As for equipment procured in Japan, Japanese engineers specializing in electronic medical equipment and general medical equipment will give instruction in installation and maintenance.

### 3-1-2 Implementation Conditions

Taking into account that the project facilities are the medical facilities in practice, the procurement schedule, routes, places for safekeeping and delivery and installation procedures should be duly considered through the consultation with each project facility so

that the daily medical activities may not be disturbed. Especially in case of renewal, sufficient consultation should be made to avoid long unavailability of the equipment caused by the removal, and prompt installation will be required for the stable medical activities.

### 3-1-3 Scope of Works

(1) The scope of responsibility of the Japanese side in accordance with the grant aid scheme of this project covers the procurement and subsequent installation of medical equipment for the three medical facilities. The scope is limited to as described below:

1. The equipment that is shown in the aforementioned equipment plan list.
2. Ocean transport and land transport expenses and domestic transport expenses to the project facilities.
3. Expenses for installation of equipment (expenses for dispatch of engineers, local workers, tools, and measuring meters).
4. Expenses required for carrying out test runs, guidance for operations, inspections and maintenance management relating to all the procured equipment.

(2) Items to be covered by the Uzbek Government

1. During the implementation period of the project, the Uzbek side should accommodate a place to use for a temporary office for this project in each project facility.
2. The infrastructures (electricity, water supply, drainage, and other facilities) needed for the project should be provided or improved before installation of the equipment, and the existing equipment should be removed from places where the

new equipment will be installed.

3. The equipment that will be imported for this project should be unloaded without delay and necessary conveniences for customs clearance and domestic transport should be provided.
4. Payments of customs duties and other taxes should be exempted for the Japanese people who reside in Uzbekistan to implement this project.
5. With respect to the bringing-in of equipment and the service provision required for the implementation of the project by the Japanese people, necessary conveniences for their stay in Uzbekistan should be provided and sufficient considerations should be taken for their security as well.
6. In accordance with the agreement with banks concerned, the Uzbek side should pay bank handling charges and the commission to issue the payment authorization to Japanese bank that handles the foreign exchange.
7. The equipment procured through the grant aid should be maintained properly and used effectively. For this purpose, necessary budget and personnel should be assured.

#### 3-1-4 Consultant Supervision

##### (1) Implementation system

This project is implemented by the following four parties:

##### 1) Project implementing body

The responsible agency for this project is the Department of

Health of the Uzbek Government, and the Department of Health of the Government of Karakalpakstan is the responsible executing agency. The project facilities are three medical facilities. The director of the Department of Health of the Uzbek Government is in charge of actual work of the project.

2) Consultant

Since the project is implemented under the Japanese grant aid program, it is stipulated by its rule that a Japanese consultant gives instructions, advises, and coordinates from a fair standpoint throughout the tender, and implementation based upon the contract with the implementing organization of Uzbekistan. Besides, the consultant performs necessary work for smooth implementation of the project.

The specific tasks are as follows:

\* Approval of tender document

Confirmation of tender documents for procurement (tender conditions documents, equipment specifications and budget reports).

\* Promotion of tender and procurement contract

Decision on the procurement contract system, preparation of procurement contract draft, examination on the contents of equipment installation work report, and selection of procurement agents (public announcement of tender, tender and tender evaluation, contract negotiation and contract witnessing).

\* Inspection and approval of work execution drawings

Inspection and approval of equipment specification reports, work execution drawings, and work execution plans submitted by the procurement agents.

\* Report on work progress

Report on progress of work execution to the implementing body and the related organizations.

\* Cooperation in payment approval procedures

Investigation of bills relating to the remuneration to be paid after shipment and cooperation in these procedures.

\* Consulting work

Witnessing of various works from the beginning through the completion.

3) Equipment procurement agent

A Japanese agent (trading company) who will be selected by tender implements procurement of equipment. The agent, based upon the contract with the Uzbek side, is responsible for manufacturing, supply, bringing-in, and installation of equipment, and gives instructions on equipment operations and maintenance management to the Uzbek side before delivery.

4) JICA

Japan International Cooperation Agency (JICA) leads the consultant and the procurement agent so that the project can be implemented properly in accordance with the Japan's grant aid system. Moreover, JICA consults with the implementing organization as required to further the project.

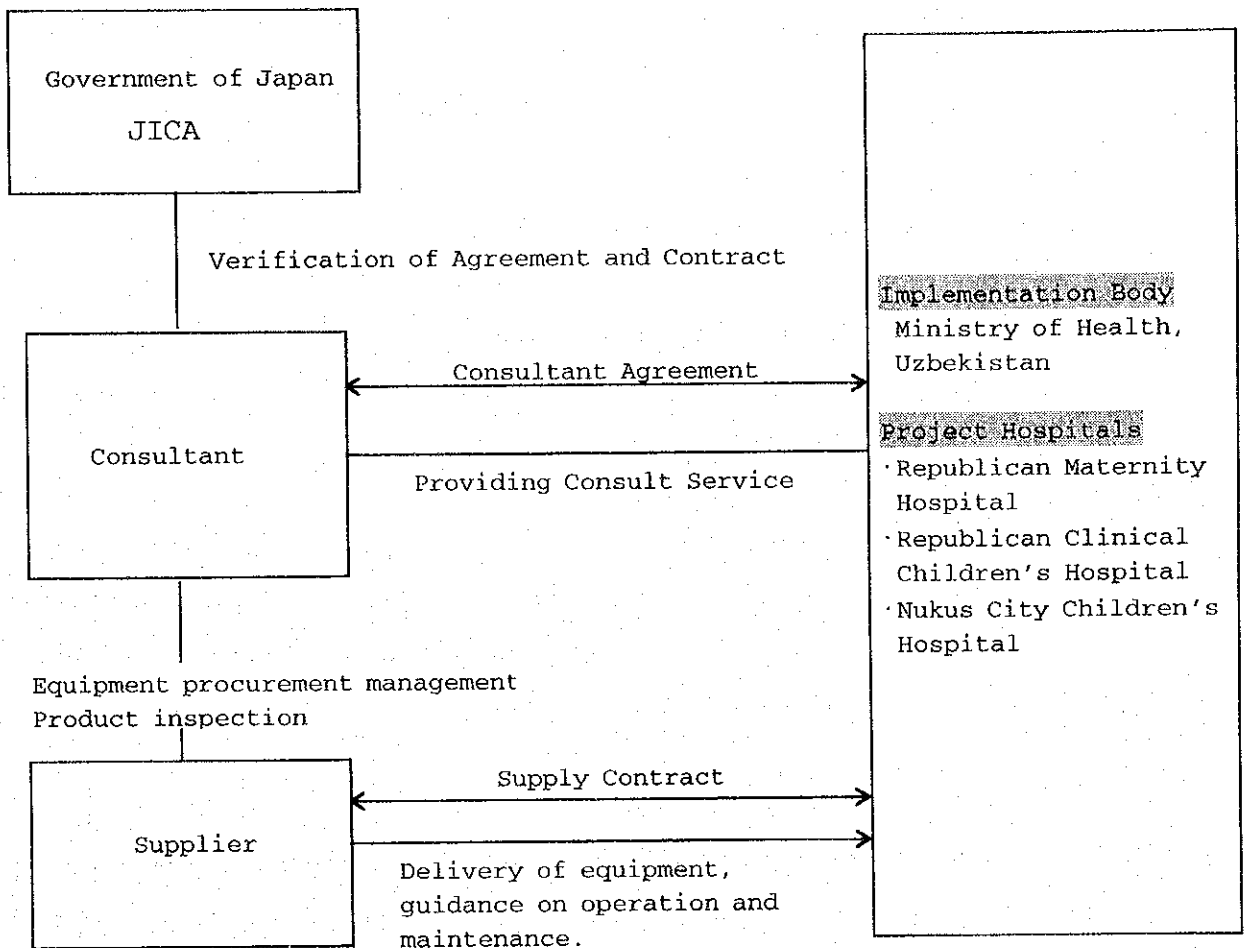


Figure 3-1 Implementation Flow Chart

(2) Implementation design and supervision

The consultant, based on the contract with the Uzbek side, performs the implementation design and supervision for the project. The implementation design is made to determine detailed specifications and prepare the tender documents comprised of specifications, tender guidance, draft of equipment procurement contract, etc., based on the basic design study. The supervision is made to assure that the work of the procurement agent is



implemented in accordance with the contract, and to give instructions, advice and coordination from a fair standpoint to promote the project.

The supervision consists of the following:

1) Stage of implementation design

Confirmation of tender documents, preparation for tender and contract documents.

2) Stage of tender

Prior screening of applicants for tender, implementation of tender, evaluation of the contents of tender, and conclusion of contract.

3) Stage of work execution

Supervision of work execution (inspection and approval of equipment specifications, supervision of shipment, marine transport, and inland transport, instructions and supervision of installation, and supervision of work to be covered by the partner country), report on the work execution progress, and issuance of certificates. (Upon confirming that the equipment installation is completed and the contract conditions are conformed, the consultant witnesses delivery of the equipment and completes its duty after obtaining acknowledgment of receipt of the equipment from the Uzbek side.)

Besides the above-mentioned work, the consultant reports on the progress, payment procedures, and completion of delivery, etc. to those concerned of the Government of Japan.

(3) Personnel plan

Those who will be engaged in the consulting operation for the implementation design and the supervision of the work execution are as follows:

1) Project manager : 1 person

The project manager will supervise the whole consulting operation.

2) Medical equipment plan I: 1 person

This person will analyze the planned.

2) Medical equipment plan II: 1 person

This person will test procured equipment before transportation and also lead test workings at project facilities.

3) Arrangements plan : 1 person

This person will confirm the execution of improvement works at project facilities.

3-1-5 Procurement Plan

(1) Procurement of equipment

Equipment applied to the following items will be procured by a third country, i.e. a country in Europe or U.S.A.

1) Equipment generally used at the project facilities, with which Uzbek medical personnel are familiar.

2) Medical equipment manufacturers and agents handling the

equipment have their own maintenance network and offer a reliable maintenance system in Uzbekistan or in Moscow.

- 3) Replacement parts and consumables of the equipment are available on site.

Other equipment should be selected after examining reliability of delivery date and appropriateness of procurement prices.

Table 3-2 Equipment to be procured by a third country

Equipment	Expected Country	Equipment	Expected Country
Anesthetic Apparatus	EU, USA	Mobile x-ray Unit	EU
Autoclave for Sterilization of Glassware	EU	Neonatal Monitor	EU, USA
Billirubinmeter	EU	Operating Table	EU
Biochemical Analyzer	EU	Operation Lamp (ceiling type)	EU
Delivery Table	EU	Patient Monitor	EU, USA
Diagnostic X-ray Unit with TV-system	EU	Phototherapy Unit	EU, USA
Doppler Heart Rate Detector	EU, USA	Portable Defibrillator / cart	EU, USA
ECG, 3-ch., portable	EU, USA	Pulse Oximeter	EU
EEG	EU, USA	Spectrophotometer	EU
Electrosurgical Unit	EU	Stand Lamp	EU
Fetal Monitor	EU, USA	Stand Lamp with Battery	EU
High Pressure Steam Sterilizer	EU	Suction Unit, Portable	EU
Hot Air Sterilizer	EU	Table Top Centrifuge	EU
Infant Incubator	EU, USA	Ventilator	EU, USA
Infant Warmer	EU, USA	Water Distilling Unit	EU
Laboratory Incubator	EU		

(2) Method to bring in the medical equipment

Procured equipment will be transported to the Lianyungang Port by sea and to Tashkent by train, and then to Nukus by land.

Equipment procured by a third country will be once collected in Hamburg and transported to Tashkent by train, and then delivered to the project medical facilities. In order to protect from damage and robbery, the equipment will be packed in containers on each facility: the Lianyungang Port and Hamburg.

### 3-1-6 Implementation Schedule

#### (1) Implementing process

When Cabinet meetings of the Government of Japan approves this project and the Exchange of Notes (E/N) relating to the implementation is concluded between both relevant countries, the project will be carried out in the following procedures:

1. Conclusion of the E/N between both governments.
2. Conclusion of agreement between the implementing organization and Japanese official foreign exchange banks on payment of the grant aid fund from the Japanese side required for the project (Banking Arrangement).
3. Conclusion of the consulting contract between the implementing organization and the Japanese consultant.
4. Payment by the implementing organization and issuance of authorization to pay for consulting contract.
5. Verification of the above contract and approval of payment by the Government of Japan.
6. Implementation design and preparation of tender documents by the consultant.
7. Approval of the tender documents by the implementing organization and preparation of tender by the consultant.
8. Tender and evaluation of tender documents.
9. Conclusion of agent contract (sales contract) relating to equipment procurement between the implementing organization

and a Japanese trading company.

10. Verification of the above contract by the Government of Japan.
11. Issuance of authorization to pay according to the agent contract (sales contract) by the Department of Health of the Uzbek Government.
12. Approval to manufacture of equipment and work execution drawings. (The consultant examines and approves specifications to be submitted by equipment suppliers, gives necessary instructions, and coordinates through close contacts with the Department of Health in order to execute the work smoothly.)
13. Equipment witnessing inspection. (The consultant witnesses factory inspection before shipment as required and approves the inspection as the proxy of the Department of Health of the Uzbek Government.)
14. Work execution management. (In accordance with the contract, the consultant, as the proxy of the Department of Health, scrutinizes and approves the specifications, inspects and approves the equipment, supervises shipment and inland transportation, instructs the installation, and supervises work execution covered by the partner country.)
15. Progress management. (The consultant supervises work progress so that the equipment procurement contract can be completed within the period stated in the E/N, and gives necessary directions to the supplier.)
16. Final inspection and test runs. (The consultant conducts work completion inspection and commissioning of the procured equipment, confirms the performances described in the specifications, and submits a certificate of completion to the Department of Health of the Uzbek Government.)
17. Completion and hand-over.

(2) Period of implementation

After the conclusion of the E/N, the period required for each task on the Japanese side is roughly as follows:

Table 3-3 Period of implementation and content of work

Content of Work	Phase I
1. Confirmation of tender documents	1.0
2. Approval of tender documents	0.8
3. Tendering, conclusion of contract and approval	1.3
4. Manufacture of equipment	3.0
5. Transportation	0.5
6. Installation (including an initial test, adjustment, operation guidance, training, maintenance instruction and confirmation of hand-over, etc.)	2.8
Total	9.7 months

The work progress chart is the following:

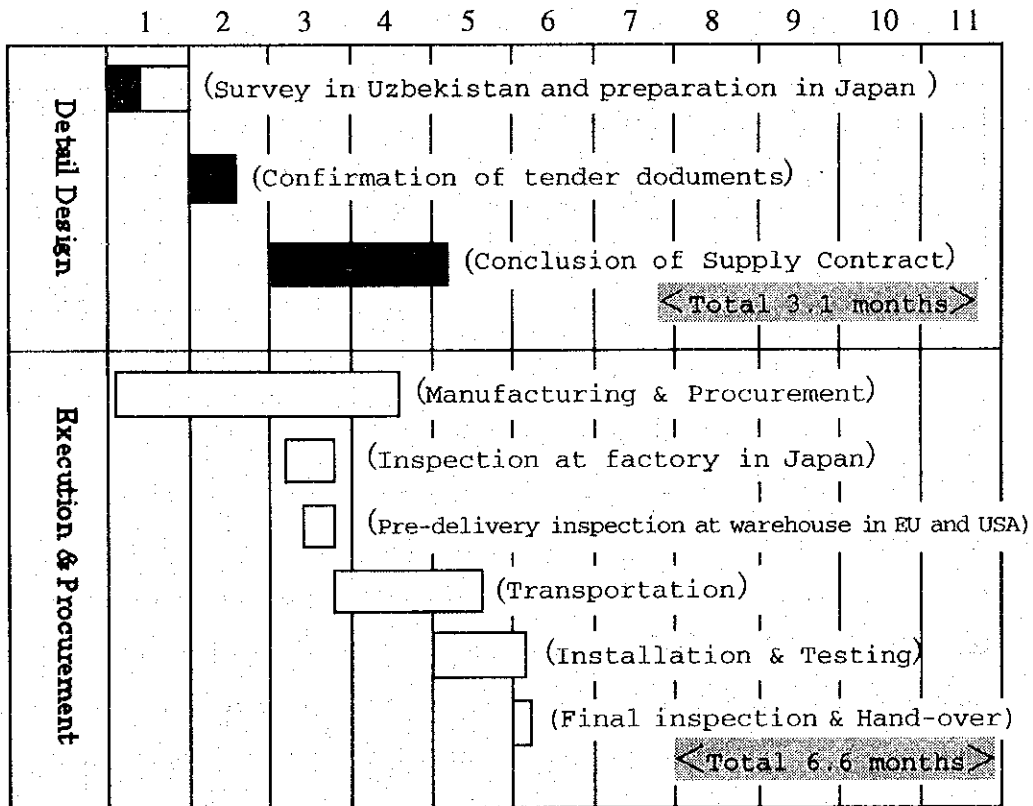


Figure 3-4 Work execution

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

For the implementation of this project, Uzbekistan is required to undertake the following necessary measures:

- (a) To execute all items stated in (2) of Chapter 3-1-3.
- (b) To maintain and use the equipment purchased under the grant aid program properly and effectively, and to report its condition to the Government of Japan on a regular basis.
- (c) To bear all the expenses other than those to be borne by the grant aid within the scope of the project.

### 3-2 Project Cost Estimation

#### 3-2-1 Costs covered by the Government of Uzbekistan

It costs approximately US\$1,000 as repair work of the X-ray Room.

FACILITY	AMOUNT
Republican Maternity Hospital	\$7,116.00
Republican Clinical Children's Hospital	\$1,569.00
Nukus City Children's Hospital	\$1,313.00
Total	\$9,998.00

#### 3-2-2 Maintenance and Management Plan

##### (1) Maintenance plan

The equipment provision of the project aims at replacing the existing equipment which have been getting too old to use and supplementing the insufficient equipment. Therefore, there will be only a few operational and technical constraints in maintenance and management after installation of the equipment.

(2) Maintenance budget

Maintenance costs for replacement parts, consumables and maintenance are in Table 3-5.

Table 3-5 Estimated maintenance costs

(Unit : thousand sum)

Project Site	Operation & Maintenance Cost
① Republican Maternity Hospital	2,188
② Republican Clinical Children's Hospital	2,088
③ Nukus City Children's Hospital	984

\*The objectives are the equipment for new supplement and renewal.

In 1997 annual maintenance costs amounting to approximately 5.0 million sum were allocated to the project facilities. Maintenance costs after the implementation of the project will increase by about 18% at least, by over 44% at most against the 1997 budget.

However, management costs of the project facilities have been increased about 100% every year from 1995 to 1997, about 35% after calculation with the inflation rate of that period of 65%. It is judged that the Governments of Uzbekistan and of Karakalpakstan will be able to cover the maintenance cost which is expected to increase 44% after the execution of this project.

Amounts of those management costs, moreover, are adjustable to the actual conditions of each project facility, such as the number of patients, types of disease on which a facility is working. When a new equipment is installed, additional management cost will be provided if necessary.

The MOH of Uzbekistan promised to increase the MOH budget of Karakalpakstan because the project facilities are the top referral hospitals in Karakalpakstan. Moreover, the Government of Karakalpakstan decided to provide special management budgets for new equipment procured by the project.



It is judged that the increased amount of maintenance and management costs after execution of this project will be covered by the Government of Uzbekistan and of Karakalpakstan since sufficient budget arrangements have been made by both of them.

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

4

# THE UNIVERSITY OF CHICAGO

THE DIVISION OF THE PHYSICAL SCIENCES

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

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## CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION

### 4-1 Project Effect

#### 4-1-1 Demonstration and Verification of Appropriateness

Beneficiaries of the project will be mothers and children living in Karakalpakstan, including those who are not economically fortunate, 350 thousand of mothers and 180 thousand of children under five. By arranging medical equipment for the hospitals under this project and by using it effectively, health care services for mothers and children in Karakalpakstan are expected to improve. It will also better the health condition of local residents and promote the ongoing "Mothers and Children's Health Improvement Plan."

Since the object of this project are mainly to upgrade existing equipment of project hospitals, there will be no particular problems in operation and maintenance services. Equipment requiring maintenance services will be procured from a manufacturer which has its maintenance service agent in Uzbekistan or in neighboring countries, that is, maintenance service can be provided by private enterprises. It should be noted that equipment which may cause negative influence on the environment is not included in this project. Under these conditions the grant aid program of Japan will be able to perform its role effectively without any difficulties.

Considering that this project has the same goal as "BHN," and aims at improvement of life of local residents, it can be judged that the implementation of the project under the grant-aid program by the Japanese government is appropriate.

#### 4-1-2 Benefit Effects

The following effects can be expected after the execution of the project:

- (1) Installation of new X-ray unit will contribute to accurate diagnoses and appropriate treatment by providing clear X-ray pictures necessary for the examination of perinatal diseases and traumas in the respiratory and the digestive system of children.
- (2) By procuring equipment for functional examination such as ultrasound apparatus, electrocardiograph and endoscopic, examination and diagnosis of the digestive and the circulatory system of pregnant women and children can be done precisely and smoothly to provide appropriate treatment.
- (3) By procuring equipment for clinical medicine departments such as spectrophotometer and hematology analyzer, clinical examination and diagnosis of pregnant women and neonates can be done precisely as well as appropriate treatment can be expected.
- (4) By procuring equipment for obstetrical departments such as delivery table, fetal monitor and suction unit, accurate monitoring of the mother's body and a fetus and safe delivery can be done, which can be expected to solve problems of high mortality rates of mothers and neonates.
- (5) By procuring equipment for neonates and infants departments such as neonatal monitor and infant incubator, precise observation and treatment of neonates and infants can be expected.

- (6) By procuring equipment for CCU such as operating table, anesthesia apparatus and patient monitor, safe operation of patients including mothers and children can be done as well as appropriate patient monitoring and treatment including after-operation observation can be expected.
- (7) Since facilities of the project are of top referral hospitals in Karakalpakstan, they will be able to offer precise diagnosis and treatment not only to the local residents also to patients transferred from lower referral hospitals by those improvements noted above. It will make it possible to regain the reliability of regional referral systems.

#### 4-2 Technical Cooperation / Cooperation with Other Donors

Most equipment procured by this project are for renewal and supplement to existing equipment, which can be operated with current technical level of each facility. The Uzbek side guarantees to arrange reeducation program to use new equipment whose operating system has changed remarkably such as X-ray unit, ultrasound apparatus and patient monitor, even if it is renewed. Then the technical cooperation from the Japanese side is considered not necessary.

Uzmedtechnica (Medtechnica), the half-national and half-private corporation, will be in charge of the maintenance system. To assist the improvement plan of maintenance and management section, however, a training program is recommended for maintenance staff.

International organizations such as USAID, WHO and UNICEF, have been providing support programs to Uzbekistan with careful attention not to overlap each other. This project is also independent from others in equipment arrangement and work execution.

#### 4-3 Recommendation

As mentioned above, this project is expected to bring large effects and to contribute to the improvement of the BHN of local population. Therefore, implementation of this project is considered effective. In addition, there may be no particular problem of personnel and funds on the Uzbek side.

However, in order to execute this project more smoothly and effectively, followings should be taken into consideration:

1) Purpose of the project is to procure medical equipment to solve problems with which the project facilities are facing such as the deterioration of diagnostic function. To support the "Mothers and Children's Health Improvement Plan" currently promoted by the Uzbek government, it is also necessary to establish its "software" (system) as well as "hardware" (equipment). Thus, the following ideas are recommended:

① Educational program should be given to local residents to recognize the importance of health care so that they consult a doctor and take medical treatment at an early stage. This will contribute to establish a low-cost medical system.

② Medical staff should be educated about the missions of medical service staff to understand social morals and to stimulate their motivation.

2) This project includes equipment which require management and maintenance costs. And, some equipment needs maintenance services based on maintenance contracts with manufacturers. In order to use

the equipment effectively for a long term, a budget for the maintenance services should be secured.

3) In order to clarify both effects and problems after the implementation of this project, annual reports on performance results of the facilities, operational conditions, and contract conditions of maintenance services should be submitted to the Japanese side as operation report every five years. Please refer to the Appendix 6, "Form of Record."

4) In order to make this project work more effectively, maintenance and management system should be established by assigning maintenance engineers to each facility to improve maintenance system as well as daily mechanical inspection.



## **Appendices**

The Project for Supply of Medical Equipment in Karakalpakstan  
Member of the B/D Study Team

1. Team Leader / Takeki SHIINA  
Bureau of International Cooperation, International Medical  
Center of Japan, Ministry of Health and Welfare
2. Project Coordinator / Makoto IMAMURA  
First Project Study Division, Grant Aid Project Study Department,  
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3. Project Manager / Shinichi KIMURA  
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4. Equipment Planner I / Kenji IWASAKI  
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5. Facility Planner / Shigeru OGURA  
BINKO LTD.
6. Cost and Procurement Planner / Takashi OGAWA  
BINKO LTD.
7. Interpreter / Yukichi GOTO  
BINKO LTD.

Appendix 1.

The Project for Supply of Medical Equipment in Karakalpakstan  
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1. Team Leader / Takeki SHIINA  
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5. Cost and Procurement Planner / Takashi OGAWA  
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Appendix 2. Survey Schedule

Schedule on Basic Design Study

DATE	Official Member	Consultant / Chief (with Official Member)	Equipment Planner (with Official Member)	Facility Planner	Procurement/ Cost Estimator (with Official Member)	Interpreter (with Official Member)
1 1/Sept.	Tue Naria → Seoul → Tashkent	◇	◇		◇	◇
2 2/Sept.	Wed Embassy of Japan Discussion with Ministry of Health of Uzbekistan	◇	◇		◇	◇
3 3/Sept.	Thu Discussion with MOH of Uzbekistan Scientific Research Institute of Pediatric Tashkent → Nukus	◇	◇		◇	◇
4 4/Sept.	Fri Nukus City Children's Hospital Discussion with MOH of Karakalpakstan	◇	◇		◇	◇
5 5/Sept.	Sat Discussion with MOH of Karakalpakstan	◇	◇		◇	◇
6 6/Sept.	Sun Village Medical Post in Nukus Region	◇	◇		◇	◇
7 7/Sept.	Mon Republican Clinical Children's Hospital Discussion with MOH of Karakalpakstan (PCM Workshop)	◇	◇		◇	◇
8 8/Sept.	Tue Republican Maternity Hospital Discussion with MOH of Karakalpakstan	◇	◇		◇	◇
9 9/Sept.	Wed Republican Children's Infection Disease Hospital Discussion with MOH of Karakalpakstan	◇	◇		◇	◇
10 10/Sept.	Thu Nukus → Tashkent Discussion with MOH of Uzbekistan Signing on "Minutes of Discussion" Report to Embassy of Japan	◇	Republican Maternity Hospital		◇	◇
11 11/Sept.	Fri Agent Survey	◇	Republican Clinical Children's Hospital		(with Consultant/ Chief)	◇
12 12/Sept.	Sat Tashkent → Frankfurt Frankfurt → Naria	◇	Nukus City Children's Hospital	Naria → Delhi	◇	◇
13 13/Sept.	Sun Team Meeting	◇	Documentation	Delhi → Tashkent Team Meeting	◇	◇
14 14/Sept.	Mon Tashkent → Nukus	◇	Republican Maternity Hospital	Tashkent → Nukus	(with Consultant/ Chief)	(with Consultant/ Chief)
15 15/Sept.	Tue Republican Clinical Children's Hospital Discussion with MOH of Karakalpakstan	◇	(with Consultant/ Chief)	(with Consultant/ Chief)	◇	◇
16 16/Sept.	Wed Nukus City Children's Hospital Nukus City Emergency Center	◇	◇	◇	◇	◇
17 17/Sept.	Thu Republican Maternity Hospital	◇	◇	◇	◇	◇
18 18/Sept.	Fri Republican Clinical Children's Hospital	◇	◇	◇	◇	◇

DATE	Official Member	Consultant / Chief	Equipment Planner	Facility Planner	Procurement/ Cost Estimator	Interpreter
19 /Sept. Sat		Nukus City Children's Hospital	"	Nukus City Children's Hospital MOH Meeting	"	(with Facility Planner)
20 /Sept. Sun		Documentation	"	(with Consultant/ Chief)	"	(with Consultant/ Chief)
21 /Sept. Mon		Republican Maternity Hospital	"	"	"	"
22 /Sept. Tue		Republican Clinical Children's Hospital Marketing Research (Maintenance Service Company for Medical Equipment)	"	"	"	"
23 /Sept. Wed		Nukus—Tashkent	Nukus City Children's Hospital	(with Equipment Planner)	(with Equipment Planner)	(with Equipment Planner)
24 /Sept. Thu		Discussion with MOH of Uzbekistan	Republican Maternity Hospital	"	"	"
25 /Sept. Fri		Discussion with MOH of Uzbekistan	Republican Clinical Children's Hospital	"	"	"
26 /Sept. Sat		Agent Survey Discussion with MOH of Uzbekistan	Regional Hospital	"	"	"
27 /Sept. Sun		Documentation	Documentation	"	"	"
28 /Sept. Mon		Discussion with MOH of Uzbekistan	Discussion with MOH of Karakalpakstan Republican Maternity Hospital Nukus—Tashkent	"	"	"
29 /Sept. Tue		Discussion with MOH of Uzbekistan Agent Survey	(with Consultant/ Chief)	(with Consultant/ Chief)	(with Consultant/ Chief)	(with Consultant/ Chief)
30 /Sept. Wed		Call on EPOS/GTZ Call on KFW	"	"	"	"
31 /Oct. Thu		Call on The World Bank Agent Survey	(with Consultant/ Chief)	Facility Research	(with Consultant/ Chief)	(with Facility Planner)
32 /Oct. Fri		Call on UNFPA Tashkent Children's Hospital	"	(with Consultant/ Chief)	"	(with Consultant/ Chief)
33 /Oct. Sat		Marketing Research (Transportation Company)	"	Facility Research Call on UNICEF	"	(with Facility Planner)
34 /Oct. Sun		Documentation	"	(with Consultant/ Chief)	"	"
35 /Oct. Mon		Discussion with MOH of Uzbekistan. Report to Embassy of Japan	"	"	"	"
36 /Oct. Tue		Tashkent—Seoul	"	"	"	"
37 /Oct. Wed		Seoul—Narita	"	"	"	"

Schedule on Draft Basic Design

DATE	Official Member	Consultant / Chief	Equipment Planner	Procurement/ Cost Estimator	Interpreter
1 30/Nov.	Mon Naria →Seoul→Tashkent	← (with Official Member)	← (with Official Member)	← (with Official Member)	← (with Official Member)
2 1/Dec.	Tue Embassy of Japan Ministry of Health of Uzbekistan Tashkent→Nukus	"	"	"	"
3 2/Dec.	Wed Ministry of Health of Karakalpakstan	"	"	"	"
4 3/Dec.	Thu Discussion with MOH of Karakalpakstan Republican Clinical Children's Hospital Republican Maternity Hospital	"	"	"	"
5 4/Dec.	Fri Cabinet of Karakalpakstan Nukus City Children's Hospital Discussion with MOH of Karakalpakstan	"	"	"	"
6 5/Dec.	Sat Documentation	"	"	"	"
7 6/Dec.	Sun Team Meeting	"	"	"	"
8 7/Dec.	Mon Discussion with MOH of Karakalpakstan Nukus→Tashkent	"	Discussion with MOH of Karakalpakstan	← (with Equipment Planner)	← (with Equipment Planner)
9 8/Dec.	Tue Team Meeting	"	Team Meeting	"	"
10 9/Dec.	Wed Discussion with MOH of Uzbekistan & Signing on Minutes Report to EOJ Dinner party by EOJ	"	Republican Maternity Hospital	"	"
11 10/Dec.	Thu Tashkent→Frankfurt→	Discussion with MOH of Karakalpakstan	Republican Clinical Children's Hospital	"	"
12 11/Dec.	Fri Av. Naria	"	Nukus City Children's Hospital Report to MOH of Karakalpakstan	"	"
13 12/Dec.	Sat	Documentation	Nukus→Tashkent	"	"
14 13/Dec.	Sun	Team Meeting	← (with Chief Consultant)	← (with Chief Consultant)	← (with Chief Consultant)
15 14/Dec.	Mon	Tashkent→Seoul→ Naria	"	"	"

## Appendix 3.

The Project for Supply of Medical Equipment  
in Karakalpakstan

## - List of Party Concerned in the Republic of Uzbekistan -

## 【Ministry of Health of Uzbekistan】

Dr. Yarkulov Ahror BAHRAMOVICH	Deputy Minister
Mr. J. Abdunamon SYDIKOV	Chief Department, External Economic Activities
Dr. H. DADAJANOV	Consultant, External Economic Activities
Dr. Abdumalik N. ARIPOV	Professor, Manager of Biochemical Department, Scientific Research Institute of Pediatrics
Dr. Huria Kudiarovna	Director, MCH Div.
Dr. Minkrov Paraut RISKROVICH	Director, Medical Service

## 【Government of Karakalpakstan】

Mr. Tojiev AMIN	Minister
Mr. Tatlimirat ATAMURATOV	Deputy Minister

## 【Tashkent】

Dr. Orchan S. MACHMUDOV	Director Scientific Research Institute of Pediatric
Dr. Abdumalik N. ARIPOV	Chief, Laboratory Dept.
Dr. Dilshod A. UMAROV	Director, Ministry of Medicine Orthopedic -pediatric Hospital

## 【Ministry of Health of Karakalpakstan】

Dr. Babanazarov DAMIR	Health Minister
Dr. Abodullaeva HARIMA	Deputy Minister
Mr. Almukhanov URAKBAI	Director

## 【Nukus City】

Dr. SH. ESHMURATOVA	Director, Republic Maternity Hospital
Dr. R.U.KALNIYAZOVA	Director, Republican Children Clinical Hospital
Dr. M. SEITOV	Director, Nukus City Children Hospital
Dr. O. SABAROV	Director, Republican Infection Disease Hospital
Dr. A. SAPARBAEV	Deputy Director, Nukus Emergency Center

## 【Nukus Region】

DR. Halimof OLIMBAI	Director, Village Medical Post
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## 【Others】

Mr. Zhaksymuratov ELMURAT	Deputy President, MED-TECHNICA
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## 【International Organization and Other Donors】

Ms. Monica Bruns-HOFFMAN	EPOS/GTZ
Mr. M. ACHRULOVA	KFW
Mr. Djasur ISHMUKHAMEDOF	UNFPA
Mr. Andrey PEREVALOV	UNICEF

## 【Embassy of Japan in Uzbekistan】

Mr. Koich OBATA	Ambassador of Japan
Mr. Hiroshi TAKAHASHI	Counsellor
Mr. Satoshi NAKANO	First Secretary
Mr. Kazutaka YOSHIO	Second Secretary

MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY  
ON  
THE PROJECT FOR SUPPLY OF MEDICAL EQUIPMENT  
IN  
KARAKALPAKSTAN

In response to the request from the Government of the Republic of Uzbekistan (hereinafter referred to as "the Government of Uzbekistan" ), the Government of Japan decided to conduct a Basic Design Study on the Project for Supply of Medical Equipment in Karakalpakstan (hereinafter referred to as "the Project" ), and entrusted the Study to the Japan International Cooperation Agency (JICA).

JICA sent to the Uzbekistan a study team (hereinafter referred to as "the Team" ), which was headed by Dr. TAKEKISHIINA, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health and Welfare, and is scheduled to stay in the country from September 1 to October 6, 1998.

The Team held a series of discussions with officials of the Government of Uzbekistan and conducted site surveys of the hospitals.

In the course of the discussions and site surveys, both parties confirmed the main items described on the attached sheets.

The Team will proceed to further work and prepare the Basic Design Study Report.

Tashkent, September 11, 1998

権 記 文 氏

Dr. Takeki Shiina  
Leader,  
Basic Design Study Team, JICA

↓. I. Yarkulov

Dr. Yarkulov Ahror Bahramovich  
Deputy Minister,  
Ministry of Health,  
Republic of Uzbekistan



## ATTACHMENT

### 1. Objective

The objective of the Grant Aid for the Project is to support the hospitals to improve the fundamental medical service through procurement of medical equipment on the principle of the replace of existing old/decrepit medical equipment.

### 2. Project Sites

(In Karakalpakstan)

Republican Maternity Hospital

Republican Clinical Children's Hospital

Nukus City Children's Hospital

### 3. Responsible and Executing Organization.

(1) Responsible Agency - Ministry of Health,  
Republic of Uzbekistan

(2) Responsible Executing Agency- Ministry of Health,  
Republic of Karakalpakstan

(3) Executing Agency - Republican Maternity Hospital  
Republican Clinical Children's Hospital  
Nukus City Children's Hospital

### 4. Items requested by the Government of Uzbekistan.

(1) After discussions with the Team, the following items with priority were finally requested by the Government of Uzbekistan.  
(See Annex 1)

However, the final items of the Grant Aid will be decided after further studies.

(2) The equipment will be selected by the basic criteria attached as Annex 2

### 5. Japan's Grant Aid System

1) The Government of Uzbekistan has understood Japan's Grant Aid System as described in Annex 3.

2) The Government of Uzbekistan 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.

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6. Schedule of the Study

- 1) The consultants will carry out further studies in Uzbekistan until October 6, 1998.
- 2) JICA will prepare a draft Basic Design Report in English and dispatch a mission in order to explain its contents around December, 1998.
- 3) In case the contents of the draft report are accepted in principle by the Government of Uzbekistan, JICA will complete the final report and send it to the Government of Uzbekistan around March, 1999.

7. Monitoring

Each Executing Agency has the responsibility in monitoring and reporting the activity and condition of the equipment by the Project on condition that the Grant Aid by the Government of Japan is extended to the Project. Content of the monitoring will be presented by the draft Basic Design Explanation Mission.

8. Other Relevant Issues

- (1) The Government of Uzbekistan has agreed to secure and allocate budget for the execution of the Project.
- (2) The Government of Uzbekistan has agreed to secure and allocate the enough budget to operate and maintain properly and effectively the equipment of the Project.

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In search

A: High Priority  
 B: Middle Priority  
 C: Low Priority

## Republican Maternity Hospital

No.	Department	Description	Q'ty	Priority
A-1-1	Clinical Lab.	Microscope	5	A
A-1-2	Clinical Lab.	Spectrophotometer	1	A
A-1-3	Clinical Lab.	Blood Gas Analyzer	1	B
A-1-4	Clinical Lab.	Coagulometer	1	A
A-1-5	Clinical Lab.	Biochemical Analyzer	1	A
A-1-6	Clinical Lab.	Laboratory Incubator	1	A
A-1-7	Clinical Lab.	Clinical Refractometer	1	A
A-1-8	Clinical Lab.	Distilling Apparatus	2	1A / 1B
A-1-9	Clinical Lab.	Hematocrit Set	2	A
A-1-10	Clinical Lab.	Laboratory Autoclave	2	1A / 1B
A-1-11	Clinical Lab.	PH-meter	1	B
A-1-12	Clinical Lab.	Electronic Balance	1	A
A-1-13	Clinical Lab.	Medical Refrigerator	1	A
A-1-14	Clinical Lab.	Hemoglobinmeter	1	B
A-1-15	Clinical Lab.	Table Top Centrifuge	1	A
A-1-16	Clinical Lab.	Billirubinmeter	1	A
A-1-17	Clinical Lab.	UV-Hand Washing Apparatus	2	B
A-1-18	Clinical Lab.	Water Bath	2	A
A-1-19	Clinical Lab.	Deep Freezer -40 degrees C	1	A
A-1-20	Clinical Lab.	Film Illuminator	1	B
A-2-1	Functional Diag.	Ultrasound System with B/W Doppler	1	A
A-2-2	Functional Diag.	ECG, 6-ch.	1	A
A-2-3	Functional Diag.	ECG, 3-ch., portable	1	A
A-2-4	Functional Diag.	Diagnostic Gynecologic Chair	2	B
A-2-5	Functional Diag.	Diagnostic Gynecologic Instruments	2	A
A-2-6	Functional Diag.	Stand Lamp	2	A
A-2-7	Functional Diag.	Weighing Scale for adult (100 kg)	2	A
A-2-8	Functional Diag.	Portable Ultrasound Scanner	1	A
A-2-9	Functional Diag.	Sphygmomanometer	4	A
A-2-10	Functional Diag.	Diagnostic Set	4	A
A-2-11	Functional Diag.	Sterilizer for Instruments	4	A
A-2-12	Functional Diag.	Ultrasonic Cleaner	2	B
A-3-1	X-ray	Diagnostic X-ray Unit with TV-system	1	A
A-3-2	X-ray	Dark Room Apparatus Set	1	A
A-3-3	X-ray	Film Developing Laboratory Set	1	A
A-4-1	Ope. Room	Operating Table	2	A

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Republican Maternity Hospital

No.	Department	Description	Q'ty	Priority
A-4-2	Ope. Room	Operation Lamp (ceiling type)	2	A
A-4-3	Ope. Room	Anesthetic Apparatus	2	A
A-4-4	Ope. Room	Ventilator	2	A
A-4-5	Ope. Room	Defibrillator	2	A
A-4-6	Ope. Room	Electrosurgical Unit	2	A
A-4-7	Ope. Room	Suction Unit	2	A
A-4-8	Ope. Room	Operating Monitor	2	A
A-4-9	Ope. Room	Endotracheal set	2	B
A-4-10	Ope. Room	Operating Laparoscope/light	1	A
A-4-11	Ope. Room	Stand Lamp	4	A
A-4-12	Ope. Room	Surgical Instruments for cesarean section	4	A
A-4-13	Ope. Room	Surgical instruments for operations on abdominal cavity organs	4	A
A-4-14	Ope. Room	Surgical (gynecological) Instruments set	3	A
A-4-15	Ope. Room	Infusion Pump	4	A
A-4-16	Ope. Room	Syringe Pump	4	A
A-4-17	Ope. Room	Mobile X-Ray Unit	1	A
A-4-18	Ope. Room	UV Hand Washing Apparatus	2	B
A-4-19	Ope. Room	Stand (MAYO)	2	A
A-4-20	Ope. Room	Billirubinmeter	1	A
A-4-21	Ope. Room	Portable Defibrillator / cart	1	A
A-5-1	Obstetric	Delivery table	10	A
A-5-2	Obstetric	Stand Lamp	10	A
A-5-3	Obstetric	Baby Scale	10	A
A-5-4	Obstetric	Infusion Pump	5	B
A-5-5	Obstetric	Syringe Pump	5	A
A-5-6	Obstetric	Fetal Monitor	4	2A / 2B
A-5-7	Obstetric	Laryngoscope	5	A
A-5-8	Obstetric	Doppler Heart Rate Detector	4	2A / 2C
A-5-9	Obstetric	Suction Unit	10	4A / 6B
A-5-10	Obstetric	Infant Warmer	10	B
A-5-11	Obstetric	Pulse Oximeter	4	A
A-5-12	Obstetric	Infant Incubator	4	B
A-5-13	Obstetric	UV Hand Washing Apparatus	10	C
A-5-14	Obstetric	Infant Weighing Scale	3	A
A-6-1	Neopathology	Infant Incubator	6	A
A-6-2	Neopathology	Ventilator for Infant	2	A
A-6-3	Neopathology	Laryngoscope for infant	2	A
A-6-4	Neopathology	Monitor for infant	2	A
A-6-5	Neopathology	Phototherapy Unit	4	A
A-6-6	Neopathology	Syringe Pump	6	A
A-6-7	Neopathology	Pulse Oximeter	4	A
A-6-8	Neopathology	Infant Warmer	4	A

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Republican Maternity Hospital

No.	Department	Description	Q'ty	Priority
A-6-9	Neopathology	Suction Unit	4	A
A-6-10	Neopathology	Billirubinmeter	1	A
A-6-11	Neopathology	Portable Infant Incubator	1	A
A-7-1	ICU	Recovery Bed	12	C
A-7-2	ICU	Bedside Monitor	6	3A / 3B
A-7-3	ICU	Ventilator	2	A
A-7-4	ICU	Ventilator for Infant	2	A
A-7-5	ICU	Laryngoscope Set	6	4A / 2B
A-7-6	ICU	Syringe Pump	8	A
A-7-7	ICU	Infusion Pump	8	A
A-7-8	ICU	Pulse Oximeter	6	A
A-7-9	ICU	Suction Unit	6	A
A-7-10	ICU	UV Hand Washing Apparatus	2	B
A-7-11	ICU	Resuscitation Bag	3	A
A-7-12	ICU	Nebulizer	3	A
A-7-13	ICU	Oxygen Box for infant	1	C
A-8-1	Reception	Portable Ultrasound Scanner	1	B
A-8-2	Reception	Diagnostic Gynecologic Chair	1	C
A-8-3	Reception	Gynecological Diagnostic instruments	2	A
A-8-4	Reception	Sphygmomanometer	4	A
A-8-5	Reception	Thermometer	50	A
A-8-6	Reception	Stethoscope	10	A
A-8-7	Reception	Scale (100 kgs)	2	A
A-8-8	Reception	Diagnostic Instrument Set	2	A
A-8-9	Reception	Stand Lamp	2	A
A-8-10	Reception	Sterilizer for Instruments	4	A
A-8-11	Reception	Ultrasonic Cleaner	1	C
A-9-1	Rehabilitation	Nebulizer	3	A
A-9-2	Rehabilitation	Low Frequency Therapy Unit	2	A
A-9-3	Rehabilitation	Infrared Ray Lamp	1	A
A-9-4	Rehabilitation	Ultraviolet Ray Lamp	1	A
A-10-1	CSSD	High pressure steam sterilizer	3	A
A-10-2	CSSD	Ultrasonic Cleaner	2	C
A-10-3	CSSD	Sterilizer for Instruments	2	A
A-10-4	CSSD	Water Distilling Unit (large)	1	A
A-10-5	CSSD	Water Distilling Unit (small)	1	B
A-11-1	Pharmacy	Water Distilling Unit	2	C
A-11-2	Pharmacy	Medical Refrigerator	2	A
A-12-1	Laundry	Washing Machine (30 kgs)	3	A
A-12-2	Laundry	Extractor Machine (30 kgs)	2	A
A-12-3	Laundry	Drying Machine	2	C
A-13-1	Administration	Ambulance for Women in labor	1	C

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Republican Maternity Hospital

No.	Department	Description	Q'ty	Priority
A-13-2	Administration	Computer and Laser Printer	1	C
A-13-3	Administration	Copy Machine	1	C

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Republican Clinical Children's Hospital

No.	Department	Description	Q'ty	Priority
B-1-1	Clinical	Microscope	5	A
B-1-2	Clinical	Blood Gas Analyzer	1	B
B-1-3	Clinical	Coagulometer	1	A
B-1-4	Clinical	Biochemical Analyzer	1	A
B-1-5	Clinical	Laboratory Incubator	1	A
B-1-6	Clinical	Clinical Refractometer	1	B
B-1-7	Clinical	Hematocrit Set	1	A
B-1-8	Clinical	Distilling Apparatus	2	1A / 1B
B-1-9	Clinical	Laboratory Autoclave	2	1A / 1B
B-1-10	Clinical	PH-meter	1	B
B-1-11	Clinical	Electronic Balance	1	A
B-1-12	Clinical	Medical Refrigerator	1	A
B-1-13	Clinical	UV Hand Washing Apparatus	2	B
B-1-14	Clinical	Clinical Refractometer	1	B
B-1-15	Clinical	Water Bath	2	A
B-1-16	Clinical	Hemoglobinmeter	1	B
B-1-17	Clinical	Table Top Centrifuge	1	A
B-1-18	Clinical	Billirubinmeter	1	A
B-1-19	Clinical	Deep Freezer -80 degrees C	1	A
B-1-20	Clinical	Film Illuminator	1	B
B-2-1	Functional Diag.	Ultrasound Scanner with B/W Doppler	1	A
B-2-2	Functional Diag.	EEG	1	A
B-2-3	Functional Diag.	ECG, 6-ch.	1	A
B-2-4	Functional Diag.	ECG, 1-ch., portable	2	A
B-2-5	Functional Diag.	Bronchofiberscope (child)/light	1	A
B-2-6	Functional Diag.	Colonofiberscope (child)/light	1	B
B-2-7	Functional Diag.	Gastrointestionfiberscope (child)/light	1	A
B-2-8	Functional Diag.	Fiberscope Trolley	2	A
B-2-9	Functional Diag.	Suction Unit for Fiberscope	2	A
B-2-10	Functional Diag.	Cabinet for Endoscope	1	A
B-2-11	Functional Diag.	Endoscopic table	1	A
B-2-12	Functional Diag.	Ultrasound Scanner, portable	1	A
B-2-13	Functional Diag.	Stand Lamp for endoscopic cabinet	3	A
B-2-14	Functional Diag.	Diagnostic Set	1	A
B-2-15	Functional Diag.	Sterilizer for Instruments	3	A
B-2-16	Functional Diag.	Hot Air Sterilizer	2	A
B-2-17	Functional Diag.	Electric Scale (60 kgs)	3	A
B-3-1	X-ray	Diagnostic X-ray Unit with TV-system	1	A
B-3-2	X-ray	Dark Room Apparatus Set	1	A
B-3-3	X-ray	Film Developing Laboratory Set	1	A

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Republican Clinical Children's Hospital

No.	Department	Description	Q'ty	Priority
B-4-1	Ope.Room	Operating Table	4	A
B-4-2	Ope.Room	Ceiling Operating Lamp	4	A
B-4-3	Ope.Room	Anesthetic Apparatus	4	A
B-4-4	Ope.Room	Ventilator	4	A
B-4-5	Ope.Room	Electrosurgical Unit	4	A
B-4-6	Ope.Room	Operating Monitor	4	A
B-4-7	Ope.Room	Laryngoscope	4	A
B-4-8	Ope.Room	Suction Unit	4	A
B-4-9	Ope.Room	Endotracheal set	8	A
B-4-10	Ope.Room	Surgical Instruments for abdominal operations (child)	4	A
B-4-11	Ope.Room	Instruments for thoratic operations	4	A
B-4-12	Ope.Room	Instruments for urology operations	4	A
B-4-13	Ope.Room	Stand Lamp	4	A
B-4-14	Ope.Room	Sterilizer for instruments	6	A
B-4-15	Ope.Room	Dressing Drum	12	B
B-4-16	Ope.Room	Infusion Pump	4	A
B-4-17	Ope.Room	Syringe Pump	4	A
B-4-18	Ope.Room	UV Hand Washing Apparatus	4	B
B-4-19	Ope.Room	Stand (MAYO)	4	A
B-4-20	Ope.Room	Portable Defibrillator / cart	1	A
B-4-21	Ope.Room	Blood Refrigerator	1	A
B-4-22	Ope.Room	Sliding Stretcher	2	B
B-4-23	Ope.Room	Medical Refrigerator	1	A
B-5-1	ICU	Recovery Bed	6	B
B-5-2	ICU	Bedside Monitor	6	3A / 3B
B-5-3	ICU	Ventilator	4	B
B-5-4	ICU	Laryngoscope	6	B
B-5-5	ICU	Infusion Pumps	6	A
B-5-6	ICU	Syringe Pump	6	A
B-5-7	ICU	Pulse Oximeter	6	A
B-5-8	ICU	Suction Unit	6	A
B-5-9	ICU	Endotracheal set	3	B
B-5-10	ICU	UV Hand Washing Apparatus	2	B
B-5-11	ICU	Resuscitation Bag	3	A
B-5-12	ICU	Billirubinmeter	1	A
B-5-13	ICU	Nebulizer	3	A
B-5-14	ICU	Diagnostic Instrument Set	2	A
B-5-15	ICU	Portable Defibrillator / cart	1	A
B-6-1	Neopathology	Infant Incubator	5	A
B-6-2	Neopathology	Neonatal Monitor	4	A

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Republican Clinical Children's Hospital

No.	Department	Description	Q'ty	Priority
B-6-3	Neopathology	Ventilator for Infant	2	A
B-6-4	Neopathology	Nebulizer	6	A
B-6-5	Neopathology	Phototherapy Unit	4	A
B-6-6	Neopathology	Infant Warmer	4	A
B-6-7	Neopathology	Laryngoscope	2	B
B-6-8	Neopathology	Portable Ultrasound Scanner	1	B
B-6-9	Neopathology	Portable Infant Incubator	1	A
B-6-10	Neopathology	Electric Scale (10 kg)	2	A
B-6-11	Neopathology	Syringe Pump	6	A
B-6-12	Neopathology	Suction Unit	4	A
B-6-13	Neopathology	Pulse Oximeter	2	A
B-6-14	Neopathology	Nursing Bottle Warmer	2	A
B-6-15	Neopathology	Breast Pump	2	A
B-6-16	Neopathology	Billirubinmeter	1	A
B-7-1	Rehabilitation	Nebulizer	3	A
B-7-2	Rehabilitation	Low Frequency Therapy Unit	2	A
B-7-3	Rehabilitation	Infrared Ray Lamp	1	A
B-7-4	Rehabilitation	Ultraviolet Ray Lamp	1	A
B-8-1	Pharmacy	Autoclave for sterilization of glassware	1	A
B-8-2	Pharmacy	Distilling Unit	2	1A / 1B
B-8-3	Pharmacy	Medical Refrigerator	4	A
B-9-1	Laundry	Washing Machine (30 kgs)	3	A
B-9-2	Laundry	Extractor Machine (30 kgs)	2	A
B-9-3	Laundry	Drying Machine	2	C
B-10-1	CSSD	High pressure steam sterilizer	2	A
B-10-2	CSSD	Ultrasonic Cleaner	1	B
B-10-3	CSSD	Sterilizer for instruments	5	A
B-10-4	CSSD	Water Distilling Unit	3	1A / 2C
B-11-1	Administration	Ambulance with portable incubator	1	C
B-11-2	Administration	Computer and Laser Printer	1	C
B-11-3	Administration	Copying Machine	1	C

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Nukus City Children's Hospital

No.	Department	Description	Q'ty	Priority
C-1-1	Clinical Lab.	Microscope	4	A
C-1-2	Clinical Lab.	Blood Gas Analyzer	1	B
C-1-3	Clinical Lab.	Coagulometer	1	A
C-1-4	Clinical Lab.	Spectrophotometer	2	A
C-1-5	Clinical Lab.	Laboratory Incubator	1	A
C-1-6	Clinical Lab.	Clinical Refractometer	1	B
C-1-7	Clinical Lab.	Hematocrit Set	1	A
C-1-8	Clinical Lab.	Distilling Unit	2	1A / 1B
C-1-9	Clinical Lab.	Autoclave	2	A
C-1-10	Clinical Lab.	PH-meter	2	B
C-1-11	Clinical Lab.	Electronic Balance	1	A
C-1-12	Clinical Lab.	Medical Refrigerator	1	A
C-1-13	Clinical Lab.	UV Hand Washing Apparatus	1	B
C-1-14	Clinical Lab.	Table Top Centrifuge	1	A
C-1-15	Clinical Lab.	Billirubinmeter	1	A
C-2-1	Functional Diag.	Ultrasound Scanner with B/W Doppler	1	A
C-2-2	Functional Diag.	EEG	1	A
C-2-3	Functional Diag.	ECG, 6-ch.	2	A
C-2-4	Functional Diag.	ECG, 1-ch., portable	2	A
C-2-5	Functional Diag.	Bronchoscope(child)/ light	1	A
C-2-6	Functional Diag.	Gastrofiberscope(child)/ light	1	A
C-2-7	Functional Diag.	Endoscope Illuminator	1	A
C-2-8	Functional Diag.	Fiberscope Trolley	1	A
C-2-9	Functional Diag.	Suction Unit for Fiberscope	1	A
C-2-10	Functional Diag.	Endoscope cabinet	1	A
C-2-11	Functional Diag.	Endoscopic table	1	A
C-2-12	Functional Diag.	Stand Lamp	1	A
C-2-13	Functional Diag.	Diagnostic Set	1	A
C-2-14	Functional Diag.	Sterilizer for instruments	4	A
C-2-15	Functional Diag.	Weighing Scale (60 kgs)	4	A
C-3-1	X-ray	Diagnostic X-ray Unit with TV-system	1	A
C-3-2	X-ray	Dark Room Apparatus Set	1	A
C-3-3	X-ray	Film Development Laboratory Set	1	A
C-4-1	ICU	Recovery Bed (child)	6	C
C-4-2	ICU	Bedside Monitor	3	A
C-4-3	ICU	Ventilator for Infant	3	A
C-4-4	ICU	Anesthetic Apparatus	1	A
C-4-5	ICU	Laryngoscope	3	A
C-4-6	ICU	Endotracheal set	3	A
C-4-7	ICU	Infusion Pump	6	A

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Nukus City Children's Hospital

No.	Department	Description	Q'ty	Priority
C-4-8	ICU	Syringe Pump	6	A
C-4-9	ICU	Suction Unit	3	A
C-4-10	ICU	Pulse Oximeter	2	A
C-4-11	ICU	Portable Ultrasound Scanner	1	A
C-4-12	ICU	Mobile X-Ray Unit	1	A
C-4-13	ICU	UV Hand Washing Apparatus	1	B
C-4-14	ICU	Stand (MAYO)	3	A
C-4-15	ICU	Nebulizer	2	A
C-4-16	ICU	Portable Defibrillator / cart	1	A
C-5-1	Rehabilitation	Nebulizer	3	A
C-5-2	Rehabilitation	Low Frequency Therapy Unit	2	A
C-5-3	Rehabilitation	Infrared Ray Lamp	1	A
C-5-4	Rehabilitation	Ultraviolet Ray Lamp	1	A
C-6-1	Pharmacy	Water Distilling Unit	2	A
C-6-2	Pharmacy	Medical Refrigerator	2	A
C-7-1	CSSD	High pressure steam sterilizer	2	A
C-7-2	CSSD	Sterilizer for instruments	2	A
C-7-3	CSSD	Water Distilling Unit	2	1A / 1B
C-7-4	CSSD	Hot Air Sterilizer	2	A
C-8-1	Laundry	Washing Machine (30 kgs)	2	A
C-8-2	Laundry	Extractor Machine (30 kgs)	1	A
C-8-3	Laundry	Drying Machine	1	B
C-9-1	Administration	Ambulance	1	B
C-9-2	Administration	Computer and Laser Printer	1	C
C-9-3	Administration	Copy Machine	1	B

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## Basic Criteria for Selecting the Equipment

### 1. Criteria for giving High priority

- (1) Equipment that is to be replaced for existing old/ decrepit equipment.
- (2) Equipment that is to be a supplement for the equipment lacking distinctly in its quantity.
- (3) Equipment that is required for basic hospital treatment / diagnosis.
- (4) Equipment that is easy to operate and maintain.
- (5) Equipment that may give much benefit / effect to hospital.
- (6) Equipment that is highly cost-effective.
- (7) Equipment that is proven for its medical usefulness (necessity).

### 2. Criteria for giving Low priority

- (1) Equipment that required high operation and maintenance cost.
- (2) Equipment that has limited benefit / effect to hospital.
- (3) Equipment that is lowly cost-effective.
- (4) Equipment that is not for treatment / diagnosis use, but for academic research purposes.
- (5) Equipment that can be substituted with a simple ones.
- (6) Equipment that may cause environmental pollution by its medical waste etc.
- (7) Equipment that is not proven for its medical usefulness (necessity).
- (8) Equipment that is for personal usage by hospital staff ( not medical use).
- (9) Equipment that has than minimum required quantity (inefficient, repetitive equipment).

## Additional Criteria for Selecting the Equipment

( After field survey and considering Recipients condition )

### 1. Additional Criteria for giving High priority.

- (1) Equipment that can be operated by hospital's current technical capabilities.
- (2) Equipment that can be operated / maintained by hospital staff.
- (3) Equipment that matches with hospital's social position / function ( referral system, local needs ).
- (4) Equipment that can be expected to be useful with other donor's assistance.

### 2. Additional Criteria for giving Low priority

- (1) Equipment that is difficult to locally procure its spare parts and

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consumables.

- (2) Equipment that cannot be operated by hospital's current technical capability.
- (3) Equipment that seem to be difficult to operate / maintained by present hospital's staff.
- (4) Equipment that dose not match with hospital's social position / function ( referral system, local needs ).
- (5) Equipment that requires large scope of infrastructure work ( water, electricity supply, drain, etc )for its installation.
- (6) Equipment that can be substituted by efficient usage of existing equipment.

#### Criteria when International Standard Exists

Standard of WHO (ex. X-ray equipment, etc ) is applicable on case by case basis.

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## Japan's Grant Aid Program

### 1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

**Application** (Request made by a recipient country)

**Study** (Preparatory Study / Basic Design Study conducted by JICA)

**Appraisal & Approval** (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)

**Determination of Implementation** (Exchange of Notes between the both Governments)

**Implementation** (Implementation of the Project)

(2) Firstly, an application or a request for a project made by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to see whether or not it is suitable for Japan's Grant Aid. If the request is deemed suitable, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm. If the background and objective of the requested project are not clear, a Preparatory Study is conducted prior to a Basic Design Study.

Thirdly, the Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study Report prepared by JICA and the results are then submitted to the Cabinet for approval.

Fourthly, the Project approved by the Cabinet becomes official when pledged by the Exchange of Notes signed by the both Governments.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

### 2. Contents of the Study

(1) Contents of the Study

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The purpose of the Study (Preparatory Study/Basic Design Study) conducted on a project requested by JICA is to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

- a) to confirm background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
- b) to evaluate appropriateness of the Project for the Grant Aid Scheme from a technical, social and economical point of view,
- c) to confirm items agreed on by the both parties concerning a basic concept of the project,
- d) to prepare a basic design of the project,
- e) to estimate cost involved in the project.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request.

Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

## (2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) consulting firm(s) registered. JICA selects (a) firm(s) through proposals submitted by firms which are interested. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference made by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency.

## (3) Status of a Preparatory Study in the Grant Aid Program

A Preparatory Study is conducted during the second step of a project formulation & preparation as mentioned above.

A result of the study will be utilized in Japan to decide if the Project is to be suitable for a Basic Design Study

Based on the result of the Basic Design Study, the Government would proceed to the stage of decision making process (appraisal and approval).

It is important to notice that at the stage of Preparatory Study, no commitment is made by the Japanese side concerning the realization

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of the Project in the scheme of Grant Aid Program.

### 3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services for economic and social development of the country under the following principles in accordance with relevant laws and regulations of Japan. The Grant Aid is not in a form of donation or such.

(2) Exchange of Notes (E/N)

The Japan's Grant Aid is extended in accordance with the Exchange of Notes by both Governments, in which the objectives of the Project, period of execution, conditions and amount of the Grant etc. are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country origin. However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude into contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification" is deemed necessary to secure accountability to Japanese tax payers.

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(6) Undertakings required to the Government of the recipient country

In the implementation of the Grant Aid, the recipient country is required to undertake necessary measures such as the following:

- a) to secure land necessary for the sites of the project and to clear and level the land prior to commencement of the construction work,
- b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) to secure buildings prior to the installation work in case the Project is providing equipment,
- d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) Proper Use

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for their operation and maintenance as well as to bear all expenses other than those to be borne by the Grant Aid.

(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

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(9) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank" ) . The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the contracts verified.
  
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay issued by the Government of the recipient country or its designated authority.

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**Necessary Measures to be Taken by the Government of Uzbekistan**

To

1. provide data and information necessary for the Grant Aid,
2. secure the site for the Grant Aid,
3. clear, level and reclaim the site prior to commencement of the Grant Aid,
4. undertake incidental outdoor works such as gardening, fencing, gates and exterior lightning in and around the site,
5. provide facilities for distribution of electricity, water supply, telephone, drainage, sewerage and other incidental facilities to the site,
  - (1) electricity distributing line to the site
  - (2) city water distribution main to the site
  - (3) main city drainage to the site
  - (4) telephone trunk line and the main distribution panel of building
  - (5) general furniture such as carpets, curtains, tables, chairs and others
6. bear commissions to the Japanese foreign exchange bank for its banking service based upon the Banking Arrangement (B/A), namely the advertising commission of the Authorization to Pay (A/P) and payment commission,
7. ensure prompt unloading, tax exemption, customs clearance at the port of disembarkation in Republic of Uzbekistan and prompt internal transportation therein of the materials and equipment for the Project purchased under the Grant Aid,
8. exempt Japanese juridical and physical nationals engaged in the Grant Aid from customs duties, internal taxes and other fiscal levies which may be imposed in Uzbekistan with respect to the supply of the products and services under the verified contracts,
9. accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such facilities as may be necessary for their entry into Uzbekistan and stay therein for the performance of their work,
10. provide necessary permissions, licenses and other authorizations for implementing the Grant Aid, if necessary,
11. assign appropriate budget and teaching and administrative staff members for proper and effective operation and maintenance of equipment procured under the Grant Aid,
12. maintain and use properly and effectively the facilities constructed and the equipment procured under the Grant Aid, and
13. bear all the expenses, other than those to be borne by the Japan's Grant Aid within the scope of the Project

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MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY  
ON  
THE PROJECT FOR SUPPLY OF MEDICAL EQUIPMENT  
IN  
KARAKALPAKSTAN  
(CONSULTATION ON DRAFT REPORT)

In September 1998, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Project for Supply of Medical Equipment in Karakalpakstan (hereinafter referred to as "the Project"), and through discussions, site surveys, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and to consult the Uzbekistan side on the components of the draft report, JICA sent to Uzbekistan a Study Team, which is headed by Dr. Takeki Shiina, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health and Welfare and is scheduled to stay in the country from November 30 to December 14, 1998.

As a result of discussions, both sides have confirmed the main items described on the attached sheets.

Tashkent, December 9, 1998

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Dr. Takeki Shiina  
Leader,  
Draft Basic Design Explanation Team,  
JICA

A. Yarkulov

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Dr. Yarkulov Ahror Bahramovich  
Deputy Minister,  
Ministry of Health,  
Republic of Uzbekistan

## ATTACHMENT

### 1. Components of the draft report

The Government of Uzbekistan has in principle agreed and accepted the components of the draft report proposed by the Team. The equipment list of the draft report is described in Annex 1. Through the discussions, one mobile x-ray unit for the Republican Clinical Children's Hospital was requested by Uzbekistan side.

The final components which will be procured under the Project will be decided by Japanese side after further study.

### 2. Japan's Grant Aid System

(1) The Government of Uzbekistan has understood the Japan's Grant Aid System as described in Annex 2.

(2) The Government of Uzbekistan will take necessary measures, as described in Annex 3 for smooth implementation of the Grant Aid, on condition that the Grant Aid by the Government of Japan is extended to the Project.

### 3. Presentation of the final report

JICA will make the final report in accordance with the confirmed items and send it to the Government of Uzbekistan around March, 1999.

### 4. Monitoring

The Ministry of Health of Uzbekistan has the responsibility to evaluate the outcome of the Project by monitoring the activities of the hospitals, and will submit the report to the Japanese side annually. The format and the monitoring indicators of the report is described in Annex 4.

### 5. Other Relevant Issues

The Government of Uzbekistan will take the following measures:

(1) to secure and to allocate the enough budget to operate and maintain properly and effectively the equipment of the Project.

(2) to complete construction works of X-ray diagnosis room in the project sites prior to installation stage of the Project.

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## Equipment List

Item No.	Department	Description	Quantity			Total
			Republican Maternity Hospital	Republican Clinical Children's Hospital	Nukus City Children's Hospital	
[Clinical Lab.]						
CCL-1	Clinical Lab.	Bilirubinmeter	1	1	1	3
CCL-2	Clinical Lab.	Biochemical Analyzer	1	1	-	2
CCL-3	Clinical Lab.	Clinical Refractometer	1	1	1	3
CCL-4	Clinical Lab.	Electronic Balance	1	1	1	3
CCL-5	Clinical Lab.	Hematocrit Set	2	1	1	4
CCL-6	Clinical Lab.	Laboratory Autoclave	1	2	1	4
CCL-7	Clinical Lab.	Laboratory Incubator	1	1	1	3
CCL-8	Clinical Lab.	Medical Refrigerator	1	1	1	3
CCL-9	Clinical Lab.	Microscope	4	3	2	9
CCL-10	Clinical Lab.	Spectrophotometer	1	-	2	3
CCL-11	Clinical Lab.	Table Top Centrifuge	1	1	1	3
CCL-12	Clinical Lab.	Water Bath	1	1	-	2
CCL-13	Clinical Lab.	Water Distilling Unit	1	1	1	3
[CSSD]						
CSD-1	CSSD	High pressure steam sterilizer	2	2	2	6
CSD-2	CSSD	Hot Air Sterilizer	-	-	1	1
CSD-3	CSSD	Sterilizer for Instruments/ Pedal type	2	1	2	5
CSD-4	CSSD	Water Distilling Unit (Large)	1	1	1	3
[Functional Diag.]						
FCD-1	Functional Diag.	Bronchofiberscope set (child)	-	1	1	2
FCD-2	Functional Diag.	Diagnostic Gynecologic Instruments	2	-	-	2
FCD-3	Functional Diag.	Diagnostic Set	4	1	1	6
FCD-4	Functional Diag.	ECG, 3-ch., portable	1	1	1	3
FCD-5	Functional Diag.	ECG, 6-ch.	1	1	1	3
FCD-6	Functional Diag.	EEG	-	1	1	2
FCD-7	Functional Diag.	Endoscopic Cabinet	-	1	1	2
FCD-8	Functional Diag.	Endoscopic Table	-	1	1	2
FCD-9	Functional Diag.	Fiberscope Trolley	-	2	1	3
FCD-10	Functional Diag.	Gastrointestionfiberscope set (child)	-	1	1	2
FCD-11	Functional Diag.	Hot Air Sterilizer	-	2	-	2
FCD-12	Functional Diag.	Portable Ultrasound Scanner	1	1	-	2
FCD-13	Functional Diag.	Sphygmomanometer	4	-	-	4
FCD-14	Functional Diag.	Stand Lamp	2	2	1	5
FCD-15	Functional Diag.	Sterilizer for Instruments	4	3	2	9
FCD-16	Functional Diag.	Ultrasound Scanner with B/W Doppler (A)	1	-	-	1
FCD-17	Functional Diag.	Ultrasound Scanner with B/W Doppler (B)	-	1	1	2
FCD-18	Functional Diag.	Weighing Scale (30 kg)	-	3	2	5
FCD-19	Functional Diag.	Weighing Scale for adult (100 kg)	1	-	-	1
[ICU]						
ICU-1	ICU	Diagnostic Instrument Set	-	2	-	2
ICU-2	ICU	Infusion Pump	1	2	2	5
ICU-3	ICU	Laryngoscope for Pediatric	-	2	3	5
ICU-4	ICU	Laryngoscope Set (for adult & child)	2	-	-	2

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Item No.	Department	Description	Quantity			Total
			Republican Maternity Hospital	Republican Clinical Children's Hospital	Nokus City Children's Hospital	
ICU-5	ICU	Mobile X-Ray Unit	-	-	1	1
ICU-6	ICU	Nebulizer	1	1	1	3
ICU-7	ICU	Patient Monitor	3	3	1	7
ICU-8	ICU	Portable Ultrasound Scanner	-	-	1	1
ICU-9	ICU	Pulse Oximeter	1	2	1	4
ICU-10	ICU	Resuscitation Bag	3	3	-	6
ICU-11	ICU	Suction Unit, Portable	2	1	1	4
ICU-12	ICU	Syringe Pump	2	2	2	6
ICU-13	ICU	Ventilator	1	1	-	2
ICU-14	ICU	Ventilator for Infant	1	-	1	2
<b>[Laundry]</b>						
LND-1	Laundry	Extractor Machine (30 kg)	2	2	1	5
LND-2	Laundry	Washing Machine (30 kg)	2	2	1	5
<b>[Neopathology]</b>						
NPL-1	Neopathology	Baby Scale	-	2	-	2
NPL-2	Neopathology	Breast Pump	-	2	-	2
NPL-3	Neopathology	Infant Incubator	1	2	-	3
NPL-4	Neopathology	Infant Warmer	1	2	-	3
NPL-5	Neopathology	Laryngoscope for Pediatric	1	-	-	1
NPL-6	Neopathology	Nebulizer	-	1	-	1
NPL-7	Neopathology	Neonatal Monitor	1	-	-	1
NPL-8	Neopathology	Nursing Bottle Warmer	-	2	-	2
NPL-9	Neopathology	Phototherapy Unit	2	2	-	4
NPL-10	Neopathology	Portable Infant Incubator	1	1	-	2
NPL-11	Neopathology	Suction Unit, Portable	1	1	-	2
NPL-12	Neopathology	Syringe Pump	1	-	-	1
NPL-13	Neopathology	Ventilator for Infant	-	2	-	2
<b>[Obstetric]</b>						
OBS-1	Obstetric	Baby Scale	3	-	-	3
OBS-2	Obstetric	Delivery table	5	-	-	5
OBS-3	Obstetric	Doppler Heart Rate Detector	1	-	-	1
OBS-4	Obstetric	Fetal Monitor	1	-	-	1
OBS-5	Obstetric	Infant Incubator	2	-	-	2
OBS-6	Obstetric	Infant Warmer	2	-	-	2
OBS-7	Obstetric	Infusion Pump	1	-	-	1
OBS-8	Obstetric	Laryngoscope for Pediatric	1	-	-	1
OBS-9	Obstetric	Pulse Oximeter	1	-	-	1
OBS-10	Obstetric	Stand Lamp	1	-	-	1
OBS-11	Obstetric	Suction Unit, 2-bottle	2	-	-	2
<b>[Ope. Room]</b>						
OPR-1	Ope. Room	Anesthetic Apparatus	2	2	-	4
OPR-2	Ope. Room	Blood Refrigerator	-	1	-	1
OPR-3	Ope. Room	Electrosurgical Unit	1	2	-	3
OPR-4	Ope. Room	Infusion Pump	1	2	-	3
OPR-5	Ope. Room	Instruments for thoratic operations/travma-ortopea	-	2	-	2
OPR-6	Ope. Room	Instruments for urology operations	-	2	-	2
OPR-7	Ope. Room	Laryngoscope for Pediatric	-	2	-	2
OPR-8	Ope. Room	Mobile X-Ray Unit	1	1	-	2

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Item No.	Department	Description	Quantity			Total
			Republican Maternity Hospital	Republican Clinical Children's Hospital	Nokus City Children's Hospital	
OPR-9	Ope. Room	Operating Laparoscope/light	1	-	-	1
OPR-10	Ope. Room	Operating Table	2	2	-	4
OPR-11	Ope. Room	Operation Lamp (ceiling type)	2	2	-	4
OPR-12	Ope. Room	Patient Monitor	2	2	-	4
OPR-13	Ope. Room	Portable Defibrillator / cart	1	1	-	2
OPR-14	Ope. Room	Stand (MAYO)	2	2	-	4
OPR-15	Ope. Room	Stand Lamp with Battery	1	1	-	2
OPR-16	Ope. Room	Sterilizer for instruments	-	2	-	2
OPR-17	Ope. Room	Suction Unit, 2-bottle	2	2	-	4
OPR-18	Ope. Room	Surgical (gynecological) Instruments set	2	-	-	2
OPR-19	Ope. Room	Surgical Instruments for abdominal (child)	-	2	-	2
OPR-20	Ope. Room	Surgical instruments for abdominal cavity organs	2	-	-	2
OPR-21	Ope. Room	Surgical Instruments for cesarean section	2	-	-	2
OPR-22	Ope. Room	Syringe Pump	2	1	-	3
[Pharmacy]						
PHM-1	Pharmacy	Autoclave for sterilization of glassware	-	1	-	1
PHM-2	Pharmacy	Medical Refrigerator	1	1	1	3
PHM-3	Pharmacy	Water Distilling Unit	-	1	-	1
[Reception]						
RCP-1	Reception	Diagnostic Gynecologic Instruments	2	-	-	2
RCP-2	Reception	Diagnostic Instrument Set	2	-	-	2
RCP-3	Reception	Sphygmomanometer	4	-	-	4
RCP-4	Reception	Stand Lamp	2	-	-	2
RCP-5	Reception	Sterilizer for Instruments	4	-	-	4
RCP-6	Reception	Stethoscope	6	-	-	6
RCP-7	Reception	Thermometer	6	-	-	6
[Rehabilitation]						
RHB-1	Rehabilitation	Infrared Ray Lamp	1	1	1	3
RHB-2	Rehabilitation	Low Frequency Therapy Unit	1	1	1	3
RHB-3	Rehabilitation	Nebulizer	-	1	-	1
RHB-4	Rehabilitation	Ultraviolet Ray Lamp	1	1	1	3
[X-ray]						
XRY-1	X-ray	Dark Room Apparatus Set	1	1	1	3
XRY-2	X-ray	Diagnostic X-ray Unit with TV-system	1	1	1	3
XRY-3	X-ray	Film Development Laboratory Set	1	1	1	3
Total			152	122	57	331

※ New requested item

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