

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
IMPROVEMENT OF MEDICAL EQUIPMENT
ON
SOUTH REGIONAL AND DISTRICT HOSPITAL
OF
ALBANIA
IN
THE REPUBLIC OF ALBANIA**

September 2004

**JAPAN INTERNATIONAL COOPERATION AGENCY
ICONS INTERNATIONAL COOPERATION Inc.**

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PREFACE

In response to a request from the Government of the Republic of Albania, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Albania a study team from April 5 to May 12, 2004.

The team held discussions with the officials concerned of the Government of Albania, and conducted a field study at the study area.

After the team returned to Japan, further studies were made. Then, a mission was sent to Albania from July 15 to August 3, 2004 in order to discuss a draft basic design, and as this result, the present report was finalized.

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

I wish to express my sincere appreciation to the officials concerned of the Government of Albania for their close cooperation extended to the teams.

September, 2004

Kazuhisa MATSUOKA
Vise-President
Japan International Cooperation Agency

September, 2004

Letter of Transmittal

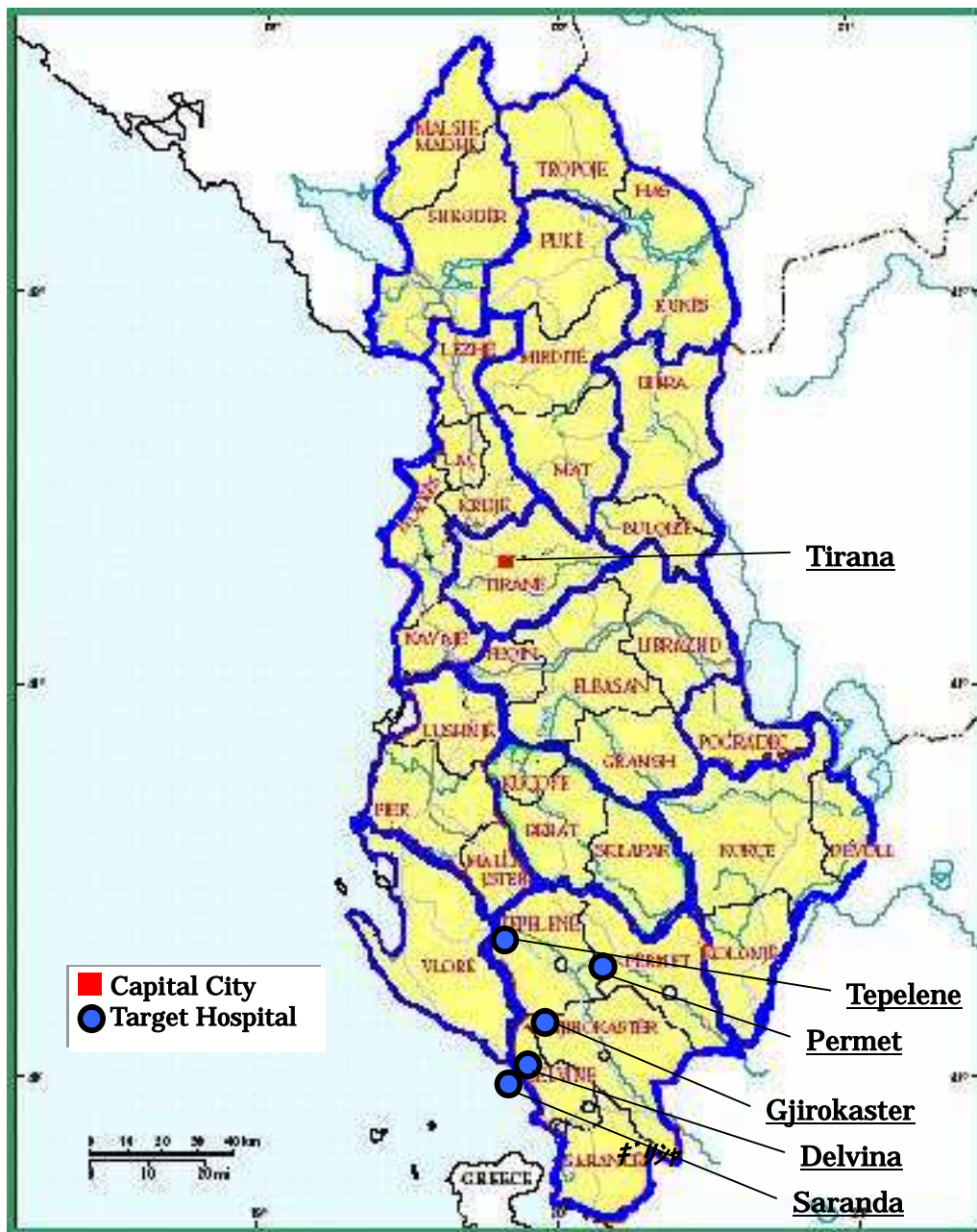
We are pleased to submit to you the basic design study report on the Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania.

This study was conducted by ICONS International Cooperation Inc., under a contract to JICA, during the period from April 1, 2004 to September 30, 2004. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Albania and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

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

Very truly yours,

Keiji IIMURA
Project manager,
Basic design study team on
the Project for Improvement of
Medical Equipment on South Regional
and District Hospital of Albania
in the Republic of Albania
ICONS International Cooperation Inc.



Map of Albania and Target Hospitals

Abbreviations

AVR	Automatic Voltage Regulator
CE	CE Mark
EKG	Electro Cardio Graph
EEG	Electro Encephalo Graph
E/N	Exchange of Notes
ENT	Ear, Nose, Throat
EU	European Union
GDP	Gross Domestic Product
ICU	Intensive Care Unit
IMF	International Monetary Fund
ISO	International Organization for Standardization
JICA	Japan International Cooperation Agency
JIS	Japan Industrial Standard
LEK	Albanian LEK
M/D	Minutes of Discussions
ME	Medical Electronics
MOH	Ministry of Health
OBGY	Obstetrics and Gynecology
PHC	Primary Health Center
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
US\$	U.S. Dollar
UPS	Universal Power Supply
WHO	World Health Organization

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Summary

Summary

Albania is a country with a land area of some 28,748 km² (1.5 times that of Shikoku, Japan) and a population of approximately 3.1 million. It is situated on west central of the Balkan Peninsular, bordered by Serbia Montenegro and province of Kosovo in north, Macedonia in east, Greece in south, Adriatic Sea in west, and Italy 100km over the sea.

Albania's isolation from the rest of the world for a long period of time was ended by the democratic movements during the 1990s started in Eastern Europe, and Albania received their influences and became democratized by introducing multiple political party systems for instance. In April of 1991, a new constitution was adopted, and it allowed market economy such as privatization of state land, or liberalization of trade and price. There was confusion in the society during the process of collapse in Communist regime, but G 24 (General 24 countries) and international organizations cooperated to stabilize Albania's economy which improved after 1993. In 1997, the collapse of pyramid saving schemes brought destructions nationwide and the damage was enormous in the society.

After the incident, Albania established a new government under the guidance of international partners like Italy and set the following new political objectives: stabilization of political system and democratization, recovery of law and order, reconstruction of organizations, recovery from poverty, stabilization of macro economy, reconstruction of banking system and solving pyramid saving schemes issues, privatization of strategic section. In May, 1998, the World Bank and IMF (International Monetary Fund) approved three years of structural loan, and Albanian economy is on the process of its recovery. Although 300 thousand Kosovo Albanian refugees during Kosovo crisis in 1999 had brought a fear of economical instability, but average of 7% of GDP growth rate was sustained with the cooperation from international organizations after 1998. However, the progress of domestic infrastructure development such as roads or electricity is still slow, and Albania still remains one of the poorest countries in Europe.

The cooperation from other donors such as international organizations or EU countries focused their attentions mainly on northern part and capital Tirana regarding the refugees from Kosovo crisis, and the cooperation for south region has not been conducted many in the past. For this reason, the economic development in south region is slower than other areas especially medical section.

In May 2003, Albania decided on a national social development strategy. Based on the achievements of medium term development goals (2003 to 2006), various measures are being drawn up in order to achieve the aims of the next 10 year long term development plan. One such measure is the provision of the new health law, and health strategy, through which the referral system is to be reconstructed.

The purpose of the target five hospitals, Gjirokaster, Tepelene, Permet, Saranda and Delvina hospital with Gjirokaster regional hospital as core, is to provide diagnosis and treatment medical services as secondary level medical facilities to the patients referred from primary level medical facilities.

The five hospitals were mostly built between the 1950s and the 1980s, and necessary modifications for the facilities were conducted by other donors such as EU countries. Therefore, there is no problem for medical activities. Since most of the medical equipment in the target hospitals dates back to that time, it is fast becoming obsolete and the target five hospitals are now unable to offer an adequate medical service as secondary level medical facilities, even though the level of hospital staffs is relatively high. It is necessary for the target five hospitals to replace medical equipment for basic diagnostic and treatment use.

Also, the management system of the medical equipment maintenance is not adequate, and it is hard to grasp the conditions of existing medical equipment or take adequate actions for mechanical breakdown.

Under the current circumstances, the government of Albania has requested Japanese government to implement the Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania in order to provide the medical equipment for basic diagnosis and treatment in five target hospitals in southern region. In response to a request from the government of Albania, Japan International Cooperation Agency (hereafter referred to as JICA) conducted request background study in April, 2003. Based on the result of the study, the Basic Design Study Team (hereafter referred to as the Team) was sent to Albania (hereafter referred to as the Recipient Country) from April 5 to May 12, 2004. After the Team returned, further study, based on the result of consultations with the Recipient Country, was made. Then, a mission was sent to the Recipient Country from July 15 to August 3, 2004 in order to

discuss a draft basic design.

The initial request from the Recipient Country regarding the Project was to procure 35 items. During the Study, 26 more items were requested, bringing the total to 61.

After the request was received, the Study was conducted in the target 5 hospitals based on the following policies:

to draw up an appropriate equipment plan based on improvement of referral system after studying the level and functions of target hospitals,

to understand the content of the request and to draw up an appropriate and effective cooperative content and scale including utilizing the existing equipment,

to draw up the content of the equipment taken maintenance and operation cost and after-service into consideration,

to draw up an equipment plan for the secondary level medical facilities as a basis and to consider possibilities of procuring medical equipment for basic diagnostic and treatment use.

The scope and grades of the equipment for the 5 target hospitals are based on:

basic equipment with minimum quantity in order to fulfill their functions and roles as the secondary level medical facilities in the referral system,

to avoid equipment that still can use existing one and is procured from other donors with duplication,

equipment that can be manually operated (selection of operation table or ICU beds are manually operated) and set with AVR or UPS in order to avoid accidents during power down by reflecting local electric conditions where power down and outage often occur,

equipment that can be easily obtained its maintenance and consumable with reasonable price after installation. As a result, total of 61 items of equipment including X-ray related, ultrasound related, ME related, Laboratory related, Operation related, ICU related equipment is selected. Also, considering poor conditions of maintenance system of the equipment in 5 target hospitals, it is planned to conduct Soft Component (Technical Assistance) regarding maintenance of the medical equipment.

A total period of 11 months is requisite to complete the objectives of the Project where the objectives will be carried out by the Japanese government through Grant Aid. Total costs are estimated at approximately JPY 234 million (Japan: JPY

233 million, Albania: JPY 0.01 million, US \$8,728).

The following beneficial effects are anticipated through the execution of the Project.

(1) Direct Effects

• **Improvement of medical services in southern region by improving diagnostic and treatment systems in the target hospitals**

The procurement of basic medical equipment will enhance its diagnostic capabilities, which have been in decline due to the deterioration of the existing obsolete equipment, and also enable diagnosis and treatment more adequately and efficiently. In addition, increase of number of tests is expected.

• **Reduction of burden on patients**

The obsolescence of equipment causes inefficient diagnosis and treatment, and, as a result, creates a situation, that patients are forced to repeat tests multiple times, endure frequent hospital visits, and refer the patients who can not treat to tertiary level hospitals in Tirana. This burden makes it difficult for patients to continue their treatment both physically and financially. The improvement of medical service lightens the burden on patients by decreasing the frequency of hospital visits and tests, and reducing the treatment period for both inpatients and outpatients.

• **Strengthening the referral system in south region in Albania**

Improving the quality of medical services in south region by the Project will recover the trust in target hospitals. The number of patients will increase, and the number of patients referred to tertiary level medical facilities in capital Tirana will decrease. As a result, the referral system in south region will be strengthened.

• **Improvement of maintenance system of medical equipment**

It makes possible operate the existing as well as procuring equipment more efficiently and effectively by providing Soft Component program regarding maintenance of medical equipment. Also, the program enables to act rapidly in case of mechanical breakdown and manage the stockpile of spare parts and consumable.

(2) Indirect Effects

• Contribution to the priority plan

In May 2003, Albania decided on a national social development strategy. One of the measures is the provision of the new health law, and health strategy, through which the referral system is to be reconstructed. If the referral system in south region is completed, a part of national social development strategy will be accomplished. As a result, tertiary level medical facilities are able to concentrate their attention on high level diagnostic and treatment medical services.

There are two recommendations proposed below in order to facilitate the equipment procuring more effectively and efficiently.

• Reconstruction of Medical health system

The Ministry of Health in Albania is working on the reconstruction of health insurance system supported by the World Bank. In the near future, the target five hospitals will be expected to become self-supporting through their own efforts. In order to achieve sound hospital management, under the guidance of the Ministry, hospital staffs must work to improve the efficiency of hospital management and medical services. They must rebuild their administrative system to suit the new economic system and implement self-sufficient management by their own. Re-training of medical staffs is also required.

• Management of Cleanliness and hygiene in the hospitals

The management of cleanliness and hygiene is not so appropriate in the target hospitals generally. Keeping good hygienic condition inside the hospital is an essential condition as a medical facility, and it is considered necessary to work on many subjects including cleaning of inside the hospital, keeping hygienic patient's rooms and operation rooms, etc. In addition, promoting the cleanliness of inside the hospital requires a new awareness of medical staffs as well as patients and their families. Improvement of these issues needs immediate actions by the hospitals staffs.

The result of studying the appropriateness of the Project by the Japanese Grant Aid is the following;

- It is estimated that the population covered by the Project is approximately 250 thousand in

south region, and its impact covers a wide range.

- The quality of medical service will improve by replacement of obsolete medical equipment in the target five hospitals in south region by the Project.
- Reduction of the physical and economical burden of the patients is expected by shortening the frequency of hospital visits and the period of treatment, brought by strengthening diagnostic and treatment capability from the Project.
- Reduction in numbers of patients referred to the tertiary level medical facilities is expected by strengthening the secondary level medical facilities in south region.
- Strengthening the referral system written in a national social development strategy is contributed.
- There is no negative environmental impact by the waste from the equipment procuring by the Project.

From the reasons mentioned above, the Project is suitable to implement by the Japanese Grant Aid Program.

From the result of verification, the Project is expected to bring great effectiveness and contributes to not only enhancement in health of people in the south region as well as in the nation but also improvement of Albanian medical health policies. Therefore, it is very consequential to implement the Project. In addition, regarding operation and maintenance after the procurement of medical equipment, medical staffs including doctors and nurses can handle without a problem with their high level of skills. In addition, improvement is expected regarding better use of medical equipment by Soft Component technical assistance.

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Chapter 1

Background of the Project

Chapter 1 Background of the Project

In May 2003, Albania decided on a national social development strategy. Based on the achievements of medium term development goals (2003 to 2006), various measures are being drawn up in order to achieve the aims of the next 10 year long term development plan. One of the measures is the provision of the new health law, and health strategy, through which the referral system is to be reconstructed.

With Gjirokaster regional hospital acting as core, the population served in the southern region reaches nearly 250,000. But at present, because it is a steeply mountainous region topographically, with roads in a bad state, and poor infrastructure, and with lack of availability of the necessary medical equipment for diagnosis and treatment, many people are unable to receive an appropriate medical service. Reflecting the fact mentioned earlier, there are patients referred to tertiary level medical facilities in capital Tirana and go to the higher level of medical facilities directly, so called bypassing effect. Access to the hospitals is difficult, yet patients are forced to travel long distances to obtain medical treatment, thus placing a heavy economic burden on them.

The existing equipment in the target hospitals is obsolete, more than average 5 years of average durable period. Some equipment has been used for more than 10 years or 30 years.

Under the current circumstances, the government of Albania (hereafter referred to as the Recipient Country) has requested Japanese government to implement the Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania in order to provide the medical equipment for basic diagnosis and treatment in five target hospitals in south region.

Previously Japan International Cooperation Agency (hereafter referred to as JICA) sent an expert in the field of operation and maintenance of medical equipment to a maternity hospital and medical facilities in south region from February to March in 2003.

Chapter 2

Contents of the Project

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

(1) Objectives of the Project

In May 2003, Albania decided on a national social development strategy. Based on the achievements of medium term development goals (2003 to 2006), various measures are being drawn up in order to achieve the aims of the next 10 year long term development plan. One of the measures is the provision of the new health law, and health strategy, through which the referral system is to be reconstructed.

The purpose of the project requested on this occasion, Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania (hereafter “the Project”), is to provide medical equipment to five hospitals, with Gjirokaster regional hospital as core, so as to strengthen the referral system in the region. By equipping these hospitals, local medical services will improve and the two objectives of strengthening the referral system in southern region, and reducing referrals to the capital Tirana’s tertiary hospitals can be achieved. The work to be undertaken by the Project is the procurement of 61 items of medical equipment for the five target hospitals, thereby improving the referral system in the southern region.

(2) Concept of the Project

With Gjirokaster regional hospital acting as core, the population served in the southern region reaches nearly 250,000. But at present, because it is a steeply mountainous region topographically, with roads in a bad state, and poor infrastructure, and with lack of availability of the necessary medical equipment for diagnosis and treatment, many people are unable to receive an appropriate medical service. Access to the hospitals is difficult, yet patients are forced to travel long distance to obtain medical treatment, thus placing an excessive economic burden on them. In these conditions, 127 patients were referred from the southern region to the tertiary level hospitals in the capital, Tirana, during the year 2003. Though exact number is unknown, many patients visit the same tertiary hospitals directly to receive medical services.

The Project will procure medical equipment for the five hospitals of Gjirokaster, Permet, Tepelene, Saranda and Delvina, main amongst which are X-ray units and ultrasound diagnostic equipment, both basic pieces of equipment, essential to the delivery of a medical service. If, with the implementation of Japanese Grant Aid, the medical

equipment is replaced, and secondary level facilities adequately prepared, the citizens in the southern region could receive the prospect of a satisfactory medical service. Tertiary level referrals to Tirana could also be reduced in number.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

(1) Basic Policy

The Project focuses on upgrading medical equipment at the five southern regional hospitals, with Gjirokaster regional hospital as core of the referral system. In order to fulfill the role as the secondary level medical facilities, 61 items of medical equipment for basic diagnostic and treatment and Soft Component regarding operation and maintenance of the medical equipment (Technical Assistance) are targeted by the Project.

The Recipient country first of all requested 35 items of basic diagnostic and treatment medical equipment to the Japanese government. In order to study the request, the field study was conducted in the target 5 hospitals based on the following policies: to draw up an appropriate equipment plan based on improvement of referral system after studying the level and functions of target hospitals, to understand the content of the request and to draw up an appropriate and effective cooperative content and scale including utilizing the existing equipment, to draw up the content of the equipment taken maintenance and operation cost and after-service into consideration, to draw up an equipment plan for the secondary level medical facilities as a basis and to consider possibilities of procuring medical equipment for basic diagnostic and treatment use.

The scope and grades of the equipment for the 5 target hospitals are based on: basic equipment with minimum quantity in order to fulfill their functions and roles as the secondary level medical facilities in the referral system, to avoid equipment that still can use existing one and is procured from other donors with duplication, equipment that can be manually operated (selection of operation table or ICU beds are manually operated) and set with AVR or UPS in order to avoid accidents during power down by reflecting local electric conditions where power down and outage often occur, equipment that can be easily obtained its maintenance and consumable with reasonable price after installation.

The additional request of the basic diagnostic and treatment medical equipment was considered appropriate and necessary for providing basic medical services as the

secondary level medical facilities.

(2) Policy on Natural Conditions

The southern region of Albania is very mountainous. In the Gjirokaster area temperatures range from –5 degrees to 35 degrees Centigrade, and in the Saranda area from 5 degrees to 35 degrees. Annual rainfall is approximately 850 mm (Gjirokaster), and the climate is warm. Snow falls several times each year, but does not tend to settle.

Steep slopes and winding roads with many hairpin bends are typical of the mountains. Badly maintained roads, with winter freezes and huge potholes, all demand that due thought be given to delivery of equipment. Nonetheless, such problems are not likely to delay installation and use of equipment.

(3) Policy on Operational, Maintainable, and Managerial Capability

Most of equipment procuring for the Project is basic diagnostic and treatment use for the secondary level medical facilities. There are enough medical personnel consisted of doctors, nurses, technicians and so forth with high knowledge and skills in each target hospital. Regarding maintenance and management of the equipment, those medical personnel are capable of handling the equipment by providing operation training after installation and Soft Component concerning maintenance of medical equipment. The Ministry of Health is planning for Delvina hospital to ensure a medical doctor with a skill of handling ultrasound diagnostic equipment since this is the first time of procurement for the hospital.

(4) Policy on Grades of Equipment

The scope and grade of equipment under consideration for procurement is defined as that essential basic equipment and quantity of equipment necessary to ensure that the target hospitals can fulfill their role and function as the secondary level medical facilities in the referral system. The Project policy is to focus on equipment that can be easily maintained after installation.

The scope and grades of the equipment for the 5 target hospitals are based on: 1) basic equipment with minimum quantity in order to fulfill their functions and roles as the secondary level medical facilities in the referral system, 2) to avoid equipment that still can use existing one and is procured from other donors with duplication, 3) equipment that can be manually operated (selection of operation table or ICU beds are manually operated) and set with AVR or UPS in order to avoid accidents during power down by reflecting local

electric conditions where power down and outage often occur, 4) equipment that can be easily obtained its maintenance and consumable with reasonable price after installation.

(5) Policy on consumable and spare parts

In the Project, priority will be given to the provision of equipment with a low necessity of repair, and to equipment for which a fast and reasonably priced supply system for consumable and spare parts can be ascertained. Along with the delivery of equipment, the correspondent consumable will further be supplied to ensure the smooth start up operation of the new equipment. This supply can only extend to the start up phase however. Thereafter, responsibility for procurement and operation about consumable and spare parts has been confirmed by the Recipient Country.

(6) Policy on procurement from third party countries and agents

Since the unit price of instrument cabinet, and other equipment planned for the operating theater (trays, basin stands etc) are inexpensive, and transport costs are high, it is preferable that these items are procured domestically. Unfortunately, there are currently no medical equipment manufacturers in Albania producing these items. Thus, there is a high likelihood that procurement of various items among the target equipment will be via third countries. Italy as a neighboring country is favored to its proximity to Albania for repair, management and maintenance.

Italy has a thriving industry in production and export of ME related equipment, included in the equipment described earlier to the Recipient country. Where there is a high likelihood of procurement from third countries, every effort will be made to obtain all relevant documentation and information so as to undertake as much work domestically as is possible. Considering the need for measures for maintenance and repair of procured equipment, it is advisable to procure it from suppliers, able to provide maintenance and repairing services near the Recipient country, to the U.S., or EU member countries.

(7) Policy on Project Period

Infrastructure conditions are poor across Albania, reflecting its economic situation, and infrastructure conditions are particularly inferior in the southern region. As well as having a large number of mountain roads, the roads are poor; as well as low electricity generation capacity, the transmission cables are obsolete and subject to frequent outages and voltage fluctuations. Outages are particularly common during the winter season.

The main method of transport is the truck.

Considering these circumstances, X-ray units, diagnostic equipment and equipment used in operation theater and ICU is to be set with AVR or UPS to avoid problems during power cuts. The Project will endeavor to procure equipment that does not require a power supply (e.g. avoidance of electrically powered operating table and ICU beds in favor of manual versions). Emphasis will be on equipment that can be easily maintained after installation, equipment for which consumable is readily obtained, equipment that can be manually operated in anticipation of power cuts, and that are set with AVR or UPS. A detailed implementation plan will help ensure the whole process, from equipment procurement and transportation to unloading and installing, takes place within the shortest time-frame and in the most efficient way possible.

The Project in principle undertakes all work within one financial year. The work will not carry over into the next financial year.

There are no special items among the equipment being studied for procurement by the Project and as long as the maximum period of delivery is restricted to four months, delivery will be possible. There are two possible routes for shipping—either Durres port via Trieste (Italy) or Thessaloniki (Greece); since both routes can deliver to the target hospitals in a maximum of two days, the delivery distance does not cause a problem and no special measures are required. The plan will be made that no delays to equipment procurement, transportation and installation periods are experienced, including from third country's.

2-2-2 Basic Plan (Equipment Plan)

(1) Total Plan

The target hospitals for procurement of equipment by the Project are five hospitals in the southern region (Gjirokaster, Tepelene, Permet, Saranda, Delvina). Selection of the equipment takes place after study of the least necessary basic diagnostic and treatment equipment and consideration of doctors' skill levels and importance of the equipment. On consideration of sudden power cuts and voltage fluctuations due to the unstable electricity infrastructure, AVR and UPS apparatus will be included in the equipment plan corresponding to the grade and voltage of each piece of equipment.

At Gjirokaster regional hospital, in the X-ray room holding the X-ray equipment, no measures have been taken to contain the radiation. Therefore the Japanese side will be responsible for modification work to line with concrete the windows where leakage is of

concern. It will be the responsibility of the Recipient Country to secure and repair the new development room for X-ray film development set and to maintain and service the room housing the EEG. The Recipient Country will also be responsible for removal and disposal of existing equipment.

(2) Equipment Plan

Based on the result of the Study for the Project, the equipment to be procured will be total of 61 items including image diagnostic related (such as X-ray Unit), Medical Electronics related (such as ECG), Laboratory related (such as Spectrophotometer), Operation Room related (such as Operation lamp). Equipment list is attached in **Table 2-1**, and important points for the equipment to be procured are written below.

1) Image Diagnostic related Equipment

Considering the use, operation and safety of the X-ray unit, a Bucky table, floor or ceiling runner-type specification, is proposed. 300 kHU X-ray tubes and common high voltage 150kV/500mA X-ray generators are planned. Fluoroscopy will be compatible with existing equipment. Mainly 400kHU X-ray tubes and standard high-voltage 150kV/500mA X-ray generator equipment is planned. Both X-ray units and Fluoroscopy will be obtained from suppliers based on suppliers' ability to fully service the equipment after installation. Taking into account Albania's fragile electric power infrastructure, a three phase 380V regulated power supply (AVR) is proposed.

Defects have been detected with Gjirokaster regional hospital's facilities for X-ray protection and modification work to bring these facilities up to standard are to be the responsibility of the Japanese side. Provision is made for floor screens, aprons, gloves and glasses to protect X-ray technicians from radiation during fluoroscopy. A dark room type X-ray film development set is planned for procurement. Film will come in various commonly used sizes (10 x 13 - 3 5x 42cm) with a development speed of approximately 100 seconds. Maintenance and servicing of the proposed new development room will be the responsibility of the Albanian side.

Ultrasound diagnostic equipment (color doppler) is proposed: sector probes for cardiac, major blood vessel and circulatory organ diagnoses, convex probes for general abdominal use and other, linear probes for superficial tests. Color printers for related use are also suggested.

Specifications of ultrasound diagnostic equipment for the target hospitals are:

B/M (brightness/motion) mode for general use, convex and linear probes for general abdominal and superficial tests. For Saranda hospital, in addition to the mentioned convex and linear probes, microconvex probes for adult and child use are included. Gjirokaster regional hospital and Saranda hospital are additionally to each receive one convex probe and one transvaginal probe for obstetric use. Black and white printers for related use are to be provided.

2) Medical Electronics related Equipment

The EEG is used to diagnose function of the central nervous system. Doctors at Gjirokaster regional hospital are highly qualified and familiar with the use of this equipment. Currently, a general 32-channel digital type device is proposed. For best results when using this equipment, it is necessary to block out external light and noise. The Recipient country has agreed to prepare a new room since the existing room is not suitable for EEG test and to maintain the environment in the new room. UPS is included here as a measure to avoid loss of power in the event of a mains outage.

The commonly used 12 leading 6 channel ECG (electrocardiogram) used to test for cardiac arrhythmia and myocardial function is to be procured. Considering the fragile operation and maintenance system, the Project endeavors to provide reusable electrodes as opposed to disposable ones.

3) Laboratory related Equipment

Selection of Blood Gas Analyzers, Blood cell Counters, Spectrophotometers and Electrolyte Analyzers which require a constant supply of reagents: products will be chosen according to the ease with which their reagents and consumable may be obtained locally and hence can be relied upon to provide an adequate service. According to the field study, the parameters to be set for each device are the basic minimum specifications in each case: the 18 main parameters for the Blood cell Counters, Pco₂, PO₂, pH for Blood Gas Analyzers, and measurement of Na⁺, K⁺; and Cl⁻ for the Electrolyte Analyzers. As for other peripheral equipment, Microscopes with light source, Drying ovens, Centrifuges, desktop-type Hematocrit Centrifuges, Barnstead 10 liter type Water Distillers, and 150 litre storage units for medicine are proposed.

All devices are to include AVR and UPS in preparation for power cuts and fluctuating voltage.

4) Operation Room related Equipment

With reference to the precarious Albanian power supply, the Project intends to supply manual, hydraulics-operated operation tables. In orthopedic operations, it is often necessary to turn the body of the patient in complex ways, therefore Operation Table for Orthopedics are to be electrically operated, and components for immobilizing the patient will be in accordance with target hospital Gjirokaster's working conditions.

The desired operation lamps are ceiling-suspended; to ensure flawless operating conditions in a well-illuminated setting, 2 satellite type lights are proposed—these are simple to operate and provide better illumination as main and auxiliary lights are used in combination. Mobile Operating Lights are with battery and will operate irrespective of sudden power cuts.

With regard to Anesthesia, artificial ventilators will be supplied, while the widely used halothane model of vaporizer is proposed. Multi-purpose Electro Surgical Unit that can switch between bipolar and monopolar output are planned, enabling dual use for both coagulation and incisions. Based on a survey with local doctors, standard sets of operating instruments—in general use in Japan—are required. Additionally, standard ENT instrument sets will be procured for Gjirokaster regional hospital and Saranda hospital. 2 bottle-type high-pressure Suction Units, generally employed in operating theatres, and both Drying Oven and Autoclave upright styles of operating instrument sterilizers are included. So that sterilized instruments can be stored and used in a sanitary manner, Instrument cabinets, Revolving chairs, Basin stands, Instrument tray stands and Kick buckets are proposed. AVRs are also included for use with equipment that must guard against voltage fluctuation.

5) ICU related Equipment

Manual, hydraulic ICU beds are planned. With no existing plan to install a centralized surveillance system in the nurse station at the target hospital of Gjirokaster, a simple bedside patient monitor set-up is envisaged. These will monitor the minimum parameters of ECG, Respiration, NIBP, SPO2 and body temperature.

For emergency use, a battery-operated Defibrillator is proposed.

The Study revealed that there was no central piping system in ICU, therefore, Ventilators are to be of compressor-loading type for infants and adults. Syringe pumps and infusion pumps are included in the plan—these can deliver minute doses of medication.

6) OBGY related Equipment

Delivery tables will be hydraulically operated manual tables. According to our survey of local doctors, standard instrument sets for OBGY as used in Japan, that can be used for basic diagnosis and treatment are necessary. Provision is also made for Instrument cabinets, Dressing carts and Basin stands to store sterilized instruments in sanitary conditions. Infant incubators are to be of the closed, single wall-type generally used and with other open Infant warmers for use during post-delivery treatment. AVRs are to be supplied to deal with voltage fluctuations.

On **Table 2-1** Equipment List is attached.

Table2-1 Equipment List

Rep=Replacement

No	Equipment Name	Intended Use	Basic Specifications	Qty	AVR	UPS	Glorakaster		Tepolene		Permet		Saranda		Delvina	
							Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep
1	X-ray Unit	To take X-ray images of chest and other body parts for general purposes	X-ray generator: KV:150kV or more MA:500mA or more X-ray generating type:inverter Anodeheat capacity:300 kWh or more X-ray tube support unit:floor or ceiling support type Table:floating bucky table	1			1	Rep								
2	Fluoroscopy	To take X-ray images of internal organs such as digestive systems	X-ray Generator: KV:150kVA or more MA:500mA or more X-ray generating type:inverter Anodeheat capacity:400kHU or more X-ray TV camera:CCD TVmonitor:15inchCRT Table tilting angle:+90 ~ -15 ° or more wide range Bedside operating system	1			1	Rep								
3	Floor screen	To protect X-ray technicians from radiation exposure	Lead equivalent:1.0mmPb or more Type:1 screen Size:app.900(W) X 1,600(H)	3			1	New		1	New	1	New			
4	Apron	To protect X-ray technicians from radiation exposure	Lead Equivalent:0.25mmPb Size:Adult	3			1	Rep		1	Rep	1	Rep			
5	Gloves	To protect X-ray technicians from radiation exposure	Lead Equivalent:0.25mmPb Size:Adult	3			1	New		1	New	1	New			
6	Glasses	To protect X-ray technicians from radiation exposure	Lead equivalent:0.50mmPb	3			1	New		1	New	1	New			
7	Development set	To develop X-ray films (develop, fix, wash, dry)	Processing speed:less than 100sec. Film size:10x13 ~ 35x42cm	2			1	Rep				1	Rep			
8	Ultrasound diagnostic equipment, color doppler	To test imagediagnosis by ultrasound on cardiovascular system such as heart and major blood vessel	Doppler:Color doppler Monitor:15inchi monitor Probe:Cardiovascular, abdomen Probe type:sector, linear, convex printer:color	1			1	Rep								
9-1	Ultrasound diagnostic equipment (General use)	To test abdomen and superficial parts by ultrasound in Radiology department	Minitor:12 inchi, Black and White Probe:abdomen, surface Image processing:Programmable Printer:Black and white	4			1	Rep	1	Rep	1	Rep			1	New
9-2	Ultrasound diagnostic equipment (General and cardio use)	To test abdomen and superficial parts by ultrasound in Radiology department	Minitor:12 inchi, Black and White Probe:abdomen, cardiovascular Image processing:Programmable Printer:Black and white	1									1	Rep		
9-3	Ultrasound diagnostic equipment (OBGY use)	To test with ultrasound in OBGY area	Minitor:12 inchi, Black and White Probe:abdomen, transvaginal Image processing:Programmable Printer:Black and white	2			1	Rep					1	Rep		
10	EEG	To measure functional conditions of central nervous system	EEG measure Input channel:32 channels Time constants:1m sec.or more Data filing:Hrad disk drive and MO or CD-R	1			1	Rep								
11	ECG	Used to observe change of electric potential to the heart over time during irregular pulse and myocardial ischemia.	Leads:standard12 leads Input impedance:10M or more Dispay waveform:3 channels or more	7			2	Rep	1	Rep	1	Rep	2	Rep	1	Rep
12	Spectrophotometer	To measure protein, sugar in urine,biochemical and serum tests forliver and kidney tests	Measuring method:photometric Wavelength:340 ~ 640nm or more wide range Program measuring:programmable Display:CRT or LCD Printer:Provided	4			1	Rep	1	Rep	1	Rep	1	Rep		
13	Water distiller	To produce distilled water for mixing with reagents and other material	Interior material:Stainless steel Distilled water production rate:10L/hr.	5			1	Rep	1	Rep	1	Rep	1	Rep	1	New
14	Blood cell counter	To measure blood cells in blood	Parameters:RBC, WBC, PLT, Hgb, Hct, MCV, MCH, MCHC, RDW, PLThistograms, Pct, MPV, PDW,LYM (% #), MO (% #),GR (% #) Classified histogram Thoughtput:50samples/hour or more Printer:Provided Sample volume:Whole blood:less than 50ul	3			1	New	1	Rep			1	Rep		
15	Microscope	The basical medical instrument for observing samples to investigate such as bacteria infection, anemia	Eye piece tube:binocular Eye piece lens:X10 Onjective lens:X4, X10, X40, X100 Light source:halogen lamp	9			3	Rep	2	Rep	1	Rep	2	Rep	1	Rep
16	Blood gas analyzer	Tests for emergent resuscitation tests by directly measuring arterial oxygen saturation (SaO2) bicarbonate (HCO3-).	Measuring range:pH, H, pCO2, pO2, Barometric pH:app.6 ~ 8 PCO2:8 ~ 200mmHg or more wide range PO2:0 ~ 740mmHg or more wide range Samples volume:less than 90µL	2			1	Rep					1	Rep		
17	Hematcrit centrifuge	To separate components in blood with centrifugal force for lab. Tests	Maximum speed:12,000rpm or more Maximum RCF:15,000 x g or more Speed adjusting system:Microprocessor Timer:1 ~ 15 minutes or more	5			1	Rep	1	Rep	1	Rep	1	Rep	1	New
18	Centrifuge	To separate components in blood and urine with centrifugal force for lab. Tests	Maximum Speed:3,600rpm or more Maximum RCF:2,320 x g or more Speed adjusting system:Microprocessor Timer:1 ~ 60minutes or more wide range Syringe bucket:15ml x 24 or more	7			2	Rep	2	Rep	1	Rep	1	Rep	1	Rep

Table2-1 Equipment List

No	Equipment Name	Intended Use	Basic Specifications	Qty	AVR	UPS	Girokaster		Tepelene		Permet		Saranda		Dalvina	
							Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep
19	Drying oven	To sterilize medical instruments in various kinds	Capacity:70L-100L Interior material:Stainless steel Heat range:50~200 or more wide range Heating system:Forced air circulation or natural circulation system Temp. control system:Microcomputer	17			4	Rep	4	Rep	4	Rep	4	Rep	1	Rep
20	Electrolyte analyzer	To measure electrolyte in serum or urine	Measuring range(Whole blood, serum, plasma) Na+:100 to 200mmol/L or more wide range K+:1 to 10.0 mmol/L or more wide range CL-:70 to 150 mmol/L or more wide range Measuring range(urine) Na+:100 to 200mmol/L or more wide range K+:2 to 100 mmol/L or more wide range CL-:15 to 300 mmol/L or more wide range Measuring time:within 60 sec.	2			1	New					1	New		
21	Operation lamp	The light designed for surgical operations	Main lamp Light intensity:100,000Lux or more Small lamp Light intensity:55,000Lux or more	4			1	Rep	1	Rep	1	Rep	1	Rep		
22	Operation lamp with battery	The operation lamp movable during surgical operations or diagnosis	Bulb type:Halogen 40W x 4pcs or more Light intensity:55,000Lux or more Battery operating time:app.2 hours or more	4			2	Rep					2	New		
23	Operation table	To fix the positions of patients during surgical operations in general surgery	Type:Hydraulic manual pump system Table top dimensions:1,930(L) X 490(W) or more Trendelenburg range: ± 15 ° or more Lateral tilting range: ± 20 ° or more	3			1	Rep	1	Rep	1	Rep				
24	Operation table for Orthopedic	To fix the positions of patients during surgical operations in Orthopedics area	Type:Electro hydraulic Table top dimensions:app.1,940(L) X 500(W)mm or more Trendelenburg range: ± 20 ° or more Lateral tilting range: ± 20 ° or more	1			1	New								
25	Anesthesia	To anesthetize patients patients during surgical operations in various kinds	Flow meter unit: for 3 kinds of gas (O2-N2O-AIR) Canister:Double chamber Ventilator:Provided Ventilation type:Electronically controlled, electrically driven, timecycle type Tidal volume:100~1,200ml or more wide range	2			1	Rep			1	Rep				
26	Patient monitor	To monitor patients' conditions in operation room and ICU	Measured parameters:ECG/HR/NIBP/TEMP./RESP./SP02 Monitor:ColorLCD ECG measuring range:12~250bpm or more wide range Respiration measuring range:4~120bpm or more wide range SpO2 measuring range:50~100% Temp. measuring range:25~45 NIBP:Oscillometric Printer:Thermal or inkjet type	6			3	Rep	1	New	1	New	1	Rep		
27	Electro surgical unit	To cut and coagulate with high frequency current of electricity	Bipolar / Monopolar change:Available Output:floating type Output modes:Cutting, Coagulation, Bipolar	2			1	Rep					1	Rep		
28	Suction unit	To suck blood, pus, washing liquid and other secretion liquid	Suction power:0-700mmHg or more Suction bottle:2 pcs. total 6L or more Pump type:Piston or rotary type	6			4	Rep	1	Rep	1	Rep				
29	Autoclave, upright	To sterilize medical instruments in various kinds	Capacity:53L or more Sterilization temp.:105~126 or more wide range Timer:1~60minutes or more	8			2	Rep	2	Rep	2	Rep	2	Rep		
30	Instrument set for General surgery	The instrument set for surgical operations in General surgery	Composition:Amputating knife, Periostome, Excision knife and others Total 46 items	4			1	Rep	1	Rep	1	Rep	1	Rep		
31	Instrument set for ENT	The instrument set for surgical operations in ENT area	Composition:Headmirror, light and others Total 77 items	2			1	Rep					1	Rep		
32	Instrument cabinet	To store surgical operation instruments	Material:Stainless steel Upper part:Glass door with key Lower part:Stainless steel door Dimensions:900(W) X 360(D) X 1,700(H)mm	10			3	New	2	Rep	2	Rep	3	Rep		
33	Revolving chair	The chair for the doctors during surgical operations	Material:Stainless steel Seat shape & size:Round type 300mm Height adjustment range:500~700mm or more	6			2	New	1	Rep	1	Rep	2	Rep		
34	Double basin stand with basin	Basic equipment used during surgical operation	Frame material:Stainless Steel Frame:Double basin with caster	6			2	New	1	Rep	1	Rep	2	Rep		
35	Instrument tray stand	Basic equipment used during surgical operation	Material:Stainless steel Shelf:2 top and bottom Tray:3 pcs.	6			2	Rep	1	Rep	1	Rep	2	Rep		
36	Kick bucket	Basic equipment used during surgical operation	Material:Stainless steel Capacity of bucket:10~15L	6			2	Rep	1	Rep	1	Rep	2	Rep		
37	Storage of medicine for Lab	To store reagents and other material used in Lab.	Effective Capacity:150L or more Operating temp.:+2~14 or more wide range Temp. indicator:digital Alarm:Provided	4			1	Rep	1	Rep	1	Rep	1	Rep		

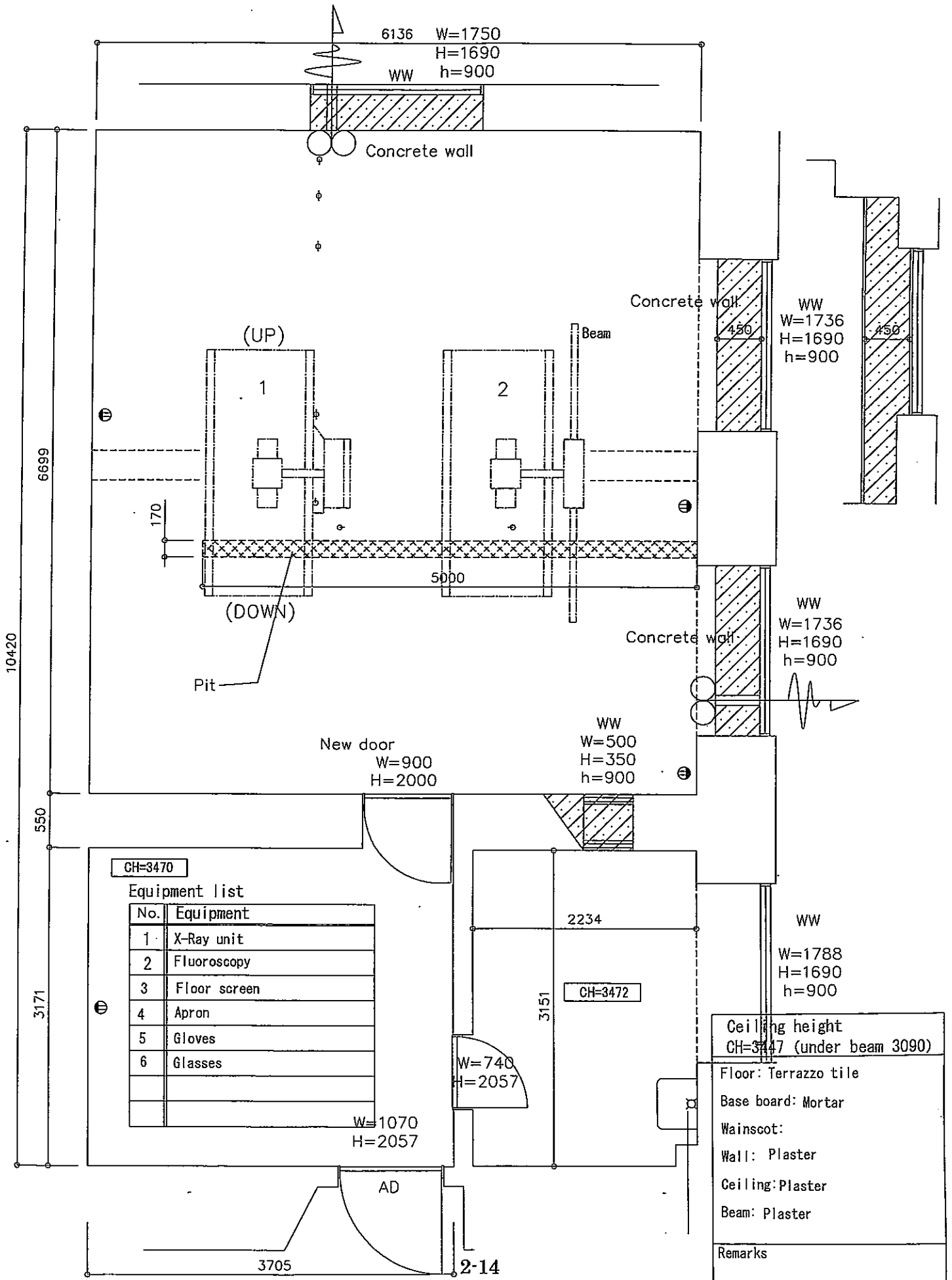
Table2-1 Equipment List

No	Equipment Name	Intended Use	Basic Specifications	Qty	AVR	UPS	Girokaster		Tepelene		Permet		Saranda		Dalvina	
							Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep	Qty	New Rep
38	ICU bed	Beds for the patients in ICU	Dimensions:880(W)x2,200x(L)x650 ~ 850(H)mm or more Material:Steel frame with epoxy powder paint Function:Back raise, knee raise, trendelenburg, reverse trendelenburg	5			4	Rep					1	Rep		
39	Infusion pump	Used to administer strictly controlled doses of medication to ICU patients.	Flow rate:1 ~ 999ml Flow accuracy:within ±5% Alarm:Provided	4			2	New					2	Rep		
40	Defibrillator	Used in cardiopulmonary resuscitation in emergencies. Stops cardiac arrhythmia using a countershock in times of ventricular fibrillation, flutter, ventricular tachycardia, and restores breathing rhythm.	Alarm:provided Battery:25 times or more usable at full charge Recorder:Thermal array	2			1	Rep					1	Rep		
41	Ventilator for adult	To enable patients to breathe artificially using a mechanical ventilator.	Function:CMV, CMV/ASIST, PEEP, CPAP, SIMV, APNEA Oxygen concentration:21 ~ 100% Tidal volume:100-1,300ml or more wide range	1			1	Rep								
42	Ventilator for children	To enable pediatric patients to breathe artificially using a mechanical ventilator.	Functions:SIMV, CPAP Oxygen concentration:21 ~ 100%	1			1	New								
43	Syringe pump	Used to administer strictly controlled doses of medication to ICU patients.	Flow rate range:0.1 ~ 199.9ml/hr or more Flow rate accuracy:Mechanical accuracy within ±2% Syringe:at least 4 kinds usable from 10 ~ 50ml syringe capacity Alarm:Provided	4			2	New					2	New		
44	Delivery table	Basic equipment used for delivery	Elevation mechanism:Hydraulic manual pump system Tabletop dimension:1,150(l) X 600(w)mm Inclination of table: ± 15 ° Height adjustment:650 ~ 930mm or more	5			2	Rep			1	Rep	2	Rep		
45	Instrument set for GY & OB	Basic equipment for diagnosis and treatment in OBGY	Material:Mainbody, stainless steel Composition:Diagnostic, Delivery, Artificical abortion, Obstetric surgery sets	4			1	Rep	1	Rep	1	Rep	1	Rep		
46	Single basin stand with basin	Basic equipment for diagnosis and treatment in OBGY	Material:Stainless steel Frame:Single basin, with caster	4			1	New	1	New	1	Rep	1	Rep		
47	Dressing cart	Basic equipment for diagnosis and treatment in OBGY	Frame material:Stainless steel Caster:Provided	4			1	New	1	New	1	New	1	New		
48	Infant incubator	To care for low weight babies and immature newborn babies	Temp Control:Servo or manual Skin temp. range:35 ~ 37 or more Air temp. range:25 ~ 37 or more Alarm:Provided	1									1	Rep		
49	Infant Warmer	To care for newborn babies and low weight babies	Temp. Control:Servo or manual Temp. setting range:35 ~ 37 or more Alarm:Provided	2									2	New		
50	Stethoscope	Basic medical equipment for general diagnosis	Chestpiece:Double head type Material of binaural:Brass or Aluminium	23			5	Rep	5	Rep	5	Rep	5	Rep	3	Rep
51	Blood pressure meter	Basic medical equipment for general diagnosis	Type:Mobile, cuff for newborns Measuring range:0 ~ 300mmHg	23			5	Rep	5	Rep	5	Rep	5	Rep	3	Rep
52	AVR 220V, 0.5KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 0.5KVA	22			8	New	4	New	4	New	4	New	2	New
53	AVR 220V, 1KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 1KVA	25			9	New	5	New	4	New	6	New	1	New
54	AVR220V, 1.5KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 1.5KVA	2			1	New					1	New		
55	AVR220V, 2KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 2KVA	17			4	New	4	New	4	New	4	New	1	New
56	AVR220V, 5KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 5KVA	8			2	New	2	New	2	New	2	New		
57	AVR220V, 8KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 2.0% Output Capacity:220V, 8KVA	2			1	New					1	New		
58	AVR380V, 70KVA	To stable voltage supply to the medical equipment from electric surge	Input Voltage:3 , 380V ± 15% Output Voltage Accuracy:within 380V ± 3.0% Output Capacity:380V, 70KVA	2			2	New								
59	UPS220V, 0.5KVA	To backup electric supply to the medical equipment while the power goes down	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 3.0% Backup Time:more than 6 minutes Output Capacity:220V, 0.5KVA	7			3	New	1	New			3	New		
60	UPS220V, 1KVA	To backup electric supply to the medical equipment while the power goes down	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 3.0% Backup Time:more than 6 minutes Output Capacity:220V, 1KVA	8			3	New	1	New	1	New	2	New	1	New
61	UPS220V, 2KVA	To backup electric supply to the medical equipment while the power goes down	Input Voltage:1 , 220V ± 15%/50Hz Output Voltage Accuracy:within 220V ± 3.0% Backup Time:more than 6 minutes Output Capacity:220V, 2KVA	1			1	New								

: AVR and UPS are planned depending on the amount of capacity required

(3) Removing the existing equipment

X-ray unit and Fluoroscopy procuring for Gjirokaster regional hospital are renewal of existing equipment, so there is no problem for installation. The modification of X-ray room for X-ray protection will be conducted by the Japanese side. The modifications of dark room and EEG room in Gjirokaster regional hospital, and ultrasound diagnostic room in Saranda hospital will be conducted by the Recipient country. There is no problem for installing these three kinds of equipment mentioned, and modification fee is not very expensive. In the next page, the layout of X-ray room in Gjirokaster regional hospital is attached as **Figure 2-1**.



CH-3470

Equipment list

No.	Equipment
1	X-Ray unit
2	Fluoroscopy
3	Floor screen
4	Apron
5	Gloves
6	Glasses

W=1070
H=2057

CH-3472

W=740
H=2057

Ceiling height
CH=3447 (under beam 3090)

- Floor: Terrazzo tile
- Base board: Mortar
- Wainscot:
- Wall: Plaster
- Ceiling: Plaster
- Beam: Plaster

Remarks

2-2-3 Basic Design Drawing

(1) The facilities of Target Hospitals

The layout plan of the equipment procuring for five target hospitals is attached
Appendices 6.

2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

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 the E/N is exchanged, 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 Albania (e.g. the Ministry of Health, Ministry of Foreign Affairs and Ministry of Economic and Cooperation and Trade) and from the target hospitals 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 E/N is concluded, a Japanese consulting firm that is currently under contract with the Albanian 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 will act as the contracting party of the Recipient Country, and shall be responsible for implementing the Project. The Ministry is required to cooperate in regard to the appointment of the responsible persons concerned for the target hospitals and work necessary for unpacking, delivery, and assembly/trial run of the equipment.

The Minister of 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 consultation 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

2-2-4-2 Implementation Conditions

The procurement plan for the equipment shall be drafted so as to favor either manufacture that have agents capable of providing technical service (repair and maintenance service) in the Recipient Country or in neighboring countries, because the equipment procuring for the Project such as X-ray unit, Fluoroscopy, Ultrasound diagnostic equipment require regular tests and maintenance. Other equipment does not require high leveled technical attention for maintenance in case of mechanical breakdown, but agents capable of providing technical service (repair and maintenance service) in the Recipient Country or in neighboring countries should be favored to be drafted in order to supply necessary spare parts and consumable.

To ensure smooth execution of procurement, transportation and installation of the

equipment for the Project in a short term, supplier of the equipment and a Japanese consulting firm need to exchange close communications. It is important to plan transportation schedule thoroughly especially time consuming process including unloading, custom clearance, inland transportation, installation and etc, because the target hospitals are located in different south regional areas.

In addition, to avoid the damages to the medical equipment from locally occurring power failure and a surge in voltage, equipping AVR and UPS is necessary for X-ray equipment, Laboratory equipment, operation room and ICU related equipment. Also, procuring manually operating equipment such as Operating table or ICU bed is positively encouraged to include in the equipment plan.

In Albania, setting a standard for medical equipment is under discussion, so in the Project the medical equipment whose standard applies ISO, CE and JIS shall be procured.

(1) Procurement from third-party countries and agents

Not only is Albania geographically far away from Japan, but since independence only loose economic ties have been made with Japan compared to those with Europe, and Japanese companies have made little advances. For equipment requiring regular maintenance or continuous provision of consumable and reagents, it is pertinent to consider those Japanese or third party manufacturers (from Italy or Greece for instance) that have either agents or representatives in Albania or neighboring countries and it is these we will focus on for such equipment. Some of the medical equipment able to export to overseas is not manufactured in Japan. Therefore, the equipment from third party countries (from Europe and the U.S.) will be included as target. In the **Table 2-2**, name of the equipment planning and the name of the countries possible candidate are listed below.

Table 2-2 Equipment Procuring from the Third Countries

Equipment Name	Procuring Country (Possible Candidate)
X-ray Unit / Fluoroscopy	Germany
X-ray protective equipment	Germany, Italy
Development Set	Germany, U.S.
Ultrasound Diagnostic Equipment	Germany
EEG	Italy, U.S.
ECCG	Italy
Spectrophotometer	Italy, Ireland
Blood Cell Counter	Italy, France
Blood Gas Analyzer	Austria, Denmark, UK
Electrolyte Analyzer	Austria, Denmark, U.S.
Operation Lamp	Italy

Operation table	Italy
Anesthesia	Italy, Germany, U.S.
Ventilator	Italy, Germany, U.S.
Electro Surgical Unit	Italy, Germany
Defibrillator	Italy, Germany
Patient Monitor	Italy
Infusion Pump / Syringe Pump	Germany, Switzerland
Storage of Medicine for Lab.	Italy

2-2-4-3 Scope of Works

The work provided for the Project by the Recipient Country and covered by Japan's Grant Aid will be described below. In the implementation phase, transportation cost shall be covered by Japanese side. In the meantime, custom clearance and other related procedure require cooperation from the Recipient Country.

1) Work to be carried out by the Recipient Country

- Exemptions of tax and payment of customs duties, internal taxation and other related additional charges
- Prosecution of smooth and adequate custom clearance of medical equipment and payment of necessary cost in a timely manner
- Preparation of storage area for the equipment to be procured until the time of installation
- Removal of existing equipment (X-ray equipment, Development set, EEG, Operation lamp, etc)
- Connection of utilities at the designated points for the equipment to be procured
- Preparation of the route for carrying the equipment to the room from the storage area
- Payment of handling charges (Banking commissions) for Banking Arrangement (BA)

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

- Procurement of the medical equipment
- Transport of the equipment to be procured (Ocean freight and inland transport) to five target hospitals
- Delivery, installation, and trial run of the equipment to be procured
- Technical transfer on operation and maintenance of the equipment to be procured

2-2-4-4 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) Policy on Implementation

Management of the completion dates for installation, maintaining close contact among all parties concerned

Supervision of installation work

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 1 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 Planner 2 One (1)

This person shall be responsible for the re-examination of the Project and the confirmation of the equipment specification, supervision of the installation of the equipment, the estimation of project costs and the supervision of the pre-shipment inspection and installation of the equipment at the target hospitals.

- 4) Soft Component One (1)

This person is responsible for Soft Component related work

2-2-4-5 Procurement Plan

(1) Plan on Equipment Procurement

Some of the equipment will require regular maintenance like X-ray unit. The procurement plan for the equipment shall be drafted so as to favor either manufacturer 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 consumable.

In addition, it is favorable to include adequate amount of consumable for smooth operations after installation

ME related equipment, Instrument cabinet, and other Operation related equipment (Instrument tray or Basin stand) are manufactured and imported in Italy. Therefore, the equipment mentioned has a high possibility to be procured from Italy. In this case, the route for transportation will be planned from Durrës (Albania) via Trieste (Italy)

Considering maintenance and repair services for the equipment to be procured, the country of origin of the manufacturers, able to provide maintenance and repairing services near the Recipient country, shall be favorable from the U.S., or EU member countries.

(2) Transportation Route of Equipment

The route of the inland transportation will be from the port of Thessaloniki in Greece and from Trieste in Italy, and Trieste route will be considered to be favorable in term of customs clearance and sorting the equipment after unloading. The equipment will complete customs clearance and be sorted for 5 target hospitals in the warehouse on the expense of Japanese side. The equipment to be procured from the third party countries will apply the same route. The equipment necessary for installation and adjustment works will be covered by the expense of Japanese side. The transportation of equipment should be carried out with extra cautions. In addition, there is a possibility that a part of equipment will be delivered to Albania via Thessaloniki in Greece. In this case, custom clearance should be arranged in Kakavilë or other most suitable city. In case the equipment is transported by air, Tirana International Airport will be available.

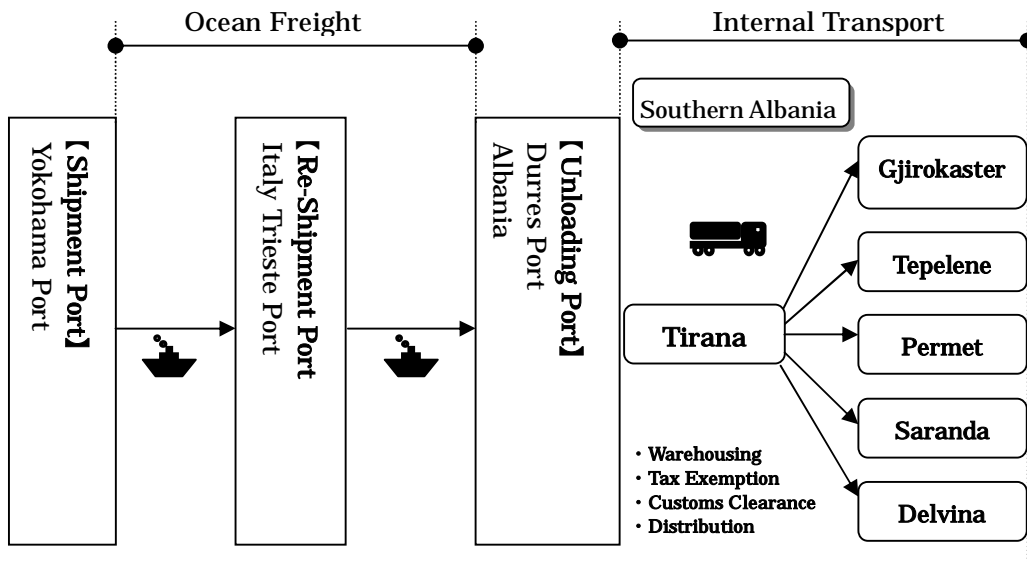


Figure 2-3 Transport Process

(3) Engineers Dispatch Plan

Personnel, including laborers required for the installation of equipment, shall be secured from neighbors in the target hospitals 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 each target hospital.

Table 2-3 Engineer Dispatch Plan

Engineer	Number	Days	Period (M/M)
Local Procurement Management	1	20	0.67
X-ray related Equipment	1	15	0.50
ME related Equipment	1	13	0.43
Laboratory related Equipment	1	19	0.63

2-2-4-6 Quality Control Plan

Some of the equipment will require regular maintenance like X-ray unit. The procurement plan for the equipment shall be drafted so as to favor either manufacturer 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 consumable.

In addition, it is favorable to include adequate amount of consumable for smooth

operations after installation

ME related equipment, Instrument cabinet, and other Operation related equipment (Instrument tray or Basin stand) are manufactured and imported in Italy. Therefore, the equipment mentioned has a high possibility to be procured from Italy. In this case, the route for transportation will be planned from Durres (Albania) via Trieste (Italy)

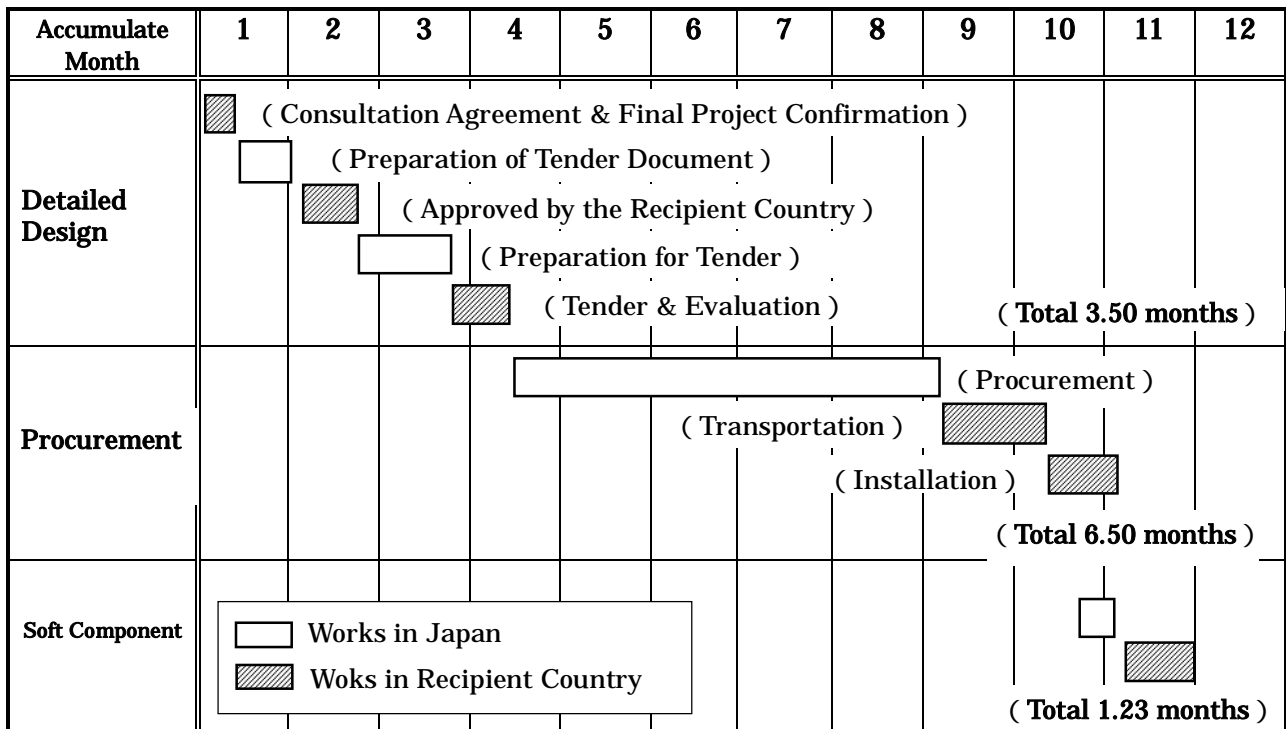
Considering maintenance and repair services for the equipment to be procured, the country of origin of the equipment shall be favorable from U.S., EU member countries.

2-2-4-7 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 2-4**.

Table 2-4 Project Implementation Schedule



2-3 Obligations of 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 Recipient Country removes the existing equipment
- 6) to ensure that the equipment procured under the Grand Aid Scheme should be maintained and used properly and effectively for the Project
- 7) to confirm that the Recipient Country bears all expenses except for those agreed to be covered by the Japanese government

2-4 Project Operation Plan

The equipment procuring for the Project requires high skills, but most of procuring equipment purposes renewal of existing obsolete one and there are enough personnel with high knowledge and skills in each target hospital. However, it is necessary for Delvina hospital to ensure a medical doctor with a skill of handling ultrasound diagnostic equipment since this is the first time of procurement for the hospital. It is favorable that the Ministry of Health will dispatch a new doctor or send the doctor regularly from Saranda hospital. The equipment requiring regular maintenance needs maintenance contract with supplying manufactures. There is no problem about maintenance of the equipment with high knowledge and skill level of hospital personnel.

2-4-1 Operation and Maintenance Cost

In order to evaluate how the procurement of medical equipment influences financial management in five target hospitals, the financial data from each hospital is analyzed and how much the equipment to be procured can contribute to the management of each hospital. The financial data from the hospitals is not enough, and the financial analysis required a lot of preconditions. As a result, the analysis showed that the procurement of equipment on the Project will contribute to better financial management of each hospital.

(1) Precondition of Evaluation

The preconditions of financial analysis are below.

- Evaluation Period : 2005 - 2009 (5 years)
- Cost basis : Cost in 2004 (The rate of price rising is not considered)
- Diagnostic price : The price table from the Ministry of Health in 2004 is applied The price escalation is not considered.
- Depreciation : The principle of depreciation is not considered.
- Exchange rate : US\$1.00 = Yen 109.18 (End of April in 2004)
EURO 1.00 = Yen 134.53 (End of April in 2004)
US\$1.00 = Lek 106.41 (End of April in 2004)
- Rate of payment collection 50% : Children, pregnant women, elderly people are excluded from collection of diagnostic payment in the hospital in law. Also, those low income individuals who can not pay the fee exist in the patients. Considering these conditions, it is assumed that about 50% of all patients will pay the diagnostic payment.
- Maintenance cost : The necessary technical maintenance services for major equipment will be supplied from neighboring areas at reasonable costs.
- Evaluation scheme : The initial investment will be covered by Grant Aid, so the initial investment cost is not calculated. The equipment to be procured will be operated by the hospital staffs presently working in the hospital presently owned, and additional fixed cost is not calculated.

(2) Expected income

Was the equipment to be provided by the Project, obsolete equipment at the five

southern regional hospitals could be upgraded and the basic medical equipment in shortage could be filled; each hospital could then look forward to more efficient diagnosis and treatment and a higher quality medical service on offer. The patients, who heretofore were unable to receive treatment locally because of obsolete equipment and were forced to go to other hospitals, will now be able to be treated locally. This also applies to the patients who have opted for treatment at private clinics or at hospitals abroad and to those who have been treated at tertiary level medical facilities in Tirana. It is therefore expected that each hospital will see an increase in patient numbers and a subsequent increase in revenues.

Based on the above hypothesis regarding the economic benefits of supplying new equipment, the following calculations have been made (see table on the next page).

This table gives a calculation of the expected increase in revenue of the main items of installed equipment after one year of operation, multiplying test unit price (2004 values) of examination and treatment by expected number of tests (2003 patient figures). Patient numbers are expected to rise 15% above the 2003 base figures, so the increase in tests is further calculated. This 15% contains elderly, infant, child, student, disabled, military, emergency and low-income patients who are not charged medical fees. About a half of the patients mentioned above is assumed to be included in those 15%, so we arrive at our final figure for expected increase in revenue.

Table 2-5 Expected Revenue from Operating Main Equipment

Gjirokaster

Equipment	Number of tests (2003)	Expected increase of tests (1 year)	Unit Price (Lek)	Revenue (Lek)
X-ray Unit	11,174	1,676	300	502,800
Fluoroscopy	11,044	1,657	300	497,100
Ultrasound Diagnostic Equipment (Color Doppler)	1,500	225	800	180,000
Ultrasound Diagnostic Equipment	9,894	1,484	800	1,187,200
EEG	1,500	225	500	112,500
EKG	6,000	900	250	225,000
Spectrophotometer	73,522	11,028	200	2,205,600
Blood Cell Counter	18,296	2,744	300	823,200
Blood Gas Analyzer	0	1,600	300	480,000
Electrolyte Analyzer	11,521	1,600	200	320,000
Total				6,553,400
Expectable Revenue				3,266,700

As a result, Gjirokaster regional hospital is forecast to see increased revenues of 3,266,700 Lek in 3 years once the 10 devices procured are fully operational.

Tepelene

Equipment	Number of tests (2003)	Expected increase of tests (1 year)	Unit Price (Lek)	Revenue (Lek)
Ultrasound Diagnostic Equipment	888	133	800	106,400
ECCG	6,000	900	250	225,000
Spectrophotometer	48,326	7,249	200	1,149,800
Blood Cell Counter	13,440	2,016	300	604,800
			Total	2,086,000
		Expectable Revenue		1,043,000

Tepelene hospital will expect increased revenues of 1,043,000 Lek from the 4 new pieces of equipment.

Permet

Equipment	Number of tests (2003)	Expected increase of tests (1 year)	Unit Price (Lek)	Revenue (Lek)
Ultrasound Diagnostic Equipment	910	137	800	109,600
ECCG	6,000	900	250	225,000
Spectrophotometer	48,430	7,265	200	1,453,000
			Total	1,787,600
		Expectable Revenue		893,800

Permet hospital will see an increase in revenues to the sum of 894,000 Lek thanks to revenue efficiencies derived from the 3 devices to be procured.

Saranda

Equipment	Number of tests (2003)	Expected increase of tests (1 year)	Unit Price (Lek)	Revenue (Lek)
Ultrasound Diagnostic Equipment	5,255	788	800	630,400
ECCG	6,000	900	250	225,000
Spectrophotometer	50,304	7,546	200	1,509,120
Blood Cell Counter	4,735	710	300	213,000
Blood Gas Analyzer	0	1,500	300	450,000
Electrolyte Analyzer	4,544	682	200	300,000
			Total	3,327,520
		Expectable Revenue		1,663,760

Revenues are set to increase by 1,663,760 Lek once the six devices at Saranda hospital are fully operational (after 3 years).

Delvina

Equipment	Number of tests (2003)	Expected increase of tests (1 year)	Unit Price (Lek)	Revenue (Lek)
Ultrasound Diagnostic Equipment	0	900	800	720,000
EKG	1,500	225	250	56,250
			Total	776,250
		Expectable Revenue		388,125

Once the two devices at Delvina hospital have become fully operational after 3 years, revenues are forecast to increase by 388,125 Lek.

(3) Expected Expenditure

Equipment will be provided by the Project with the precondition that the equipment will not require high operation or maintenance cost, and that it will replace obsolete equipment. The most important equipment is currently in operation and assuming there is little change to patient numbers, there should be little change to the quantity of consumable used. Since current equipment is to be upgraded, it is estimated that servicing costs for the equipment should decrease. This infers that the new equipment will have a positive effect on financial management at each hospital.

However, the cost of regular maintenance and spare parts are likely to increase, as the equipment becomes modernized.

The introduction of new equipment will enable each hospital to provide a better medical service to the patients, and this may in turn cause patient numbers to rise. Increased patient numbers will subsequently increase the volume of consumable and spare parts needed. With reference to all these individual elements, **Table 2-6** sets out the calculated operational cost (for spare parts and consumable) required for the 7 major items at full operation rate and with patient numbers up the predicted 15%. The expenses generated from this scenario are as **Table 2-6**.

Financial analysis of procured equipment has been undertaken with the purpose of evaluating how equipment procured with Japanese Grant Aid can be operated without putting a financial strain on the hospitals. After confirmation that there will be no undue burden on the hospitals, the possibility of whether equipment could potentially improve

management conditions has been studied.

Table 2-6 Maintenance Cost of Main Equipment

(Lek)

Equipment	Maintenance	Spareparts (Consumable)	Annual Operation Cost
X-ray Unit	-	Film (100/pack)	82,450
Fluoroscopy	-	Film (100/pack)	117,450
		Barium (1 year)	
Ultrasound Diagnostic equipment	-	Roll paper, Gel	32,000
Spectrophotometer	-	Reagent, other	419,000
Blood Cell Counter	50,000	Reagent, other	231,000
Blood Gas Analyzer	50,000	Reagent, other	373,500
Electrolyte Analyzer	50,000	Reagent, other	452,000

(4) Evaluation Result

An evaluation of the financial situation of each hospital in response to the various factors above has been compiled in **Table 2-7**. The results of the analysis show that the major medical equipment to be procured under the Project would operate soundly in financial terms with stable profitability to be expected by all target hospitals during the evaluation period, helping to improve and strengthen the financial management of each hospital. It is concluded that once the equipment becomes fully operational, the necessary expenses will be adequately covered by the expected increase to revenue of each hospital and the equipment will further contribute toward sound hospital management.

Table 2-7 Evaluation Result

(1,000 Lek)

Gjirokaster						
Year	2005	2006	2007	2008	2009	Total
Revenue	1,634	2,287	2,940	3,267	3,267	13,395
Expenditure	0	1,294	1,635	1,806	1,806	6,541
Maintenance	0	150	150	150	150	600
Consumable	0	1,144	1,485	1,656	1,656	5,941
Balance	1,634	993	1,305	1,461	1,461	6,854

(1,000 Lek)

Tepelene						
Year	2005	2006	2007	2008	2009	Total
Revenue	522	730	938	1,043	1,043	4,276
Expenditure	0	489	629	699	699	2,516
Maintenance	0	0	0	0	0	0
Consumable	0	489	629	699	699	2,516
Balance	522	241	309	344	344	1,760

Permet						(1,000 Lek)
Year	2005	2006	2007	2008	2009	Total
Revenue	447	626	804	894	894	3,665
Expenditure	0	327	421	468	468	1,684
Maintenance	0	0	0	0	0	0
Consumable	0	327	421	468	468	1,684
Balance	447	299	383	426	426	1,981

Saranda						(1,000 Lek)
Year	2005	2006	2007	2008	2009	Total
Revenue	832	1,165	1,498	1,664	1,664	6,823
Expenditure	0	1,253	1,410	1,575	1,575	5,813
Maintenance	0	150	150	150	150	600
Consumable	0	1,103	1,260	1,425	1,425	5,213
Balance	832	-88	88	89	89	1,010

Delvina						(1,000 Lek)
Year	2005	2006	2007	2008	2009	Total
Revenue	194	272	349	388	388	1,591
Expenditure	0	22	28	32	32	114
Maintenance	0	0	0	0	0	0
Consumable	0	22	28	32	32	114
Balance	194	250	321	356	356	1,477

2-5 Other Relevant Issues

Soft Component Plan

(1) Purpose

Since new equipment is procured by the Project, the vital question is how efficiently and effectively it will be utilized, because the equipment control system of the target five hospitals is not adequate. There is a need to define this stock control and fully establish a system for management and maintenance of the equipment. A well-organized management system is the precursor to effective operation of the equipment and a good standard of medical service for the patients such as the equipment inventory, present condition of the equipment, a repairing system of the equipment for breaking down (necessity of hospital technician or a special one from manufacture), storage and ordering system of spare parts and consumable. Sharing this information inter-hospital would bring further efficiencies as hospitals may accommodate each other's equipment needs.

(2) Form of action

In each hospital a method of equipment management should be established and shared all details to allow effective, efficient operation of the equipment procured. To this end, an equipment operation and maintenance manual will be created. The manual will

contain standardized documents including the equipment management register (with equipment inventory), purchase invoices, order forms, receipts (denoting timing of order, volume, delivery time for spare parts and consumable) and stock register (an accurate inventory of spare parts and consumable). As well as the operation know-how that manufacturers will transfer at the time of installation, instruction manuals will also be obtained. These manuals will be stored together to prevent their dispersal and are to be referred to during servicing to prevent damage to equipment due to incorrect operation. Regular checks and inspections of equipment are to be performed to keep equipment running smoothly.

By these means, a system is created whereby current conditions of equipment, spare parts and consumable in each hospital inventory can be referred to at any time, allowing greater efficiencies and effectiveness in using the target equipment and smoother operation.

(3) Fundamental set-up

Details of the equipment control system

- Designation of one person as equipment controller

Each hospital designates one person as equipment controller, giving them responsibility for the system. The controller creates and supervises a fully documented version of the following register.

- Creation of equipment control register

An equipment register is created, itemizing all equipment owned in the register. The register format is standardized.

- Creation of inventory register

Based on the inventory register, the hospital has a sound understanding of appropriate quantities of spare parts and consumable, and can distribute these as and when necessary.

- Standardization of cooperative supervision

Timing of orders, quantities and delivery times for all parts and consumable are made clear by the use of standardized purchase invoices, order forms, receipts and other documents.

- Equipment maintenance control

All manuals for the main items of equipment are kept centrally, so there can be a fluid response to breakdowns when they occur. Information relating to operating conditions of equipment is also held centrally. Devices that require regular inspection or exchange of parts are itemized together in a table of regular equipment maintenance and inspection work.

- Foundation of Equipment Supervisory Committee

To support the equipment controllers in their role, an equipment supervisory committee is to be set up. The committee will be comprised of managers (the hospital director), users (doctors) and the equipment controller themselves, and meetings will act as the forum for sharing information on equipment conditions in each department, notifying each other of equipment trouble spots, and discussing results-oriented operation of all equipment. The system will be outlined in a supervisory manual.

(4) Action

The Soft Component plan is to be carried out under the auspices of engineering assistance.

One specialist will be dispatched to the region for a period of 4 weeks. The support of the Ministry of Health is essential in fully establishing the equipment management system, hence the attendance of the people in charge of equipment management from the Ministry of Health has been requested at the beginning of this period, at which time the (candidate) equipment controllers from each of the target five hospitals will meet at Gjirokaster regional hospital for a seminar on equipment audit. Prototypes for the equipment register and the other registers will be distributed at this seminar, and based on these prototypes explanations will be given on how coordinate the supervision of equipment, followed by a Q&A session. This will be followed by site visits to each hospital with supervision skills transfer using OJT (on the job training).

(5) Execution Period

Soft Component assistance will take place promptly upon installation of the procured equipment.

2-6 Estimated Cost of the Project

Total costs of the Project are estimated at approximately JPY 234 million. The details of the costs shared by both Japanese side and the Recipient Country are estimated based on the estimation condition in the next page. This cost estimate is provisional and

would be further examined by the Government of Japan for the approval of the Grant.

(1) Japanese side

The Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania (Medical Equipment Procuring Project)

Total Estimated Cost

Approx. JPY 233 million

Contents		Estimation Cost (million JPY)		
Equipment	Gjirokaster Regional Hospital	Radiology	49	114
		Laboratory	9	
		Surgery	18	
		ICU	12	
		OBGY	9	
		Pathology	17	
	Tepelene Hospital	Radiology	5	21
		Pathology	1	
		Laboratory	6	
		Surgery	7	
		OBGY	2	
	Permet Hospital	Radiology	5	22
		Pathology	1	
		Laboratory	3	
		Surgery	10	
		OBGY	3	
	Saranda Hospital	Radiology	8	43
		Laboratory	9	
		Surgery	11	
		ICU	2	
		OBGY	12	
Pathology		1		
Delvina Hospital	Radiology	5	7	
	Laboratory	1		
	Pathology	1		
Implementation Plan, Procurement Management, Technical Training		26		

(2) Albanian side

Expenses borne by the Recipient Country

Contents of Work	Amount (US\$)
Removing the existing X-ray System (Gjirokaster)	6,988
Modifying the Dark Room and EEG Room (Gjirokaster)	1,740
Modifying the Ultrasound Diagnostic Room (Saranda)	
Total	8,728

• Exchange rate : 1US\$ = JPY 109.18, 1EURO= JPY134.53, 1LEK = JPY 1.02
(US\$: US dollar, EURO : Euro, Lek : Albanian Lek)

Chapter 3

Project Evaluation and Recommendations

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

(1) Direct Effect

Improvement of medical services in southern region by improving diagnostic and treatment systems in the target hospitals

The procurement of basic medical equipment will enhance its diagnostic capabilities, which have been in decline due to the deterioration of the existing obsolete equipment, and also enable diagnosis and treatment more adequately and efficiently. In addition, increase of number of tests is expected.

Reduction of burden on patients

The obsolescence of equipment causes inefficient diagnosis and treatment, and, as a result, creates a situation, that patients are forced to repeat tests multiple times, endure frequent hospital visits, and refer the patients who can not treat to tertiary level hospitals in Tirana. This burden makes it difficult for patients to continue their treatment, both physically and financially. The improvement of medical service lightens the burden on patients by decreasing the frequency of hospital visits and tests, and reducing the treatment period for both inpatients and outpatients.

Strengthening the referral system in south region in Albania

Improving the quality of medical services in south region by the Project will recover the trust in target hospitals. The number of patients will increase, and the number of patients referred to tertiary level medical facilities in capital Tirana will decrease. As a result, the referral system in south region will be strengthened.

Improvement of maintenance system of medical equipment

It makes possible operate the existing as well as procuring equipment more efficiently and effectively by providing Soft Component program regarding maintenance of medical equipment. Also, the program enables to act rapidly in case of mechanical breakdown and manage the stockpile of spare parts and consumable.

(2) Indirect Effect

Contribution to the priority plan

In May 2003, Albania decided on a national social development strategy. One such measure is the provision of the new health law, and health strategy, through which the referral system is to be reconstructed. If the referral system in south region is completed, a part of national social development strategy will be accomplished. As a result, tertiary level medical facilities are able to concentrate their attention on high level diagnostic and treatment medical services.

3-2 Recommendations

We propose 2 recommendations written below in order to facilitate procuring equipment more effectively and efficiently.

(1) Reform of Health Insurance System

The Ministry of Health in Albania is working on the reconstruction of health insurance system supported by the World Bank. The main points are 1) concentrate widely divided funds including Ministry of Health, Social Insurance and Health Insurance on single fund by establishing Health Insurance Fund, 2) raise insurance fee greatly from present 3.4%, 3) collect a certain amount of treatment fee from the patients. It is planned that the coverage of insurance, at present only primary level medical service, will extend to secondary and tertiary level, which has not been realized yet due to lack of fund. The Ministry of Health is working on introducing this new health insurance system with other related sections, but it is not easy to realize because this new plan includes the raise of insurance fee, charging the treatment fee, which demand drastic change from almost free of charge medical system at present. However, the Ministry needs to face the political decision to change the health insurance system sooner or later as Albania becomes more market economized.

In the near future, target five hospitals will be expected to become self-supporting through their own efforts. In order to achieve sound hospital management, under the guidance of the Ministry, hospital staffs must work to improve the efficiency of hospital management and medical services. They must rebuild their administrative system to suit the new economic system and implement self-sufficient management by their own. Re-training of medical staffs is also required.

(2) Management of cleanliness and hygienic conditions in the hospitals

The management of cleanliness and hygiene is not so appropriate in target hospitals generally. It was said that Albania is one of the highest countries about infectious exposure inside the hospitals. People walk in the hospital without taking off their shoes which comes from local customs, and the ash of tobacco was left in corridor, steps and waiting room. Because of that, the janitors were placed in the hospitals but can not clean the entire building. Not only outpatients but also doctors and inpatients were smoking inside the hospital. Also, patient's rooms are not kept hygienic conditions. Keeping good hygienic condition inside the hospital is essential as a medical facility, and it is considered necessary to work on many subjects including cleaning of inside the hospital, keeping hygienic patient's rooms and operation rooms, prohibiting smoking except for smoking areas, etc. In addition, promoting the cleanliness of inside the hospital requires a new awareness of medical staffs as well as patients and their families. Improvement of these issues needs immediate actions by the hospitals staffs.