Ministry of Health
The Republic of Albania

PREPARATORY SURVEY (BASIC DESIGN) REPORT ON THE PROJECT FOR IMPROVEMENT OF THE MEDICAL EQUIPMENT OF THE REGIONAL LEVEL EMERGENCY CENTERS IN THE REPUBLIC OF ALBANIA

October 2009

JAPAN INTERNATIONAL COOPERATION AGENCY

BINKO INTERNATIONAL, LTD.

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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 the Medical Equipment of the Regional Level Emergency Centers and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Albania a study team from April 26 to May 23, 2009.

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 in order to discuss a draft basic design, and as this result, the present report was finalized.

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

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

October 2009

Yoshihisa UEDA
Vice-President
Japan International Cooperation Agency

October 2009

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of the Medical Equipment of the Regional Level Emergency Centers in the Republic of Albania

This study was conducted by Binko International Ltd., under a contract to JICA, during the period from April, to October, 2009. In conducting the study, we have examined the feasibility and rational 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,

Shinichi KIMURA
Project Manager,
Basic design study team on
the Project for Improvement of the Medical Equipment
of the Regional Level Emergency Centers
Binko International, Ltd

Summary

(1) Country Situation

The Republic of Albania (hereinafter called "Albania") is located in the central southern part of the Balkans, with a population of approximately 320 million as of 2009. It is bordered by Serbia, Montenegro and Kosovo to the north, Macedonia to the east, Greece to the south, Adriatic Sea to the west, and Italy located 100km further along the sea. The total area of the country is 28,748 $km^{2.}$ The country is mountainous except for flat coastline, and 70% of land is 300m or more above sea level.

The coastal lowlands have typically Mediterranean weather while the highlands enjoy a continental Mediterranean climate. Thus, while there are areas where the peak summer temperature exceeds 30 ℃, the lowest winter temperature in coastal areas is 0 ℃, and the inland temperature drops to -10 ℃ with significant snowfall at areas of high elevation.

The total GDP in 2007 for Albania was approximately 112 billion US dollars, while GDP per capita in 2008 was 4,073 US dollars (ranked 95 among 180 countries in 2008). These figures are the lowest in Europe, where Albania remains one of the poorest countries. The industry structure per GDP is 20.6% (first industry), 19.9% (second industry), and 59.5% (third country), respectively.

(2) Background of request, details and summary

The Albanian Ministry of Health set forth "The Long-term Strategy for the Development of the Albanian Health System" in 2004 in order to reaffirm the urgency to establish an emergency medical system as well as emergency medical centers. The Albanian Ministry of Health also procured 100 ambulances in 2005 for regional and district hospitals located throughout Albania, in order to improve the smooth transportation of emergency patients. In addition, the Strategy of Emergency Medical System Reform in Albania was launched in June 2007 so as to establish an emergency medical service system as well as improve the emergency sections at regional hospitals.

Furthermore, the Government of Albania set forth the National Strategy on Development and Integration (NSDI) in 2007, in order to emphasize the establishment of a health and medical system and provide high quality healthcare services as one of the top priority socio-economic development issues. In this NSDI, the Government prioritizes "the improvement of access to effective health and medical services" as an emergency service prioritized strategy. The main component of this Strategy involves recovering Albanian nationals' trust in healthcare services by establishing a robust medical system, including emergency services as an entry point to and part of a network of continuous medical diagnosis and treatment.

This project is to support the provision of swift, appropriate and high quality emergency medical service for emergency patients in a holistic manner through improvement of emergency medical facilities, and is certain to be an important factor in achieving the goal set forth in this strategy.

The major cause of mortality in recent Albania has shifted from preventable infectious diseases, which have been overcome due to the expansion of primary healthcare, to non-communicable diseases. Over the past ten (10) years, circulatory diseases such as cardiovascular disease, which claimed 281.9 lives (against a population of 10 million) as of 2006, has been ranked at number one (1), while traffic accidents, which were 44.4 persons (against a population of 10 million) as of 2006 were ranked at number four (4). This problem exposes a serious risk to the achievement of "The Long-term Strategy for the Development of the Albanian Health System". To prevent fatalities linked to circulatory diseases and traffic accidents, there is a need to provide quick diagnosis and treatment at the facilities nearest the patients, and hence to establish an emergency medical system throughout Albania.

In the Emergency Medical System, secondary level medical facilities such as regional and district hospitals take charge of rural areas, while tertiary hospitals such as the Mother Teresa General Hospital and Tirana Dispatch Center act as focal points in metropolitan areas. However, emergency sections, which are located in both metropolitan and rural areas, face problems such as the obsolescence of ambulances, shortages of lifesaving equipment used inside them, and shortages and obsolescence of emergency medical equipment at emergency focal point facilities. These problems adversely affect the lifesaving rate, and promote a lack of trust among Albanian nationals in public health and medical services. Since demands for emergency medical services are expected to increase, there is an urgent need to establish an emergency medical system.

Under current circumstances, the Government of Albania had requested Grant Aid from the Government of Japan to procure emergency medical equipment, which would otherwise be difficult to procure.

A preparatory survey conducted in November 2008 highlighted the obsolescence of ambulances, shortages of lifesaving equipment used inside them, and the deterioration of the emergency focal point facilities stemming from the obsolescence of emergency medical equipment, and the lack of awareness about equipment maintenance. As this project is based on the result of a preparatory survey, there are plans to input soft components, namely to establish a "Preventive Maintenance System" in order to properly maintain lifesaving equipment used inside ambulances and emergency medical equipment when procuring ambulances themselves.

(3) Summary result of investigation, and contents of the project

Based on a request from the Government of Albania, the Government of Japan decided to conduct preparatory survey (basic design), and Japan International Corporation Agency (JICA)

dispatched preparatory survey (basic design) team to Albania from 26th of April to 23rd of May, 2009. The survey team discussed and confirmed with the relevant Albanian stakeholders aspects concerning the background to the request, contents of the request, and implementation system etc, and finally prepared a draft preparatory survey (basic design) report following domestic analysis. JICA again dispatched survey team from 23rd to 29th of August, 2009 in order to explain and discuss about the contents of the draft preparatory survey (basic design) report, and finally obtained agreement on preparatory survey (basic design). Furthermore, the survey team prepared the current preparatory survey (basic design) report after domestic analysis.

The objective of this project is to improve ambulances, the lifesaving equipment used inside them, and emergency medical equipment for regional and district hospitals located in rural areas, and for the Mother Teresa General Hospital and Tirana dispatch center located in Tirana, thereby enabling quick diagnosis and treatment at facilities nearest the patients, which will improve the lifesaving rate. The concrete project contents were planned based on the following policy:

1. Efforts are made to improve the emergency medical service system at regional hospitals, which are focal points of service provision.

   There is one regional hospital in each region, and a total of 11 regional hospitals throughout Albania. Among these 11 regional hospitals, Shkodra regional hospital is supported by an Italian NGO in order to improve emergency medical services, thereby excluding this site. Consequently, the sites targeted in the project are ten (10) hospitals. In addition, there is one district hospital in each district, making a total of 23 district hospitals. The district hospitals are the focal points of the district emergency medical services, especially Lushnje and Sarande district hospitals, which are located in densely populated areas. In addition, these two district hospitals have relatively larger activity scales and scopes and are hence included in this project because of plans to upgrade them to regional hospitals in the near future.

2. The Mother Teresa Pediatric Hospital is a tertiary medical facility and attached to the Mother Teresa General Hospital. At this general hospital, the EBRD (European Bank for Reconstruction and Development) is currently constructing an emergency center, which incorporates seven (7) diagnostic sections, although no pediatric section is included. In addition, the Albanian Ministry of Health has renovated pediatric emergency sections, and has constructed expansionary a pediatric operation theater, but the equipment there is insufficient. Thus, the pediatric emergency section and pediatric emergency operation theater of the Mother Teresa Pediatric Hospital are also included in this project.

3. Regarding ambulances and the lifesaving equipment used in them, existing ambulances, which are obsolete, would be replaced, and the emergency rescue equipment used in them would be procured for other usable existing ambulances in order to improve the function of the emergency medical services.

4. The equipment procured for emergency sections should be for use of diagnosis and treatment for emergency patients based on their minimum clinical demands. Additionally, the appropriate grade of equipment was selected based on hospital maintenance management capability.

5. Equipment that is low-priced and procurable by the Government of Albania, and clinical laboratory equipment whereby the central laboratory is located beside the emergency section in the hospital and shared use would be possible where necessary, is not considered in this project.

6. Regarding CT scanners, there are plans to procure these to a limited extent for Kukes and Gijrokaster regional hospitals, which are capable of maintenance, have convenient road access and have wide catchment area populations.

7. It was decided to exclude equipment used to establish a communication system, equipment for operational training, and campaigns for Albanian national following explanation about Japan's Grant Aid scheme.

8. The soft component, which aims to establish a "Preventive Maintenance System" in order to maintain medical equipment in good condition for an extended period, is included and would be implemented.

Based on the above policy, the major equipment, which is to be procured under the project for the targeted hospitals, is as follows:

Project site and Major Procurement Equipment

Project Site	Major procurement equipment
1. Emergency Unit of Pediatric Hospital of "Mother Theresa"(Mother Teresa Pediatric Hospital)	Anesthesia Machine with Ventilator,Autoclave,Automatic Ventilator for infant and pediatric、Defibrillator、ECG、Centrifuge、Patient Monitor、Electrosurgical unit、Mobile OT lamp with battery、Laryngeal catheterization simulator for continuous education、Respiratory Care Bag、Resuscitaror、Examination lamp、Syringe pump etc.
2. Emergency Dispatch Center in Tirana	Advanced Life support ambulance、Back Boad (spine board)、Respiratory Care Bag、Resuscitaror、ECG、Examination lamp、Suction unit etc.
3. Lezha Regional Hospital	Advanced Life support ambulance、Blood cell counter、Defibrillator、ECG、Examination lamp、Syringe pump、Respiratory care bag、Resuscitator、Patient Monitor、Mobile X-ray unit、Suction unit、Ultrasound unit etc.
4. Kukes Regional Hospital	Advanced Life support ambulance、Blood cell counter、CT scanner、Defibrillator、ECG、Examination lamp、Patient Monitor、Mobile X-ray unit、Resuscitation care bag、Resuscitator、Suction unit、Ultrasound scanner、X-ray fluoroscopy with general X-ray (dual type) etc.
5. Diber Regional Hospital	Advanced Life support ambulance、Defibrillator、ECG、Examination lamp、Mobile X-ray unit、Suction unit、Patient Monitor、Resuscitation care bag、Resuscitator、Ultrasound unit、X-ray fluoroscopy with general X-ray (dual type) etc.
6. Durres Regional Hospital	Advanced Life support ambulance、Blood cell counter、Defibrillator、ECG、Examination lamp、Spectrophotometer、Resuscitation care bag、Resuscitator、Suction unit、Patient Monitor etc.
7. Elbasan Regional Hospital	Advanced Life support ambulance、Defibrillator、C-arm X-ray unit、ECG、Examination lamp、Mobile X-ray unit、Suction unit、Resuscitation care bag、Resuscitator、Patient Monitor、Ultrasound scanner、X-ray fluoroscopy with general X-ray (dual type)etc.
8. Fier Regional Hospital	Advanced Life support ambulance、Defibrillator、ECG、Examination lamp、Mobile X-ray unit、Suction unit、Patient Monitor、Resuscitation care bag、Resuscitator、Ultrasound scanner etc.
9. Berat Regional Hospital	
10. Vlore Regional Hospital	Advanced Life support ambulance、Defrillator、ECG、Examination light、Suction unit、Resuscitation care bag、Resuscitator、Patient Monitor etc.
11. Gjirokaster Regional Hospital	Advanced Life support ambulance、Blood cell counter、CT scanner、Defibrillator、ECG、Examination light、Mobile X-ray unit、Suction unit、Resuscitation care bag、Resuscitator、Ultrasound scanner、Spectrophotometer etc.
12. Korce Regional Hospital	Advanced Life support ambulance、Blood cell counter、Defibrillator、ECG、Examination light、Patient Monitor、Mobile X-ray unit、Resuscitation care bag、Resuscitator、Suction unit etc.
13. Lushnje District Hospital	Advanced Life support ambulance、Defibrillator、ECG、Examination light、Mobile X-ray unit、Suction unit、Patient Monitor、Resuscitation care bag、Resuscitator、Ultrasound scanner、X-ray unit etc.
14. Sarande District Hospital	

(4) Implementation schedule and cost estimation

To implement this project under Japan's Grant Aid scheme, the project cost borne by the Albanian side would be approximately 11 million Japanese Yen, which is equivalent to approximately 12 million Albanian Leks. Regarding the implementation schedule, 10.5 months are expected to be required after the engagement of Exchange of Notes (E/N) and the Grant Agreement (G/A).

(5) Appropriateness of the project

The project is judged to be appropriate for implementation based on the following points:

1) The aim of this project is to improve emergency medical services by procuring emergency medical equipment based on the "Strategy of Emergency medical system reform in Albania", and it can be said that this project contributes to the achievement of the development goal of health sector in Albania. Thus, this project is a part of a national higher plan.
2) Implementation of this project will allow all Albanian nationals which are 320 million, regardless of location, to receive access to standard emergency medical services.
3) This project will not directly lead to a huge income because emergency medical services will be provided to nationals free of charge.
4) High level techniques will not be required, and the procured equipment could be maintained and managed by country's own budget and personnel.
5) This project's objective matches the Basic Human Needs (BHN). This is because the project can help improve emergency medical services, which are urgently required.
6) This project uses Japan's Grant Aid scheme and as such will not be difficult to implement.

To ensure the project proceeds successfully, it is important to be aware of and improve the following issues:

1) Due to the one-driver and one-vehicle system operating in regional and district hospitals in Albania, ambulances whose drivers are off-duty, are unused. The usage rate of ambulances is thus reported as low due to this ineffective operational system. In order to use the procured ambulances and lifesaving medical equipment effectively under this project, it is recommended to improve the driver's and ambulance's work formation.

2) Since the laryngeal intubation technique among emergency medical personnel was observed to be insufficient, it is important to improve their technique through periodical training, and continuous education in order to improve the quality of emergency medical services.

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Chapter 3 Project Evaluation and Recommendations

［Appendices］

Location Map

(⬭ is the city where targeted site is located.)

List of Figures & Tables

Abbreviations

A/P	Authorization to Pay
AVR	Auto Voltage Regulator
B/A	Banking Arrangement
BHN	Basic Human Needs
CPR	Cardiopulmonary Resuscitation
CT	Computer Tomography X-ray Unit
EBRD	European Bank for Reconstruction and Development
E/N	Exchange of Notes
EU	European Union
GA	Grant Agreement
GDP	Gross Domestic Products
HII	Health Insurance Institute
ICU	Intensive Care Unit
IMF	International Monetary Fund
NATO	North Atlantic Treaty Organization
NBC	National Biomedical Engineer Center
NGO	Non Governmental Organization
NSDI	National Strategy on Development and Integration
NSSED	National Strategy for Socio-Economic Development
PHC	Primary Health Care
PRSP	Poverty Reduction Strategy Paper
RH	Reproductive Health
SIDA	Swedish International Development Cooperation Agency
USAID	United States Agency for International Development
WHO	World Health Organization

Chapter 1 Background of the Project

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1-1 Current Situation of the Country

The total area of the country is 28,748 km^2. The Republic of Albania (hereinafter called "Albania") is mountainous except for flat coastline, and 70% of land is 300m or more above sea level. The coastal lowlands have typically Mediterranean weather while the highlands enjoy a continental Mediterranean climate. Thus, while there are areas where the peak summer temperature exceeds 30 ℃, the lowest winter temperature in coastal areas is 0 ℃, and the inland temperature drops to -10 ℃ with significant snowfall at areas of high elevation.

The Government of Albania resumed diplomatic relations with European countries in 1991, and affiliated itself with the World Bank and International Monetary Fund (IMF). Following the regime shift, the Albanian historical administration set the goal of integrating with Europe, and the current administration is promoting political and economic reform as its top priority in order to join the European Union (EU) and the North Atlantic Treaty Organization (NATO).

Regarding its economy, following democratization and a market economic policy since 1990, the post-2000 economic growth rate remained high, despite the severe economic damage caused by a pyramid selling problem in 1997. The Government of Albania is implementing a reform program in order to achieve economic liberalization and stabilization under the guidance of the World Bank and IMF. Recently, the actual economic growth rate has been maintained at around 6% with an inflation rate of 2%. However, the GDP growth rate in 2009 remained around at 0.38% due to the world financial crisis since summer 2008.

The total GDP in 2007 for Albania was approximately 112 billion US dollars, while GDP per capita in 2008 was 4,073 US dollars (ranked 95 among 180 countries in 2008). These figures are the lowest in Europe, where Albania remains one of the poorest countries. The industry structure per GDP is 20.6% (first industry), 19.9% (second industry), and 59.5% (third country), respectively.

1-2 Development Plan

The National Strategy for Socio-Economic Development (NSSED) (2001-2015) in Albania, which cited poverty reduction and an interim national development goal, is equivalent to a Poverty Reduction Strategy Paper (PRSP). In NSSED, the concrete goals that should be achieved by 2015 are:

① Actual GDP growth (double for a further 15 years),
② Reduction of the poverty population rate,
③ Reduction of the infant mortality rate and morbidity rate of dehydration diseases,
④ Improvement in the enrollment rate of primary education, etc.

The Government of Albania set forth "The National Strategy on Development and Integration (NSDI)" in 2008, which is a basic document related to development and integration by 2013. One of the priority socio-economic development issues is to provide high quality and effective health and medical services in addition to health and financial reform in the health sector.

In the health field, the Government of Albania set forth "The Long-term Strategy for the Development of the Albanian Health System" in 2004, and cited the priority subject as the establishment of emergency medical services and expansion of emergency dispatch centers.

The Albanian Ministry of Health procured 100 ambulances in 2005 for regional and district hospitals throughout Albania in order to facilitate the transportation of emergency patients. In addition, "The Strategy of Emergency Medical System Reform in Albania" was launched in June 2007 in order to establish an emergency medical service system as well as improve the emergency facilities at regional hospitals.

1-3 Background of Request for Japan's Grant Aid, details and summary

A Situation Analysis conducted by the Ministry of Health, targeting 4,000 patients in the emergency sections of 16 hospitals throughout Albania, exposed qualitative and quantitative shortages of balanced and effectively functioning emergency medical services, due to the lack of swift rescue and emergency diagnosis, and the obsolete nature of the ambulances and emergency medical equipment. Therefore, residents' trust in the emergency medical system at regional level is relatively low, and people transfer emergency patients to tertiary medical facilities located in the capital using their own cars. The transportation of patients by ambulances without lifesaving equipment resulted in a low lifesaving rate due to the lack of treatment.

The Government of Albania has set the goal of providing basic and standard emergency medical services nationwide in Albania based on "The Strategy of Emergency Medical System Reform in Albania". In collaboration with the Italian Corporation, the World Health Organization (WHO) and other relevant donors, the Government has promoted improvements in the emergency medical service system, improved emergency sections at regional hospitals, improvement of trauma centers, and education and training programs for personnel dealing with emergency medical services.

Under current circumstances, the Government of Albania has requested grant aid from the Government of Japan to procure emergency medical equipment, diagnostic imaging equipment, clinical laboratory equipment, and ambulance and lifesaving equipment used within the ambulance for regional & district hospitals throughout Albania, and also the Pediatric Hospital "Mother Teresa" of the University Center of Tirana (hereinafter called "Mother Teresa Pediatric Hospital"), and Emergency Dispatch Center in Tirana.

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

2-1-1 Overall Goal and Project Purpose

The aim of this project is to provide swift and appropriate emergency medical services to emergency patients by procuring ambulances and emergency medical equipment for regional and district hospitals located throughout Albania based on "The Strategy of Emergency Medical System in Albania", which is endorsed by the Albanian Ministry of Health.

2-1-2 Overview of the Project

In order to achieve the above targets, this project will procure emergency medical equipment, diagnostic imaging equipment, clinical laboratory equipment, ambulances and emergency lifesaving equipment in order to provide emergency medical services for ten (10) Regional hospitals nationwide, two (2) District hospitals, Mother Teresa Pediatric Hospital, and the Emergency Dispatch Center in Tirana and also in-put of soft components related to the "Establishment of a Preventive Maintenance System" required for the maintenance management of the procured equipment.

This means the swift and proper emergency medical service system will be improved with regard to medical activities and a proper preventive maintenance system is established in the maintenance management, thereby prolonging the lifespan of the procured equipment and improving the emergency service activities involving the patients.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

(1) Basic design

This project plans the following improvements in accordance with the request of and discussion with the Government of Albania and the results of a field survey to support the promotion of the "Strategy of Emergency Medical System Reform" by the Government of Albania and help implement swift and proper emergency medical service system reform.

1. Efforts are made to improve the emergency medical service system at regional hospitals, which are focal points of service provision.

   There is one regional hospital in each region, and a total of 11 regional hospitals throughout Albania. Among these 11 regional hospitals, Shkodra regional hospital is supported by an Italian NGO in order to improve emergency medical services, thereby excluding this site. Consequently, the sites targeted in the project are ten (10) hospitals. In addition, there is one

(2) Criteria for the selection of equipment

【Criteria for giving high priority 】

①Equipment that is to be a replacement of the existing but old equipment.

②Equipment that is to be a supplementation of the equipment obviously in shortage.

③Equipment that is indispensable for emergency medical services.

④Equipment that is easy to operate and maintain.

⑤Equipment that adjusts technological level to the designated facility.

⑥Equipment that agrees with needs and patient demand for medical service requested from lifesaving emergency medical treatment.

⑦Equipment that with clear installation location of equipment.

【Criteria for giving low priority】

①Equipment that is not related to do emergency medical services directly.

②Equipment that aims at high and large amount of medical cost, and special research.

③Equipment that requires high operation and maintenance cost, and is assumed to be burden of financial situation to the designated facility.

④Equipment that is difficult to operate and maintain to the current level of the designated facility.

⑤Equipment that exists or supports from other donors.

⑥Equipment that the necessity is low in demands of patients and medical services by investigation.

⑦Equipment that is cheap and possible to procure it by the designated facility.

(3) Policy for natural environmental conditions

Many of the north-east, south, and south-west regions are mountainous, and there are long winters, and short springs and autumns. In the north-east, snow falls for three (3) or four (4) months, and several times in a year in the south-east.

The main roads to regional cities in the north-east and south-west regions are mountainous and narrow, with slopes and many curves, and the pavement is damaged in various places with large holes. Durable packaging on bad roads is required as for the procurement of tender conditions. Given the concern about freezing of the roads in winter, delivery should be avoided during this period.

Since power interruption and voltage fluctuations often occur in the project areas, the procurement of Automatic Voltage Regulators (AVR) is planned to protect the electric circuits of

equipment from severe power fluctuations for patient monitors, electrocardiographs, X-ray units, and automatic blood cell counters, etc. that require continuous stable power when they are used.

(4) Policy for operation and maintenance control

Since the equipment to be procured is for renewal/replacement of existing equipment, in principle, it can be handled by the organization and personnel and at the technical levels of each facility. However, since the procured equipment may differ slightly in terms of operation methods from the existing equipment, initial operation guidance will be given at each facility when the equipment is delivered.

Standard consumables, which are required for equipment operation, are included for 6 months after installation.

For medical equipment requiring constant maintenance such as CT scanners and diagnostic imaging equipment, the maintenance contract is to be concluded on the hospital side with the manufacturer's local agent. For any costs incurred thereby, the Ministry of Health shall make the necessary budgetary arrangements. When the equipment is delivered/installed, operational training shall be given to the engineers/technicians of the hospital facility section and those in charge of each section at each facility. Especially for diagnostic imaging equipment such as CT scanners, diagnostic X-ray units, and ultrasound scanners, practical operation training shall be given by those in charge of the manufacturer or its agency.

(5) Policy related to setting of grade of equipment, etc.

The equipment to be procured through this project is that urgently required to provide swift and accurate emergency medical services, hence its grade shall be, in principle, equivalent to the existing equipment at public medical facilities in Albania.

(6) Policy for work method/procurement method and period of work

The equipment is procured from Japan and Albania and also third countries such as Europe and the USA. As for the period of work for the equipment procurement, 10.5 months are planned based on the Exchange of Notes (E/N) between the Governments of Albania and Japan and the conclusion of the Grant Agreement (G/A) with the Japan International Cooperation Agency, an independent administrative institution. In winter, since the transportation of equipment is difficult due to freezing of the road surface, the transportation, delivery, and installation of the equipment shall be implemented simultaneously by a single team for each of the southern and northern areas respectively (2 teams in total) and shall be completed by early October, 2010. For the period of work for soft components, 21 months from the conclusion of the Exchange of Notes (11 months from delivery) are planned.

2-2-2 Basic Plan (Equipment Plan)

(1) Overall plan

The facilities requested in this project numbered 15, including Shkodra Regional Hospital, but the latter was subsequently excluded from the project because an Italian NGO is presently implementing aid related to the improvement of emergency medical services. Because of this exclusion, the facilities included in this project are the 14 medical facilities shown below. The cooperation scope of this project covers the improvement of ambulances, the lifesaving equipment used within them, equipment related to the emergency medical equipment services to be provided for the emergency medical services of these medical facilities and soft components related to the "establishment of Preventive Maintenance System" for the emergency medical personnel working at these facilities.

(1) The Pediatric Hospital "Mother Teresa" of University Center of Tirana
(2) Emergency Dispatch Center in Tirana
(3) Lezha Regional Hospital
(4) Kukes Regional Hospital
(5) Diber Regional Hospital
(6) Durres Regional Hospital
(7) Elbasan Regional Hospital
(8)Fier Regional Hospital
(9) Berat Regional Hospital
(10) Vlore Regional Hospital
(11) Gjirokaster Regional Hospital
(12) Korce Regional Hospital
(13) Lushnje District Hospital
(14) Sarande District Hospital

Kukes, Gjirokaster, Elbasan, Diber Regional Hospital, Lushnje and Sarande District Hospital are those in which a CT scanner and X-ray unit would be procured, and where no appropriate measures are currently taken for X-ray leakage protection. With this in mind, there are plans to establish construction work such as sealing off parts of doors and/or windows with lead and/or reinforced concrete and to remove existing obsolete equipment to be replaced; the costs of which would be borne by the Albanian side.

(2) Equipment plan

Based on the result of a basic design study, the procurement of a total of 47 kinds of equipment under this project was decided on, such as ambulances, the lifesaving equipment used inside them, emergency medical equipment, CT scanner, imaging diagnostic equipment (such as X-ray unit and surgical C-arm X-ray unit), and equipment used within the operating theater (such anesthesia machine and operating table etc.). The procurement planning equipment is listed in Table 2-7, and remarks in terms of procuring major equipment are as follows:

1) Investigation of main lifesaving equipment requested

1. Ambulances

① Discussion from procurement adequateness, necessity and demand aspect

In 2005, the Ministry of Health provided 100 ambulances for public medical facilities. Of these, one (1) - two (2) units of type II [1] ambulance and one (1) - three (3) units of ambulance for transportation of type I are provided to each regional/district hospital. These ambulances play a major role in forming the emergency mobilization system.

Under such circumstances, according to the current situation survey of the emergency medical service system conducted in 2005 by the WHO, the operation rate[2] (at the level of regional hospitals) against the number of ambulances provided is about 60%.

If the present emergency medical service system continues for a while and about 60% of the present ambulances function and operate properly, the service volume is theoretically assumed to be sufficient, the targeted number of ambulances for each hospital shall be maintained at the present level of about 60%, and the equipment plan established in order to enhance the function of the ambulances from the present level.

② Investigation of proposed distribution plan of ambulances

The following table shows the breakdown or proper quantity of the ambulances presently possessed by the facilities. Column (a) shows the number of ambulances installed with equipment allowing them to act as Type II in future, while Column (b) shows the number of ambulances for transportation of Type III that are planned to have Type II function by installing the standard emergency equipment. Presently, at targeted facilities, except for the Emergency Dispatch Center in Tirana, the mobilization system is set up with a one (1) driver and one (1) ambulance system. For this reason, the number of ambulances in actual operation represents about 60% of the overall total, with the remaining 40% on standby in accordance with the off-shifts of drivers. In this project, an investigation was conducted into the quantity distributed on the basis of a system where the ambulances procured can operate whenever required, rather than in accordance with the one (1) driver and one (1) ambulance system.

As for the Emergency Dispatch Center in Tirana, we consider it adequate to replace one old ambulance with the ambulance of Type II.

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[1] It indicates the grade of ambulances provided. Type I is for transportation and has no equipment installed (76 units), Type II are installed with an aspirator, defibrillator, etc., and Type III are installed with full emergency life-saving equipment (4 units).

[2] Operation rate: Because of the shift formation of the ambulance mobilization system in Albania, there are days (non-operation days) for both driver and ambulance, which are 1 or 1.5 days out of every 2 or 3 days for all vehicles. The operation rate is the rate of number of days obtained by detracting these non-operation days from the number of days when the ambulances are provided.

district hospital in each district, making a total of 23 district hospitals. The district hospitals are the focal points of the district emergency medical services, especially Lushnje and Sarande district hospitals, which are located in densely populated areas. In addition, these two district hospitals have relatively larger activity scales and scopes and are hence included in this project because of plans to upgrade them to regional hospitals in the near future.

2. The Mother Teresa Pediatric Hospital is a tertiary medical facility and attached to the Mother Teresa General Hospital. At this general hospital, the EBRD (European Bank for Reconstruction and Development) is currently constructing an emergency center, which incorporates seven (7) diagnostic sections, although no pediatric section. In addition, the Albanian Ministry of Health has renovated pediatric emergency sections, and has constructed expansionary a pediatric operation theater, but the equipment there is insufficient. Thus, the pediatric emergency section and pediatric emergency operation theater of the Mother Teresa Pediatric Hospital are also included in this project.

3. Regarding ambulances and the lifesaving equipment used in them, existing ambulances, which are obsolete, would be replaced, and the emergency rescue equipment used in them would be procured for other usable existing ones in order to improve the function of the emergency medical services. Regarding medical equipment installed at emergency section, it is planed to procure appropriate grade judged by hospital maintenance management capability, and minimum necessity of diagnosis and treatment for emergency patients.

4. Regarding CT scanners, there are plans to procure these to a limited extent for Kukes and Gijrokaster regional hospitals, which are capable of maintenance, have convenient road access and have wide catchment area populations.

5. It was decided to exclude equipment used to establish a communication system, equipment for operational training, and campaigns for Albanian national following explanation about Japan's Grant Aid scheme.

6. The soft component, which aims to establish a "Preventive Maintenance System" in order to maintain medical equipment in good condition for an extended period, is included and would be implemented.

Table 2-1 The Examination tables of number of Ambulance and ES (emergency section) equipment

Name of facilities	Present number	Number of ambulance in 2005 (Type II)	Number of ambulance in 2005 (Type III)	Number of ambulance, which is obsolete	Number of proper ambulance (60% corresponding present number)	(a) Type II Number of ambulances to be procured	(b) Type II Number of ES equipment
Emergency Dispatch Center in Tirana	7	4	2	1	7[3]	1	2
Lezha Regional Hospital	6	1	1	4	4	2	1
Kukes Regional Hospital	4	1	1	2	3	1	1
Diber Regional Hospital	8	1	1	6	5	3	1
Durres Regional Hospital	8	1	3	4	5	1	3
Elbasan Regional Hospital	6	1	2	3	4	1	2
Fier Regional Hospital	7	1	3	3	5	1	3
Berat Regional Hospital	6	1	2	3	4	1	2
Vlore Regional Hospital	8	1	3	4	5	1	3
Gjirokaster Regional Hospital	6	1	3	2	4	0	3
Korce Regional Hospital	9	1+1[4]	2	5	6	2	2
Lushnje District Hospital	7	1	1	5	5	3	1
Sarande District Hospital	6	1	2	3	4	1	2
Total	88	16	26	45	61	18	26

2. Defibrillator, Electrocardiograph (ECG) and Patient Monitor

① Discussion from procurement adequateness, necessity and demand aspect

The emergency sections of each targeted facility are equipped with defibrillators, but most are obsolete, thereby hampering the function of emergency medical activities. In addition, emergency sections directly equipped with ECG and patient monitor are rare, and if present, such equipment is shared with other sections. Due to the lack of emergency medical equipment required for emergency medical services, it is impossible to provide swift emergency medical diagnosis and treatment, hence the urgent need to procure such equipment.

[3] As for the Emergency Dispatch Center in Tirana, it is judged that the present quantity of seven (7) units is a proper quantity to be provided.

[4] One unit of the Type 2 ambulances of Korce is of type I.

② Investigation of proposed distribution plan

The number of emergency patients per facility is around 15 to 30 patients per day. In order to ensure they receive proper diagnosis and treatment, at least two (2) defibrillator units and patient monitors, and one (1) ECG unit must be installed. In this project, there are plans to install one (1) or two (2) units of such equipment to each facility considering the distribution of existing equipment and the number of patients etc. in order to enhance the emergency medical service system.

The Mother Teresa Pediatric Hospital receives 330 to 360 emergency patients per day, hence plans to install eight (8) units of newly procured patient monitors in order to improve the ICU (intensive care unit), and the newly-constructed operating theater.

Table 2-2 Distribution plan for Defibrillator, ECG, and Patient Monitor

	Name of Facility	Defbilirator		ECG Unit		Patient Monitor	
		Exist No.	Planned procurement No.	Exist No.	Planned procurement No.	Exist No.	Planned procurement No.
1	Mother Teresa Pedistric Hospital	1	2	1	1	2	8
2	Emergency Dispatch Center in Tirana	0	2	0	1	0	0
3	Lezha Regional Hospital	0	2	0	1	1	1
4	Kukes Regional Hospital	0	2	0	1	1	1
5	Diber Regional Hospital	0	2	0	1	0	1
6	Durres Regional Hospital	1	2	1	1	1	1
7	Elbasan Regional Hospital	0	2	0	1	0	2
8	Fier Regional Hospital	0	2	0	1	0	1
9	Berat Regional Hospital	0	2	0	1	0	2
10	Vlore Regional Hospital	0	2	1	1	0	1
11	Gjirokaster Regional Hospital	1	1	0	1	1	0
12	Korce Regional Hospital	1	1	0	1	0	2
13	Lushnje District Hospital	0	2	0	2	0	2
14	Sarande District Hospital	0	2	0	1	1	1
In Total			26		15		23

Reference: Hearing at the time of local survey

3. Autoclave, Centrifuge and Examination lamp and Blood cell counter

The autoclaves, centrifuges and examination lamps, which are installed in emergency sections, are obsolete in some facilities, and very prone to malfunction. Such equipment, however, is essential in emergencies, and should be installed in every emergency section as required by “The Strategy of Emergency Medical System Reform”. In this project, there are plans to install one (1) unit of such equipment for targeted facilities, where replacement is required.

Although there is a need to install hematocrit centrifuges for seven (7) medical facilities, Lazha and Vlore Regional Hospitals, where relatively new equipment is installed, are excluded for procurement. In addition, Durres regional hospital is also excluded from the hematocrit centrifuge procurement because it is equipped with a central laboratory.

Although blood cell counters must also be installed for seven (7) medical facilities, Diber Regional Hospital, where counting by hand is possible due to the reduced number of examinations per day (25-45 cases/day), is excluded from procurement. Furthermore, Elbasan Regional Hospital, which has a relatively new unit (3-4 years old), and Sarande District Hospital, which also has a relatively new and well-functioning unit, are also excluded from blood cell counter procurement.

Table 2-3 Distribution plan for Autoclave, Centrifuge and Examination lamp

		Autoclave	Centrifuge	Examination lamp
Name of Facility		Planned procurement No.	Planned procurement No.	Planned procurement No.
1	Mother Teresa Pedistric Hospital	1	1	1
2	Emergency Dispatch Center in Tirana	0	0	1
3	Lezha Regional Hospital	0	0	1
4	Kukes Regional Hospital	1	1	1
5	Diber Regional Hospital	1	1	1
6	Durres Regional Hospital	1	0	1
7	Elbasan Regional Hospital	1	1	1
8	Fier Regional Hospital	1	0	1
9	Berat Regional Hospital	1	1	1
10	Vlore Regional Hospital	1	0	1
11	Gjirokaster Regional Hospital	0	0	1
12	Korce Regional Hospital	0	0	1
13	Lushnje District Hospital	1	1	1
14	Sarande District Hospital	1	0	1
In Total		10	6	14

Reference: Hearing at the time of local survey

2) Investigation of main diagnostic imaging equipment requested

1. Diagnostic X-ray unit

① Discussion from procurement appropriateness, necessity and demand aspect

Among the targeted facilities, the radiation units installed in five (5) medical facilities are 15 to 40 years old, and hence grave danger (from exposure to secondary radiation) has been observed for both patients and radiologists. Since the diagnostic X-ray unit is directly involved in the provision of emergency medical services, such equipment must be renewed in this project. In estimating the quantity to be installed, it is appropriate to plan the minimum necessary quantities by analyzing the activities of each facility (the number of patients to be diagnosed and the contents of the examination). From this perspective, it is considered that X-ray units carrying the danger of exposure stemming from secondary radiation due to obsolescence shall not be used.

② Investigation of installation plan of the diagnostic X-ray unit

Following our survey of targeted facilities, the X-ray units in five (5) sites were found to be very old, obsolete, and with considerable functional deterioration. At some sites, multiple X-ray units were installed, but since the number of radiographic examinations at each facility is in the order of 20 to 70 photos /day, it is considered that the present demand can be sufficiently met by renewing one unit of equipment capable of coping with both fluoroscopy and radiography. As for the Sarande District Hospital, the radiography X-ray unit was installed seven (7) years ago, thus renewing only the fluoroscopy X-ray unit, which was very obsolete.

Table 2-4 The Examination table of number of diagnostic X-ray unit

Name of facilities	Situation of present X-ray Unit	Present number	To be procured
Elbasan Regional Hospital Number of X-ray photography：30-50 films /day	1. WHO type X-ray unit (Duration: 29 years) Frequent occurrence of breakdown 2. Radiography X-ray Unit (Duration: 25 years) Made in Italy, Out of order 3. Fluoroscopy X-ray unit (Duration: 21 years) Out of order	3 sets	Fluoloscopy+ Radiography X-ray Unit, 1 set
Lushnje District Hospital Number of X-ray photography：40-70 films/day	1. Diagnostic X-ray Unit (Duration: 20 years) Out of repair 2. Radiography X-ray Unit, (Duration: 11 years) In a slump, but it operates. 3. Fluoroscopy X-ray unit (Duration: 17 years) Made in Hungary, Difficult to repair	3 sets	Fluoloscopy+ Radiography X-ray Unit, 1 set
Diber Regional Hospital Number of X-ray photography：20-35 films/day	1. Fluoroscopy +Radiography X-ray unit, (Duration: 12 years) EUROPA 2TS (2 tube system type) made in Italy, Out of function	1 set	Fluoloscopy+ Radiography X-ray Unit, 1 set
Kukes Regional Hospital Number of X-ray photography：20-30 films/day	1. Fluoroscopy +Radiography X-ray unit, (Duration: 30 years) Only Fluoroscopy working, Radiography out of order 2. Radiography X-ray unit (Duration: 25 years) Siemens AG. made. Out of function	3 sets	Fluoloscopy+ Radiography X-ray Unit, 1 set
Sarande District Hospital Number of X-ray photography：40-55 films/day	1. Radiography X-ray unit, (Duration: 7 years) Philip Electronics. “OPTIMUS” In good order 2. Radiography X-ray unit (Duration: 35 years) Possible to use it but danger to the exposed to radiation 3. Fluoroscopy X-ray unit (Duration:30 years) Possible to use it but danger to the exposed to radiation * Necessary to update 2 and 3 to Fluoroscopy X-ray unit with TV	3 sets	Fluoloscopy X-ray Unit, 1 set

③ Remarks in introducing diagnostic X-ray unit

Since the radiology room of the above medical facilities was improved only when the existing equipment was installed, measures taken against radiation leakage are insufficient. The doors of the room are made of wood or aluminum, the windows open outward (onto a terrace and parking lot), and the room must be improved by specialists.

The radiation protection standards are stipulated by the Safety Radiation Section of the Institute of Public Health. When installing an X-ray unit, a license from the Section is legally required.

2. CT scanner

① CT scanner installation situation

In Albania, there are 15 CT scanners installed. Of these, four (4) units are installed in private medical facilities in the capital region and six (6) units in the west, north and south-east areas, but the examination fees are very high, and it is difficult for residents in the low-income bracket to receive examinations, even when in a serious condition. In particular, both the Kukes and Gjirokaster Regional Hospitals are located in mountainous regions, and transportation by vehicle is a major burden for severely ill patients. There are many cases requiring swift diagnosis with the CT scanner for emergency patients brought in suffering from diseases such as cerebral infarctions, cerebral hemorrhage, acute subdural hematomas, cervical vertebrae damage, aortic aneurysms/detachment, kidney stones, etc. However, since no examination can be conducted, proper diagnoses cannot be made, and radical change occurs during follow-up monitoring or transportation, while there have also been cases where time simply ran out. The installation of a CT scanner at these secondary medical facilities, which is crucial for emergency medical services in Albania, is an urgent issue in the emergency medial system requiring swift diagnosis and treatment.

Table 2-5 Current installation of the CT-scanner

	Metropolitan area	Suburban city	Total
Public Medical Facility	4 sets	1 set	5 sets
Private Medical Facility	4 sets	6 sets	10 sets
Total	8 sets	7 sets	15 sets

② Investigation of demand aspect

In “The Strategy of Emergency Medical System Reform,” the swift diagnosis of emergency patients using a CT scanner is recommended. The Government of Albania targets the installation of CT scanners at 11 Regional Hospitals nationwide, though the time of achievement remains to be clarified. In this country, five (5) CT scanners are presently installed at public medical facilities, with four (4) units at the central region or capital Tirana (Mother Teresa General Hospital, Mother Teresa Pediatric Hospital, Lung Disease Hospital, and Military Hospital) and the remaining unit at Korce Regional Hospital in the south-east region. The Ministry of Health considers it a pressing issue to introduce CT scanners to the Regional Hospitals in the north and south regions to provide equivalent medical services to residents and reduce the regional disparity in emergency medical services and requests the installation in this project.

③ Investigation from beneficial population

Presently, the number of CT scanners installed in public medical institutions in Albania is one (1) unit per 620,000 persons or one (1) unit per 200,000 persons if including private medical institutions. If the CT scanners are installed in 4 regions nationwide through this project, it means that one (1) unit per 500,000 persons or so is installed in the metropolitan area and one (1) unit per 300,000 persons in rural areas.

The installation of CT scanners in remote areas will facilitate the provision of better quality medical services for local residents, leading to an enhanced lifesaving rate of emergency patients and improved trust of residents in the emergency medical services. Basically, swift and accurate diagnosis using CT scanners is demanded for all emergency patients. However, presently only a small percentage of emergency patients (five (5) to ten (10) cases per month, though depending on the site and season) can receive the CT examination. If further CT scanners are installed as part of this project, there will be considerable benefits for local residents.

④ Procurement effects and efficiency

If the CT scanners are uniformly installed in four (4) regions of the country, the provision of effective and efficient emergency medical services will be secured there. Furthermore, since the CT scanners will contribute to the provision of swift and accurate diagnoses in surgery, internal medicine, pediatric services, gynecology, and other specialties (digestive organs, circulatory organs, cranial nerves, etc.) as well as for the emergency medical services, it is considered that the equipment will be efficiently utilized in overall medical services at secondary medical

facilities. Facilities where the installation of the CT is planned in this project will cater for surgery, internal medicine, pediatric services, gynecology and other specialties.

Furthermore, special mention of the synergistic effect in cooperation is made. At Gjirokaster Regional Hospital, where the introduction of a CT scanner is planned, the installation of an X-ray unit and examination and operation-related equipment was implemented as part of the project to improve medical equipment in the south regional & district hospital in 2005, thereby dramatically improving its medical services. If the CT scanners are installed at the facilities listed in this project and the general medical service system of the entire hospital, including the emergency medical service system, is further improved, the fatal disease rate of emergency patients is expected to decline and likewise the number of referral patients, prompting a continuous aid effect through Japanese cooperation.

⑤ Investigation on sustainable development

The operation and maintenance control of the five (5) CT scanners now installed are covered by the operation expenses of the medical facilities. Since these expenses are sufficiently allocated in urban areas, the purchase of consumables and maintenance contracts with manufacturer's agencies are executed without any problem. If hospital reforms are further promoted in future and the national insurance scheme now being introduced functions smoothly, the Ministry of Health considers that increases in operation expenses spent on the medical facilities can be expected and the sustainable development in terms of securing the operation expenses and maintenance/management of the equipment can thus be ensured.

The following table shows improvement work costs and maintenance contract costs, etc. of the equipment for the Kukes and Gjirokaster Regional Hospitals; targeted for CT introduction. As for these costs, the Ministry of Health promised to allocate them through budgeting.

Table 2-6 Administrative and maintenance expenses for the CT-scanner

Unit: Lek (1 Lek=1.03 yen)

The Hospitals which has been installed or will be installed CT-scanner	Budget for Management expense (2009)	Procurement Cost Medical equipment and consumables (2009)	Estimated expenses of consumables for CT- scanner (year)	Annual maintenance cost for CT-scanner under the contract base (year)
Korce Regional Hospital (has been installed)	43 million	13 million	240,000 (Estimation)	6 million (Contract during introduction cost, contract on year fifth)
Kukes Regional Hospital (will be installed)	70 million	12 million	240,000 (Estimation)	1.3 million (Contract after year second)
Gjirokaster Regional Hospital (will be installed)	99 million	33 million	240,000 (Estimation)	1.3 million (Contract after year second)

As for the sustainable development in terms of personnel, doctors who can read X-ray photographs are allocated at the targeted facilities. The images of the CT scanner are basically the same as those of the X-ray unit, and they can be coped with by medical service personnel now available.

As for the maintenance/management, although no BME (biomedical engineer) is allocated for either Kukes Regional Hospital or Gjirokaster Regional Hospital, the CT scanners and advanced medical equipment, are all maintained by the manufacturer's agent (maintenance by unqualified persons is prohibited by the manufacturer), and if the maintenance contract is concluded with the manufacturer's agent after the introduction of the equipment, there will be no particular problem concerning maintenance.

3) Major equipment in operation theater and distribution plan

Even through existing emergency sections are equipped with a surgical C-arm X-ray unit, there are plans to procure one (1) unit for Berat and Elbasan regional hospitals respectively due to frequent defects stemming from obsolescence.

Expansion construction work for pediatric operation theater was finished by September 2009.

There are plans for one (1) unit for each of an instrument table, instrument forceps and medicine cabinet to be respectively transferred to the newly expanded pediatric operating theater. Under this project, there are also plans to install one (1) unit of a mobile operation lamp, an anesthesia machine, an operating table and an electrosurgical unit in order to operate on pediatric patients.

4) Excluded equipment under this project

As a result of discussion with Albanian side, it was decided to exclude equipment used to establish a communication system, equipment for operational training, and campaigns for Albanian national.

Although the procurement of four (4) units of blood gas analyzers, and 13 units of glucometers is requested for the targeted facilities, it is decided to exclude such equipment under this project.This is because the functions of both blood gas analyzer and glucometer can be covered by other examination methods.

Table 2-7 Equipment List for each facility(1/2)

Description	1	2	3	4	5	6	7
	Mother Teresa P.H	Dispatch Center	Lezha RH	Kukes RH	Diber RH	Durres RH	Elbasan RH
Advanced Life support ambulance	0	1	2	1	3	1	1
Anesthesia Aparatus with Ventilator	1	0	0	0	0	0	0
Autoclave	1	0	1	1	1	1	1
Automatic Ventilator (for infant and pediatric)	2	0	0	0	0	0	0
Back Boad (spine board)	0	2	2	2	2	2	2
Blood cell counter	1	0	1	1	0	0	0
Blood gas analyzer	0	0	0	0	0	0	0
C-arm Surgical X-ray (II: 6inch)	0	0	0	0	0	0	1
Centrifuge	1	0	0	1	1	0	1
Cloth Stretcher	0	1	1	1	1	2	1
CT-Scanner	0	0	0	1	0	0	0
Defibrillator with pacing	2	2	2	2	2	2	2
ECG 3ch	1	1	1	1	1	1	1
Electrosurgical unit	1	0	0	0	0	0	0
Emergency Diagnos Set	2	5	4	4	4	6	5
Endotracheal Set for adult, pediatric and infant	2	0	1	1	1	1	1
Examination Light , spot light	1	1	1	1	1	1	1
Examination Light (Mobile OT lamp with battery)	1	0	1	1	1	0	1
Hematocrit Centrifuge	0	0	0	1	1	0	1
Laryngeal catheterization simulator for continuous education	1	0	0	0	0	0	0
Laryngeal catheterization simulator for CPR and Airway management	2	0	0	0	0	0	0
Laryngeal catheterization simulator (new born baby)	1	0	0	0	0	0	0
Mobile X-ray	0	0	1	0	1	0	1
Nebulizer	1	1	1	1	1	1	1
Neck Collar for adult and pediatric	2	4	3	3	3	3	3
Negative Pressure Fixed Implement	0	2	2	2	2	2	2
Operating table for pediatric (electric)	1	0	0	0	0	0	0
Oxygen Bottles with Guedel cannula	0	1	1	1	1	1	1
Oxygen Bottles with Guedel cannula(with installation materials)	0	2	1	1	1	3	2
Patient Monitor for ESC/OT/ICU (more than 6inch)	8	0	1	1	1	1	2
Portable Glucometer	0	0	0	0	0	0	0
Pulse Oxymeter	1	1	2	2	2	2	2
Respiratory Care Bag (adult, pediatric and infant)	1	4	3	3	3	5	4
Resuscitator	1	1	1	1	1	1	1
Scoop Stretcher	0	2	1	2	2	2	2
Spectrophotometer(Semi-automatic analyzer)	0	0	0	0	0	1	0
Stretcher	1	1	1	1	1	1	1
Stretcher in vehicle use (Main and sub stretcher)	0	1	1	1	1	1	1
Suction unit ,portable (AC/DC)	0	3	2	2	2	4	3
Suction unit, L size	4	0	0	0	0	0	0
Suction unit, M size with cart	1	0	1	1	1	1	1
Suction unit, manual type(foot pedal type)	0	0	1	1	1	1	1
Syringe Pump	4	0	1	0	2	0	0
Tourniquet (2pcs/set)	1	4	3	3	3	5	4
Ultrasound scanner B&W with two probes	0	0	1	1	1	0	1
Fluoroscopy x-ray Unit	0	0	0	0	0	0	0
Fluoroscopy ,Rediography x-ray Unit (dual tube type)	0	0	0	1	1	0	1

Table 2-7 Equipment List for each facility(2/2)

Description	8	9	10	11	12	13	14	Total Quantity
	Fier RH	Berat RH	Vlore RH	Gjirokaster RH	Korce RH	Lushnje DH	Sarande DH	
Advanced Life support ambulance	1	1	1	0	2	3	1	18
Anesthesia Aparatus with Ventilator	0	0	0	0	0	0	0	1
Autoclave	1	1	1	0	0	1	1	11
Automatic Ventilator (for infant and pediatric)	0	0	0	0	0	0	0	2
Back Boad (spine board)	2	2	2	2	2	2	2	26
Blood cell counter	0	1	0	0	0	0	0	4
Blood gas analyzer	0	0	0	0	0	0	0	0
C-arm Surgical X-ray (II: 6inch)	0	1	0	0	0	0	0	2
Centrifuge	0	1	0	0	0	1	0	6
Cloth Stretcher	2	1	2	2	1	1	1	17
CT-Scanner	0	0	0	1	0	0	0	2
Defibrillator with pacing	2	2	2	1	1	2	2	26
ECG 3ch	1	1	1	1	1	2	1	15
Electrosurgical unit	0	0	0	0	0	0	0	1
Emergency Diagnos Set	6	5	6	6	5	4	5	67
Endotracheal Set for adult, pediatric and infant	1	1	1	1	1	1	1	14
Examination Light , spot light	1	1	1	1	1	1	1	14
Examination Light (Mobile OT lamp with battery)	1	1	1	1	1	1	1	12
Hematocrit Centrifuge	1	1	0	0	1	1	0	7
Laryngeal catheterization simulator for continuous education	0	0	0	0	0	0	0	1
Laryngeal catheterization simulator for CPR and Airway management	0	0	0	0	0	0	0	2
Laryngeal catheterization simulator (new born baby)	0	0	0	0	0	0	0	1
Mobile X-ray	1	1	0	1	0	0	0	6
Nebulizer	1	1	1	1	1	1	1	14
Neck Collar for adult and pediatric	3	3	3	3	3	3	3	42
Negative Pressure Fixed Implement	2	2	2	2	2	2	2	26
Operating table for pediatric (electric)	0	0	0	0	0	0	0	1
Oxygen Bottles with Guedel cannula	1	1	1	1	1	1	1	13
Oxygen Bottles with Guedel cannula(with installation materials)	3	2	3	3	2	1	2	26
Patient Monitor for ESC/OT/ICU (more than 6inch)	1	2	1	0	2	2	1	23
Portable Glucometer	0	0	0	0	0	0	0	0
Pulse Oxymeter	2	2	2	2	2	2	2	26
Respiratory Care Bag (adult, pediatric and infant)	5	4	5	5	4	3	4	53
Resuscitator	1	1	1	1	1	1	1	14
Scoop Stretcher	2	2	2	2	2	2	2	25
Spectrophotometer(Semi-automatic analyzer)	0	0	0	1	0	1	0	3
Stretcher	1	1	1	1	1	1	1	14
Stretcher in vehicle use (Main and sub stretcher)	1	1	1	1	1	1	1	13
Suction unit ,portable (AC/DC)	4	3	4	4	3	2	3	39
Suction unit, L size	0	0	0	0	0	0	0	4
Suction unit, M size with cart	1	1	1	0	0	1	1	11
Suction unit, manual type(foot pedal type)	1	1	1	1	1	1	1	12
Syringe Pump	0	0	0	0	0	0	0	7
Tourniquet (2pcs/set)	5	4	5	5	4	3	4	53
Ultrasound scanner B&W with two probes	1	1	0	0	0	1	1	8
Fluoroscopy x-ray Unit	0	0	0	0	0	0	1	1
Fluoroscopy ,Rediography x-ray Unit (dual tube type)	0	0	0	0	0	1	0	4

(3) Criteria for equipment selection

Requested units of equipment in this project were investigated and the results are shown in the attached material and Table 2-8.

[Study in supply aspect]

◎: Urgent renewal is called for.

○: Urgent replenishing is called for.

●: Procurement is planned anew.

X: Necessity of procurement is not recognized.

[Study in demand aspect]

①: Function deteriorated due to obsoleteness, etc.

②: Quantitative shortage due to expanded medical service activities.

③: New medical service activities are planned.

④: Existing equipment is enough.

⑤: Other equipment can be used.

⑥: Procurement is possible through self-efforts.

[Technical study]

a: Operation is possible at the current technical level.

b: Since the equipment specifications are different from those of the existing equipment (enhanced function), initial guidance by experts is required.

c: On-the-job training is required when the equipment is installed.

(4) Main equipment

The attached material and Table 2-9 show main equipment to be procured in this project.

Table 2-8 Result of investigation for planned equipment (1/2)

Description	1			2			3			4			5			6			7		
	Mother Teresa P.H			Dispatch Center			Lezha RH			Kukes RH			Diber RH			Durres RH			Elbasan RH		
	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure
Advanced Life support ambulance (Model A)	0	-	0	1	◎①(a)	1	1	◎①(a)	2	1	◎①(a)	1	1	◎①(a)	3	1	○①(a)	1	1	◎①(a)	1
Anesthesia Aparatus with Ventilator	1	●③(a)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Autoclave	1	○②(a)	1	0	-	0	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	○①(a)	1	1	◎①(a)	1
Automatic Ventilator (for infant and pediatric)	2	○③(b)	2	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Back Boad (spine board)	0	-	0	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2
Blood cell counter	1	○②(a)	1	0	-	0	1	●②(b)	1	1	●②(b)	1	1	×⑤(c)	0	0	-	0	1	×④(a)	0
Blood gas analyzer	1	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	×④(a)	0	0	-	0
C-arm X-ray (II: 6inch)	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	◎①(a)	1
Centrifuge	1	◎①(a)	1	0	-	0	0	-	0	1	◎①(a)	1	1	◎①(a)	1	1	×④(a)	0	1	◎①(a)	1
Cloth Stretcher	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	2	○②(a)	2	1	○②(a)	1
CT	0	-	0	0	-	0	0	-	0	1	●③(c)	1	0	-	0	0	-	0	0	-	0
Defibrillator with pacing	2	○②(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	○②(a)	2	2	○②(a)	2
ECG 3ch	1	○②(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Electrosurgical unit	1	○②(a)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Emergency Diagnos Set	2	○②(a)	2	5	○②(a)	5	4	○②(a)	4	4	○②(a)	4	4	○②(a)	4	6	○②(a)	6	5	○②(a)	5
Endotracheal Set for adult, pediatric and infant	2	○②(a)	2	0	-	0	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	○②(a)	1	1	○②(a)	1
Examination Light , spot light	1	○②(a)	1	1	○②(a)	1	1	●③(b)	1	1	○②(b)	1	1	○②(a)	1	1	○②(a)	1	1	◎①(a)	1
Examination Light (Mobile OT lamp with battery)	1	●③(b)	1	0	-	0	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	0	-	0	1	◎①(a)	1
Hematocrit Centrifuge	0	-	0	0	-	0	1	×④(a)	0	1	○②(b)	1	1	◎①(a)	1	1	×④(a)	0	1	○②(a)	1
Laryngeal catheterization simulator for continuous education	1	●③(c)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Laryngeal catheterization simulator for CPR and Airway management	2	●③(c)	2	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Laryngeal catheterization simulator (new born baby)	1	●③(c)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Mobile X-ray	0	-	0	0	-	0	1	◎①(a)	1	0	-	0	1	○①(a)	1	0	-	0	1	◎①(a)	1
Nebulizer	1	○②(a)	1	1	○③(a)	1	1	○②(a)	1	1	◎①(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Neck Collar for adult and pediatric	2	○②(a)	2	4	○③(a)	4	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3
Negative Pressure Fixed Implement	0	○②(a)	0	6	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	◎①(a)	2
Operating table for pediatric (electric)	1	●③(a)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
Oxygen Bottles with Guedel cannula	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○①(a)	1
Oxygen Bottles with Guedel cannula(with installation materials)	0	-	0	6	○②(a)	2	3	○②(a)	1	1	○②(a)	1	5	○②(a)	1	3	○②(a)	3	2	○②(a)	2
Patient Monitor for ESC/OT/ICU (more than 6inch)	8	○②(a)	8	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	2	◎①(a)	2
Portable Glucometer	1	×⑤⑥(a)	0	0	-	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0
Pulse Oxymeter	1	◎①(a)	1	1	○②(a)	1	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2
Respiratory Care Bag (adult, pediatric and infant)	1	○②(a)	1	4	○②(a)	4	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	5	○②(a)	5	4	○②(a)	4
Resuscitator	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Scoop Stretcher	0	-	0	6	○②(a)	2	3	○②(a)	1	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2
Spectrophotometer(Semi-automatic analyzer)	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	○②(a)	1	0	-	0
Stretcher	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Stretcher in vehicle use (Main and sub stretcher)	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Suction unit ,portable (AC/DC)	0	-	0	3	○②(a)	3	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	4	○②(a)	4	3	○②(a)	3
Suction unit, L size	4	○②(a)	4	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0		0
Suction unit, M size with cart	1	◎①(a)	1	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	◎①(a)	1
Suction unit, manual type(foot pedal type)	0	-	0	0	-	0	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1
Syringe Pump	4	○②(a)	4	0	-	0	1	○②(a)	1	0	-	0	2	○②(a)	2	0	-	0	0		0
Tourniquet (2pcs/set)	1	○②(a)	1	4	○②(a)	4	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	5	○②(a)	5	4	○②(a)	4
Ultrasound scanner B&W with two probes (convex, sector)	0	-	0	0	-	0	1	○③(a)	1	1	○③(a)	1	1	○②(a)	1	0	-	0	1	○②(a)	1
X-ray fluoroscopy	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0
X-ray fluoroscopy with general x-ray	0	-	0	0	-	0	0	-	0	1	◎①(a)	1	1	◎①(a)	1	0	-	0	1	◎①(a)	1

Table 2-8 Result of investigation for planned equipment (2/2)

Description	8			9			10			11			12			13			14				
	Fier RH			Berat RH			Vlore RH			Gjirokaster RH			Korce RH			Lushnje DH			Sarande DH			Total Q'ty	
	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Analysis	Procure	Request	Procure
Advanced Life support ambulance (Model A)	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	0	1	◎①(a)	2	1	◎①(a)	3	1	◎①(a)	1	13	18
Anesthesia Aparatus with Ventilator	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	1
Autoclave	1	◎①(a)	1	1	○①(a)	1	1	◎①(a)	1	0	-	0	0	-	0	1	○②(a)	1	1	○②(a)	1	11	11
Automatic Ventilator (for infant and pediatric)	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	2	2
Back Boad (spine board)	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	26	26
Blood cell counter	0	-	0	1	◎①(a)	1	0	-	0	0	-	0	0	-	0	0	-	0	1	×④(a)	0	7	4
Blood gas analyzer	0	×⑤(c)	0	1	×⑤(c)	0	0	-	0	0	-	0	0	-	0	0	-	0	1	×④(a)	0	4	0
C-arm X-ray (II: 6inch)	0	-	0	1	●②(a)	1	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	2	2
Centrifuge	0	-	0	1	◎①(a)	1	0	-	0	0	-	0	1	×④(a)	0	1	○②(a)	1	0	-	0	8	6
Cloth Stretcher	2	○②(a)	2	1	◎①(a)	1	2	◎①(a)	2	2	◎①(a)	2	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	17	17
CT	0	-	0	0	-	0	0	-	0	1	●③(c)	1	0	-	0	0	-	0	0	-	0	2	2
Defibrillator with pacing	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	1	◎①(a)	1	1	○②(a)	1	2	○②(a)	2	2	○②(a)	2	26	26
ECG 3ch	1	◎①(a)	1	1	◎①(a)	1	1	○②(a)	1	1	○②(a)	1	1	◎①(a)	1	2	○②(a)	2	1	◎①(a)	1	15	15
Electrosurgical unit	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	1
Emergency Diagnos Set	6	○②(a)	6	5	○②(a)	5	6	○②(a)	6	6	○②(a)	6	5	○②(a)	5	4	○②(a)	4	5	○②(a)	5	67	67
Endotracheal Set for adult, pediatric and infant	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	14	14
Examination Light , spot light	1	○①(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	14	14
Examination Light (Mobile OT lamp with battery)	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	1	◎①(a)	1	12	12
Hematocrit Centrifuge	1	◎①(a)	1	1	○②(a)	1	1	×④(a)	0	0	-	0	1	○②(a)	1	1	○②(a)	1	0	-	0	10	7
Laryngeal catheterization simulator for continuous education	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	1
Laryngeal catheterization simulator for CPR and Airway management	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	2	2
Laryngeal catheterization simulator (new born baby)	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	1
Mobile X-ray	1	○①(a)	1	1	●②(a)	1	0	-	0	1	●②(a)	1	0	-	0	0	-	0	0	-	0	6	6
Nebulizer	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	14	14
Neck Collar for adult and pediatric	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	3	○②(a)	3	42	42
Negative Pressure Fixed Implement	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	2	◎①(a)	2	30	26
Operating table for pediatric (electric)	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	1
Oxygen Bottles with Guedel cannula	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	13	13
Oxygen Bottles with Guedel cannula(with installation materials)	3	○②(a)	3	2	○②(a)	2	3	○②(a)	3	1	○②(a)	3	4	○②(a)	2	4	○②(a)	1	2	○②(a)	2	39	26
Patient Monitor for ESC/OT/ICU (more than 6inch)	1	○①(a)	1	2	○①(a)	2	1	○①(a)	1	0	-	0	2	○②(a)	2	2	○②(a)	2	1	○②(a)	1	23	23
Portable Glucometer	0	-	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	1	×⑤⑥(a)	0	2	×⑤⑥(a)	0	1	×⑤⑥(a)	0	13	0
Pulse Oxymeter	2	○②(a)	2	2	○②(a)	2	2	◎①(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	26	26
Respiratory Care Bag (adult, pediatric and infant)	5	○②(a)	5	4	○②(a)	4	5	○②(a)	5	5	○②(a)	5	4	○②(a)	4	3	○②(a)	3	4	○②(a)	4	53	53
Resuscitator	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	14	14
Scoop Stretcher	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	2	○②(a)	2	31	25
Spectrophotometer(Semi-automatic analyzer)	0	-	0	0	-	0	0	-	0	1	◎①(a)	1	0	-	0	1	○①(a)	1	0	-	0	3	3
Stretcher	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	14	14
Stretcher in vehicle use (Main and sub stretcher)	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	13	13
Suction unit ,portable (AC/DC)	4	○②(a)	4	3	○②(a)	3	4	○②(a)	4	4	○②(a)	4	3	○②(a)	3	2	○②(a)	2	3	○②(a)	3	39	39
Suction unit, L size	0		0	0		0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	4	4
Suction unit, M size with cart	1	◎①(a)	1	1	◎①(a)	1	1	○②(a)	1	0	-	0	0	-	0	1	○②(a)	1	1	○②(a)	1	11	11
Suction unit, manual type(foot pedal type)	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	1	○②(a)	1	12	12
Syringe Pump	0		0	0		0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	7	7
Tourniquet (2pcs/set)	5	○②(a)	5	4	○②(a)	4	5	○②(a)	5	5	○②(a)	5	4	○②(a)	4	3	○②(a)	3	4	○②(a)	4	53	53
Ultrasound scanner B&W with two probes (convex, sector)	1	○②(a)	1	1	○②(a)	1	0	-	0	0	-	0	0	-	0	1	○②(a)	1	1	○②(a)	1	8	8
X-ray fluoroscopy	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	◎①(a)	1	1	1
X-ray fluoroscopy with general x-ray	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	1	◎①(a)	1	0	-	0	4	4

Table 2-9 Main Equipment List

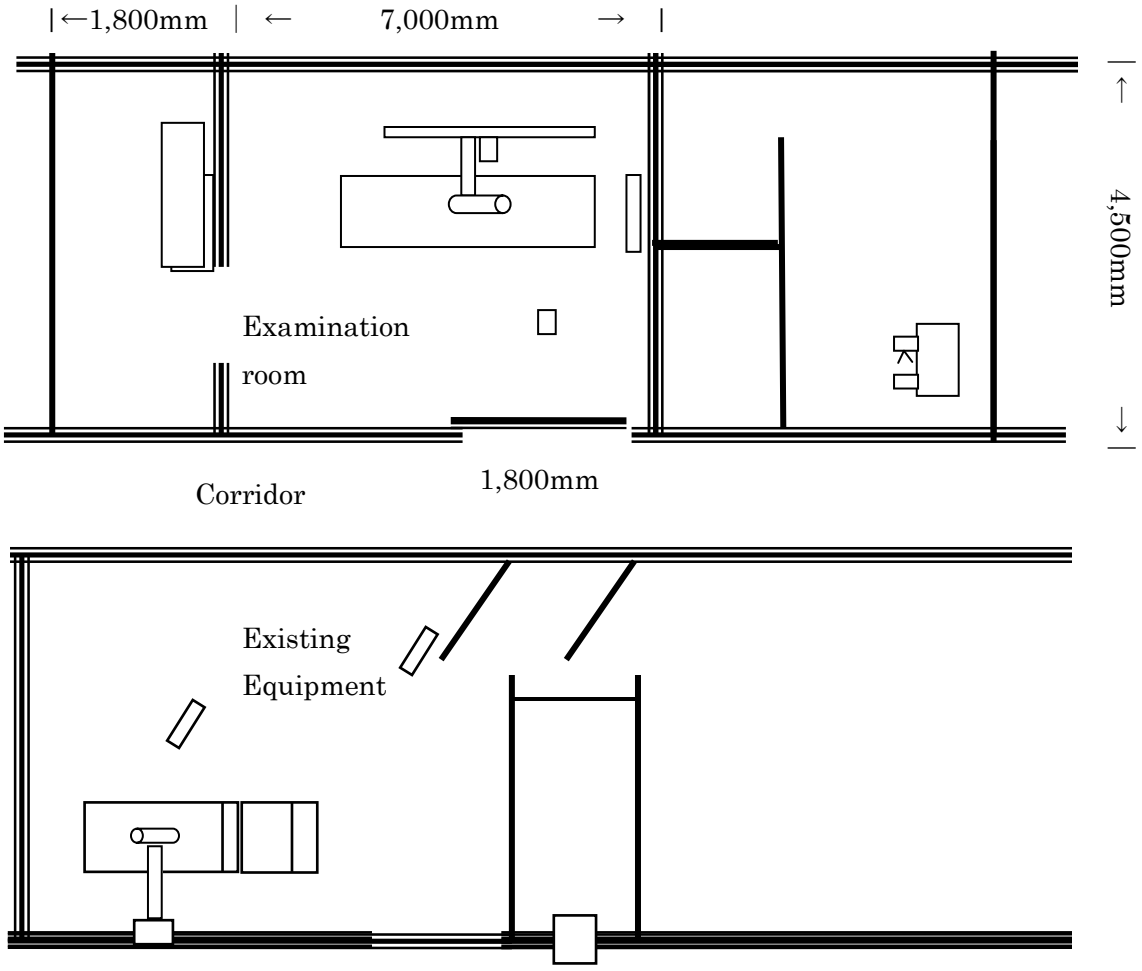
Category	Description	Major specification	Q'ty	Purpose
Emergency lifesaving equipment	Advanced Life support ambulance	・Diesel Engine ・One Box ・High Roof ・Left Handle ・2 Weel Drive	18	Transporting patients to the hospital with emergency treatmnet by doctor
	Automatic Ventilator (for infant and pediatric)	・Ventilation mode ：Plateau, PEEP/CPAP,Sigh or more ・Ventilation frequency ：0～150 bpm or more ・Tidal volume ：10－999 ml or more ・Inspiratory flow ：5－40L/min. or more ・Inspiratory time ：0.1－3.0 seconds	2	Used for acting for respiratory function of patient's breathing stop or lowered its control for neonate/infant
	Blood cell counter	・Fully automated ・Parameters：at least 18 parameters ・Sample volume ：50μℓ or less ・Through Put ：60samples /hour or more ・Measuring method :whole blood ・Display ：LCD screen ・Printer （either external or incorporated)	4	Used for diasnosing a disease by counting red blood cells, white blood cells and platelets in a patient's blood sample
	Defibrillator	・Max. output energy ：5 to 200 J ・Charging time ：5 seconds ・Monitor ・ECG measuring function	26	Used for applying electric shock to severe condition patients with cardiac arrest, ventricular fibrillation, ventricular tachycardia.
	ECG	・3 channel ・Standard 12 leads ・Analysis machine ・Monitor ・Printer ・Cart	15	Monitoring and recording of heat's electrical activities for diagnosis and treatment of heart related diseases.
	Patient Monitor	Measuring parameters: ECG, HR, Respiration, Temperature, SPO2, NIBP or more ・Display :6 inch ・Cart	23	Used for monitoring patient's electrocardiogram, pulse, oxygen saturation leven in serious conditions.
Imaging diagnostic equipment	Ultrasound Scanner	・Scanning Mode ：B、B/B、M、B/M ・Monitor : B&W ・Probe :Convex 1 （for abdomen), Convex 2 （for heart and abdomen ）	8	Used for examining abdomen and heart by ultrasound
	Mobile X-ray	・X-ray generator ：Inverter type ・KV range ：125KV or more ・mA range ：160mA ・Max. output ：10KW or more	6	Used for taking X-ray picture of chest and other parts when patients can not move.
	Fluoroscopy X-ray Unit	・X-ray generator: High frequency inverter system, 50KW or more ・Tube voltage ：40－150KV ・Tube current ：10～630mA ・Composition : X-ray generator、X-ray tube unit、R/F Table 、II9 inch etc.	1	Used for diagnosing a part of patient's disease, alimentary canel and others with taken pictures by X-ray fluoroscopy
	Fluoroscopy and Radiography X-ray Unit	System ： remote、local control、 able to change Rating ：10 - 600mA or more X-ray generator: High frequency inverter system, 50KW or more X-ray tube unit ： 2 (Fluoro/Rad.) Fluoroscopy Tube voltage ：125kV or more Anode heat storage capacity ：300kHU or more Composition: R/F Table, Bucky Table and Stand, X-ray generator, TV camera with monitor etc.	4	Diagnosis of chest, abdomen and other parts of body taking X-ray photography by Flouro or General Radiography.
	CT Scanner	・Scan system ：360° continuous rotate/spiral rotate ・Scan time ：0.5 seconds or less (half rotate) ・Scanning time ：1.0,1.5,2.0,3.0 秒(full rotate) ・Data collection ：4 ch. Or more ・X-ray generator ：40kW or more ・Main detector ：788 ch. X 22 factors or more	2	Used for measuring absorbed X-ray volume and taking its tomographic picture by processing computer. This machine is specially used for emergency patients for quick diagnosis.
Operation Theater related equipment	Surgical C-arm X-ray Unit	・C-arm sliding rotation ：115° ・X-ray generator ：Inverter type ・Radiation volume：110KV、100mA	2	Used for taking X-ray picture of orthopedics
	Operating Table for Pediatric	Type ： Pediatric, electro-hydraulic Position ： 3 positions available X-ray photograph ：possible Table top ： 1,950(L)× 500(W)mm or more High/Low ：650－1,000mm or wider	1	Used for fixing and moving patient position which is suitable for pediatric surgical operation
	Anesthesia Appratus with Ventilator	・Halothane vapolizer Capacity ：160ml or more ・O2：0, 1～10L/min. or more ・N2O：0.5～10L/min. or more ・Ventilator Type：gas-driven Ventilation mode ：Pressure control and/or volume control Tidal volume ：20－1,200ml or wider	1	To apply gaseous anesthesia to patients for operation

2-2-3 Basic design drawing

(3) Layout of equipment installed

The equipment requiring installation work in this project and subject facilities are as follows.

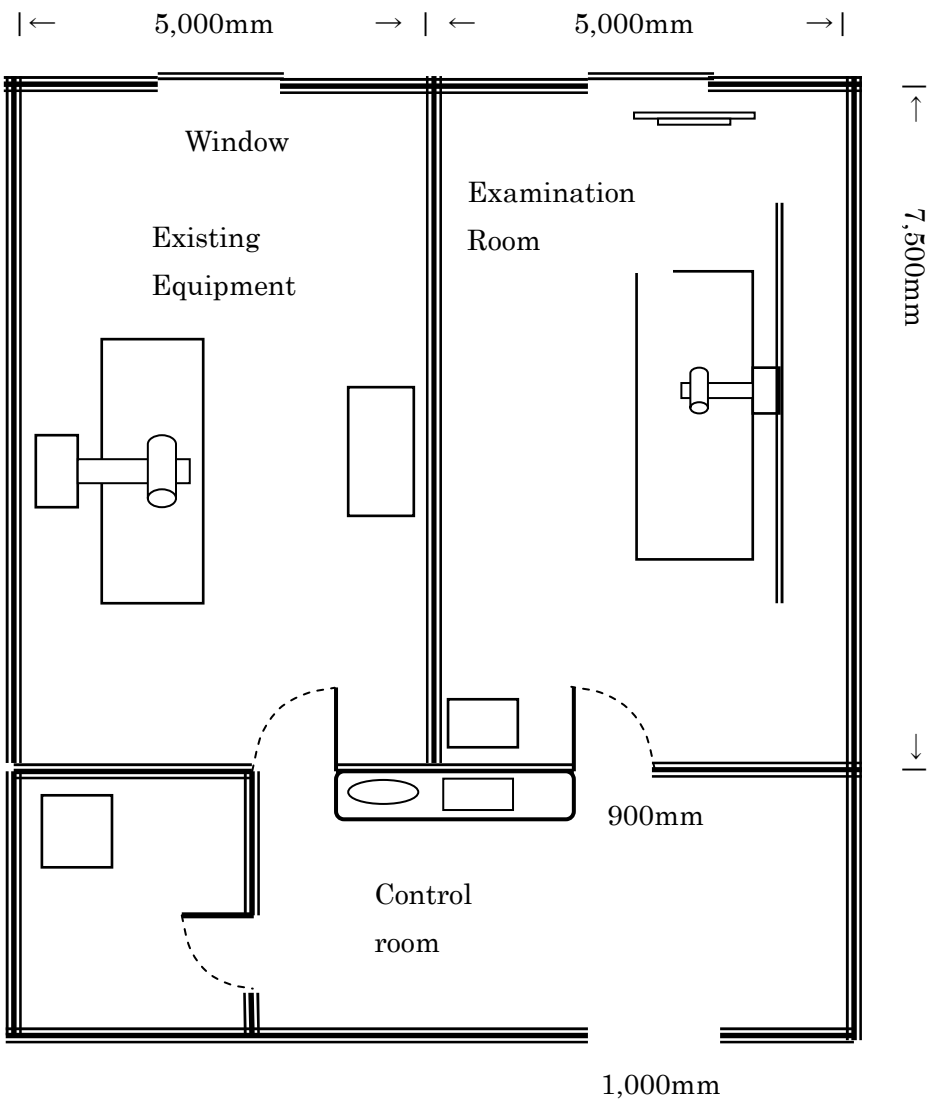
Elbasan Regional Hospital



X-ray room installation ray-out plan

Figure 2-1

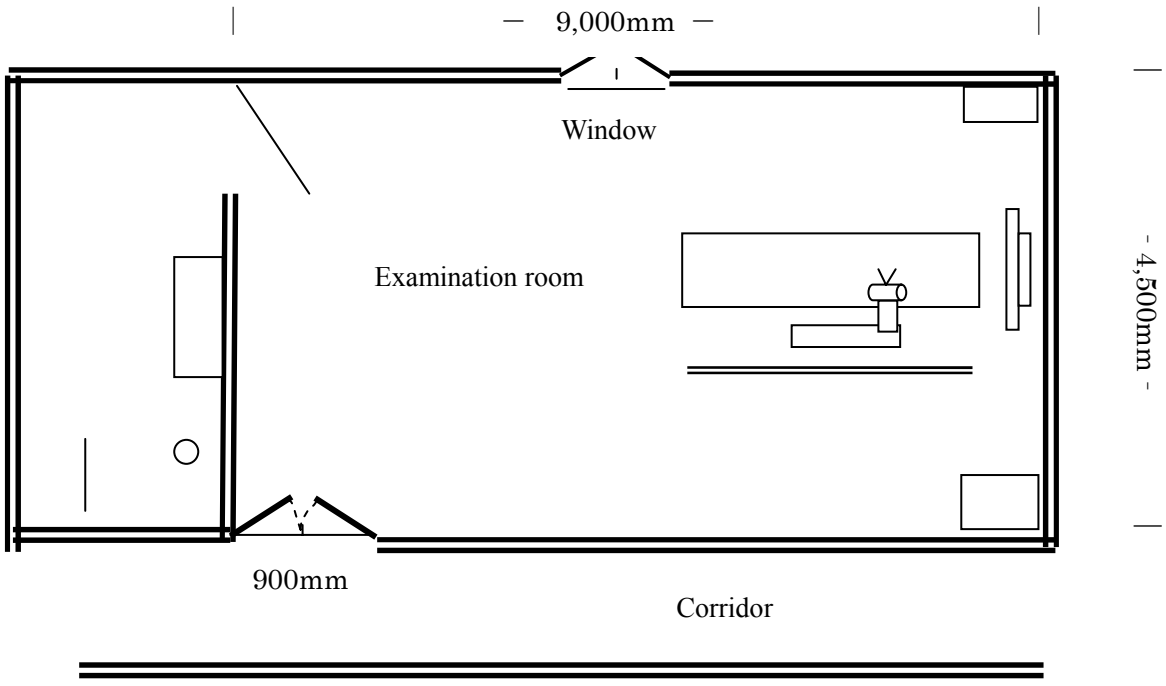
Lushnje District Hospital



X-ray unit installation lay-put plan

Figure 2-2

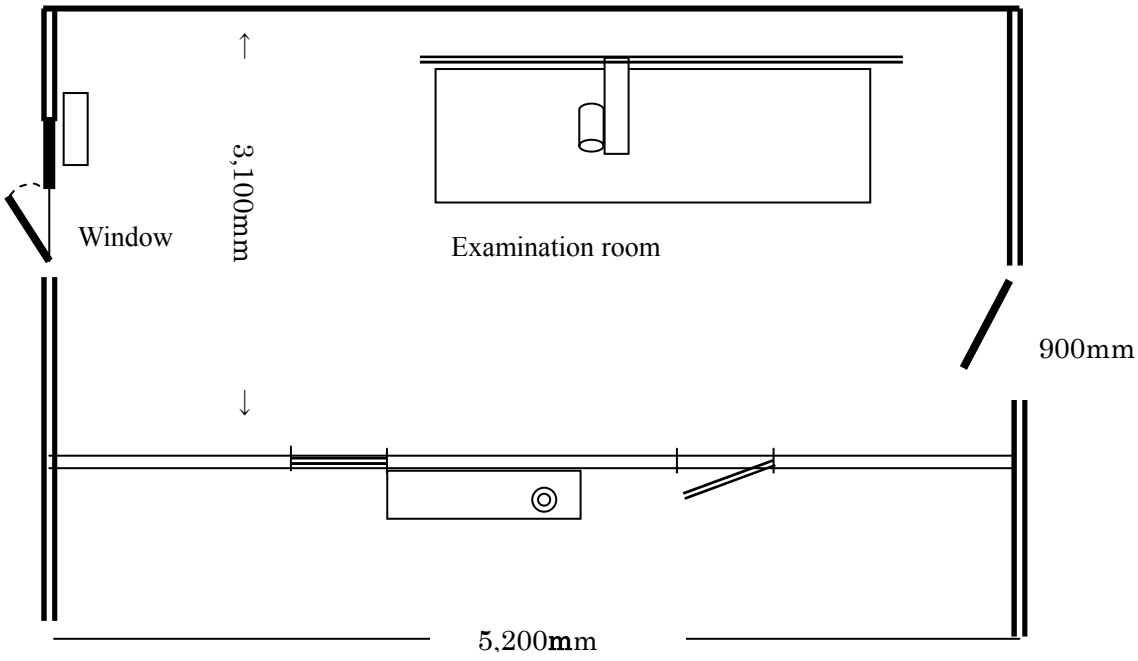
Diber Regional Hospital



X-ray room installation ray-out plan

Figure 2-3

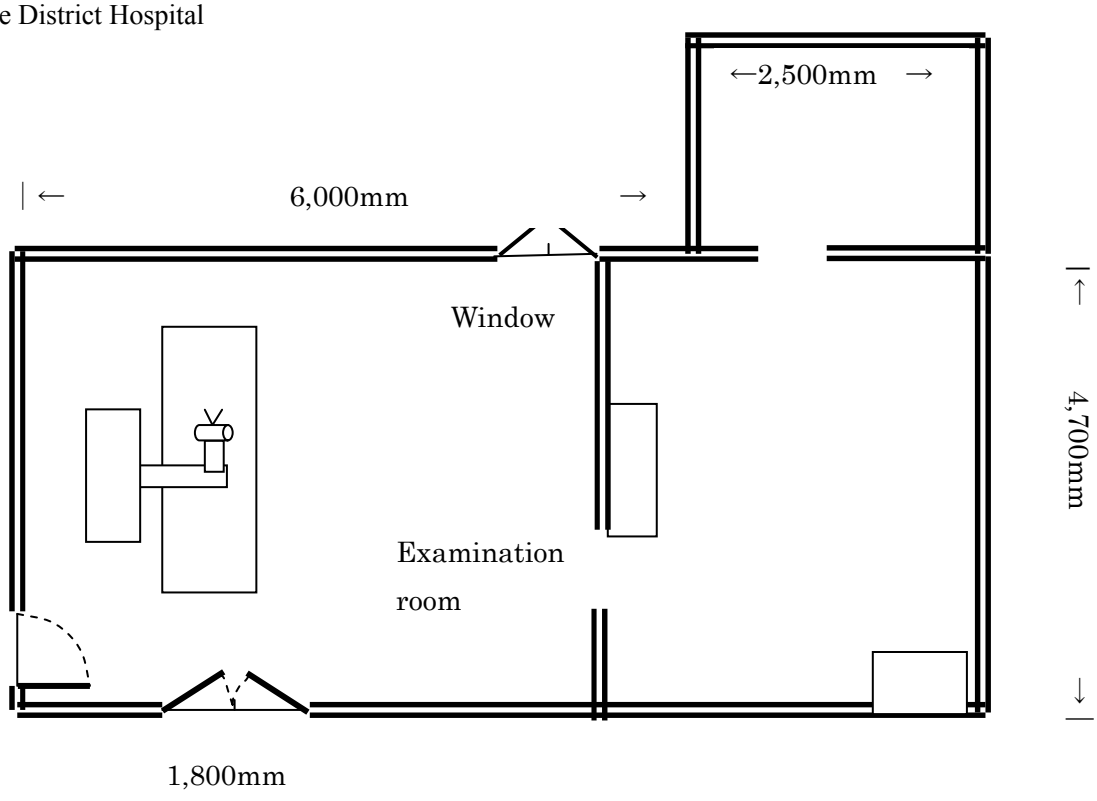
Kukes Regional Hospital



X-ray unit installation ray-out plan

Figure 2-4

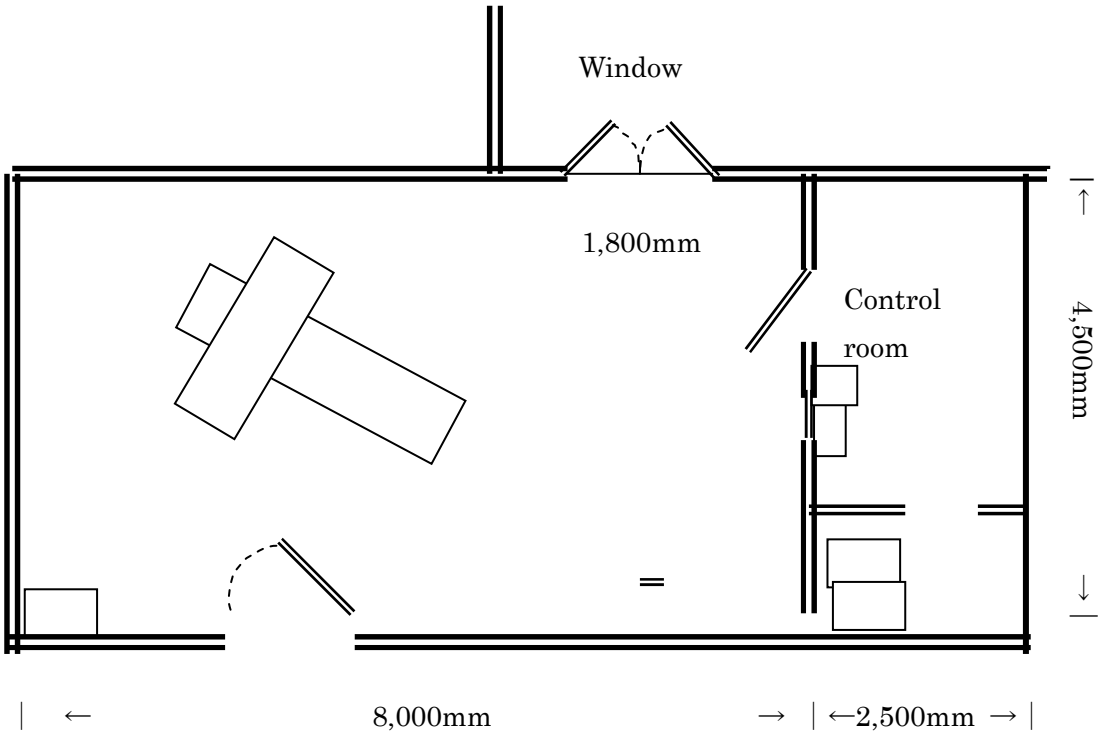
Sarande District Hospital



X-ray unit installation ray-out plan

Figure 2-5

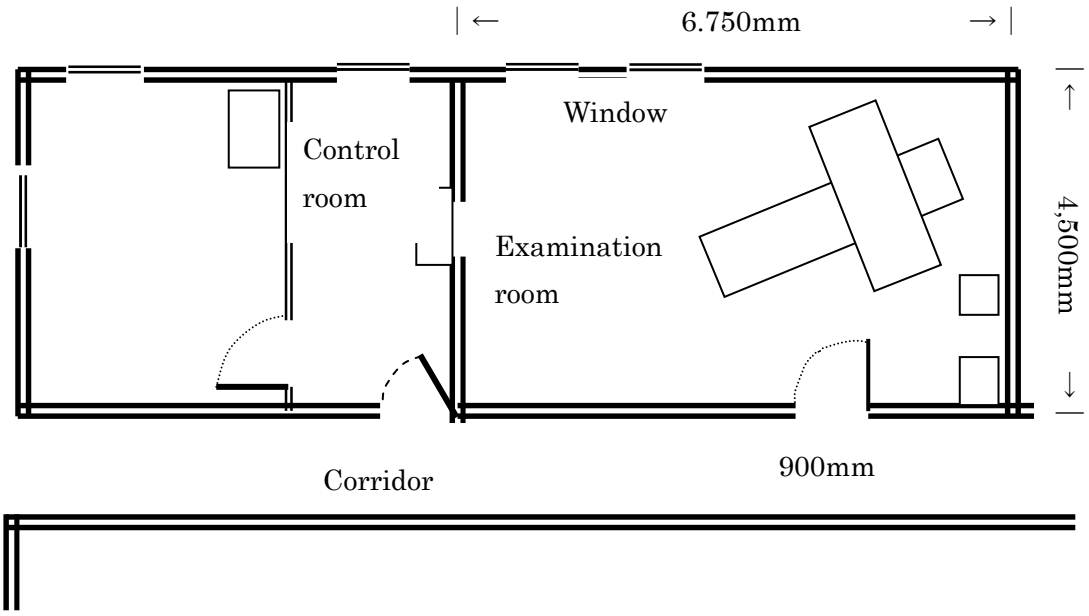
Kukes Regional Hospital



Installation ray-out plan of CT scanner

Figure 2-6

Gjirokaster Regional Hospital



Installation ray-out plan of CT scanner

Figure 2-7

2-2-4 Implementation plan

2-2-4-1 Implementation policy

As for the execution of work in this project, the work plan is formulated with the focus on the following items; bearing in mind the fact that this project is implemented in accordance with the framework of the Grant Aid scheme of the Government of Japan:

① The implementation items are investigated among the personnel in charge of the Government of Albania, implementation institution, consultants on the Japanese side, and supplier, and the range of work burdens of the Japanese and Albanian sides and the start times for each process are set.

The start and end times are adjusted to facilitate the works of both sides.

② To minimize the term of work, the supplier investigates each subject facility by two (2) months before the delivery of the equipment, checks the equipment delivery route, scheduled installation site, conditions of power supply and water supply/discharge, etc., and prepares the schedules for bringing in and installing the equipment, before starting the actual work.

③ To complete the equipment delivery and installation before the winter starts in Albania, two (2) teams for delivery/installation are arranged, and the delivery/installation work at the sites of the north and south areas are simultaneously carried out in parallel.

④ As for equipment requiring training/guidance for operation and maintenance/management, the procurement manufacturer implements the initial operation guidance/training for equipment operators in Albania.

⑤ As for the renovation work of the X-ray and CT scanner rooms, work sections for which the Government of Albania is responsible, accurate work costs and drawings of the equipment shall be submitted immediately after the model of the equipment to be procured is defined, to avoid any delay in the work by the Government of Albania and promote work progress on the Albanian side.

⑥ The installation/operation guidance for the equipment procured from Japan shall be given by Japanese engineers in the fields of general medical equipment and diagnostic imaging equipment.

2-2-4-2 Implementation Conditions

Bearing in mind the fact that the targeted facilities are presently active, the delivery schedule, delivery route and storage place shall be checked and sufficient discussion made with the persons concerned regarding the procedures for installing the equipment so that the daily medical activities are allowed to continue. In particular, in the case of renewal equipment such as X-ray units, sufficient discussion should be made concerning the removal timing of the existing equipment and due consideration should be given to ensure the diagnostic/treatment activities are unhindered by the considerable time lag between the operation of the old equipment and installation of the new.

2-2-4-3 Scope of Works

The work items shared in this project are as follows.

Items borne by Japanese side

1） Procurement of emergency medical equipment

2） Transportation from the country where the equipment is procured to the targeted facilities in Albania

3） Installation, commissioning and testing of the equipment at the targeted facilities and initial operation guidance

4) Implementation of soft components to establish a “Preventive Maintenance System”

Items borne by Albanian side

1） Removal of existing equipment to be renewed such as X-ray unit, etc.

2） Renovation work of the room in which the installation of X-ray equipment, etc. is scheduled

3) Power supply and water supply (including discharging) to the room where the equipment is installed

2-2-4-4 Consultant Supervision

1) Implementation system

This project is implemented by the following 4 parties, ① through ④.

① Project implementation body

The responsible institution, the main body in this project, is the Ministry of Health of Albania (hereinafter called “the Albanian MoH”), and the implementation institutions are 12 Regional Hospitals/District Hospitals, the Mother Teresa Pediatric Hospital, and the Emergency Dispatch Center in Tirana.

② Consultant

Since this project is implemented through Japan’s Grant Aid, the Japanese consultant shall issue guidance, advice, and coordination throughout the bidding/procuring stages, from a fair position, in accordance with the contracts with the implementation institutions in Albania and perform the necessary work to promote the smooth implementation of this project. The specific works are as follows:

- Confirmation of Tender documents

Checking work of tender documents for equipment procurement (tender conditions, equipment specifications, and list of estimated prices for bidding)

- Promotion of bidding/procuring contracts

Decision of procuring the contract system, preparation of procuring contract drafts, content investigation of equipment installation work documents, selection of suppliers (tender announcements, bidding and evaluation of tender proposals, contract negotiation and contract witnessing)

- Examination and approval of drawings, etc.

Examination and approval of equipment specifications and procurement plans submitted by the suppliers.

- Report of procurement situation

Supervising and reporting of the procurement progress situation to the Albanian MoH and related institutions

- Cooperation for payment approval procedure

Cooperation for content investigation and procedures for bills, etc. related to payment to be made after shipping

- Consultant operation for procurement

Witnessing of various operations from start to end

③ Equipment Supplier

The equipment shall be procured by a Japanese trading firm selected through tendering. The supplier is in charge of equipment manufacturing, supplying, delivering and installing in accordance with the contract concluded with the Albanian side and issues guidance on the initial operation and maintenance/management of the equipment to the Albanian side.

④ Japan International Cooperation Agency (JICA)

The Japan International Cooperation Agency (JICA), an independent administrative institution, advises the consultant to ensure this project is properly implemented in accordance with the Grant Aid scheme. As required, it discusses with the main body and promotes the implementation of this project.

2) Personnel plan

Those who are engaged in the consulting work concerning the implementation design and supervision of the work execution are as follows:

① Project Manager	(Japanese consultant): 1 person
② Equipment planner	(Japanese consultant): 1 person
③ Survey engineer	(Japanese consultant): 1 person

2-2-4-5 Procurement Plan

1) Eligible procurement source countries of equipment

The equipment to be procured in this project shall be restricted to that to be procured from Japan or Albania in the E/N and G/A. The equipment to which certain of the following conditions apply shall be procured from a third country:

① The equipment to be procured is not manufactured in Japan.

② While the equipment is manufactured in Japan, competitiveness is not expected in the tender, and the fairness of the latter may not be secured by restricting the procurement source to Japan.

③ If the equipment is restricted to the Japanese product, the transportation costs will be very expensive, reducing the effect of said aid. Alternatively, the equipment manufacturer and local agent lack their own maintenance network, meaning the equipment cannot be maintained properly, which may reduce the impact of the project.

④ There are unavoidable circumstances, such as urgency of procurement.

2) Procurement of spare parts

For Japanese products and those of a third country, plans are made so that the procurement of periodical replacement parts can be easily made through manufacturer's agencies existing in Albania.

3) Method of delivering equipment

Products procured outside Albania are passed through Customs at Durres Port, Albania, and then transported to each targeted facility by land. The equipment is contained in a wooden box or container for each targeted facility in order to prevent wrong delivery.

2-2-4-6 Operational Guidance Plan

During installation, the basic operational method of the equipment is guided by the equipment supplier or engineer dispatched by the manufacturer's local agent to the equipment operation personnel at each targeted facility.

2-2-4-7 Soft Component (Technical Assistance) Plan

At medical facilities in Albania, people understand the need for maintenance management of medical equipment during the lifespan of the equipment. However, there is a lack of notice concerning preventive maintenance; namely how to keep and maintain medical equipment in good condition, thereby decreasing the lifespan of equipment due to inappropriate treatment when defects arise.

The objective of this soft component is to establish a "Preventive Maintenance System" in order to maintain and manage medical equipment by medical personnel. Consequently, medical equipment would be properly maintained and managed at each targeted facility.

In concrete terms, there are plans to prepare a start and end operational manual, daily operational manual and periodical check implementation operational manual. These documents are for operational representatives in the field to understand the need for preventive maintenance and hence prolong the lifespan of the procured equipment.

Currently, the lifespan of medical equipment at targeted facilities is around six (6) years. The input of this soft component is expected to prolong lifespan to nine (9) to ten (10) years, which represents the actual lifespan of the equipment.

2-2-4-8 Implementation Schedule

When this project is approved in the Cabinet meeting of the Government of Japan and an Exchange of Notes (E/N) is concluded between both countries, the project shall be conducted according to the following procedures:

1. Conclusion of the Exchange of Notes between both relevant governments
2. Conclusion of the Grant Agreement (G/A) between the Japan International Cooperation agency (JICA) and the Government of Albania
3. Conclusion of agreement between the responsible agency and a bank in Japan on payment of the Japan's Grant Aid for implementation of this project (Banking Arrangement; B/A)
4. Conclusion of the consultancy agreement between the responsible agency and the Japanese consultant
5. Issuance of the Authorization to Pay (A/P) by the responsible agency according to

the consultancy agreement

6. Verification of the above contract by the Japan International Cooperation agency (JICA)
7. Preparation of tender documents by the consultant
8. Approval of the tender documents by the responsible agency and preparation for tendering by the consultant
9. Implementation of tender, and evaluation-of tender proposal
10. Conclusion of supply contract between the responsible agency and the Japanese supplier
11. Verification of the supply contract by the Japan International Cooperation agency (JICA)
12. Issuance guidance of the Authorization to Pay (A/P) by the responsible agency according to the supply contract
13. Witnessing for equipment inspection

(The consultant witnesses factory inspection before shipment, if necessary, and approves the inspection on behalf of the responsible agency)

14. Confirming installation conditions, distribution plan of the equipment, and adjustment of the work schedule by the consultant
15. Supervision of work execution

(In accordance with the contract, the consultant, on behalf of the responsible agency, conducts inspection and approval of the equipment's specifications, inspection and approval of equipment, supervision and instruction of inland-transport, and supervision of the works covered by the recipient country)

16. Progress control

(The consultant supervises work progress and gives necessary instruction to the supplier so that the supply contract may be completed within the period stated in the Exchange of Notes)

17. Inspection, operation and test

(The consultant performs a final inspection and test-run to the equipment to be procured, confirms that the performance is as described in the specifications, and submits a certificate of completion of inspection to the responsible agency)

18. Hand-over of the equipment & Completion of the Project

Following implementation schedule shows schedule of this project after engagement of E/N & G/A.

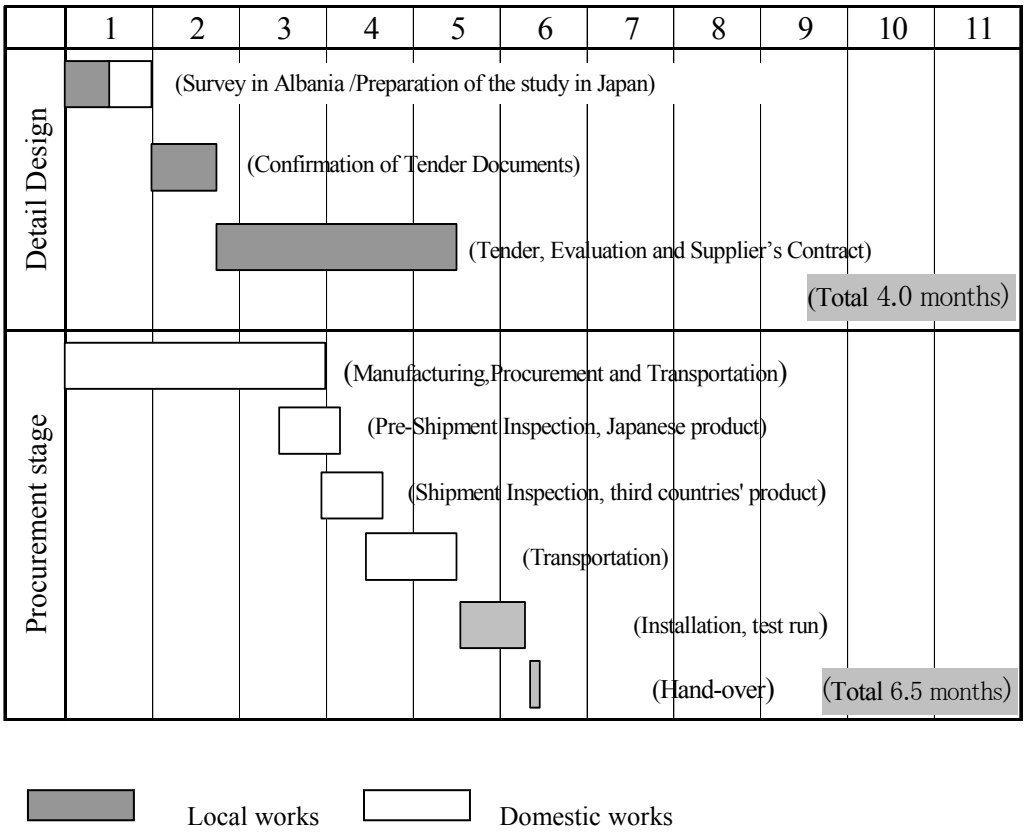


Figure 2-8 Implementation Schedule

2-3 Obligations of Recipient Country

The items to be covered by the Albanian side are as follows:

(1) During the implementation period of the project, the Albanian side should find a site to be used as a temporary office in each designated facility for this project.
(2) The peripheral foundations (supply of electricity and water, drainage, and other facilities) necessary for this project should be prepared and supplied before distribution of the equipment. In addition, the existing equipment should be removed from places where the new equipment will be installed before the distribution.
(3) The equipment imported for this project should be unloaded promptly, and the necessary measures for customs clearance and inland transportation of the equipment should be taken. A tax exemption certificates should be arranged before the arrival of the containers in Albania.
(4) Payments of customs duties and other taxes should be exempted for Japanese nationals remaining in Albania to fulfill their missions in this project.
(5) For Japanese nationals participating in the supply of the necessary equipment and in the implementation of this project, the necessary conveniences for their stay in Albania shall be provided and sufficient consideration made concerning their security.
(6) In accordance with the Banking Arrangement (B/A), the Albanian side should pay the banking commission and the commission for the issuance of the Authorization to pay into the authorized bank in Japan.
(7) The equipment to be procured under Japan's Grant Aid should be maintained properly and used effectively. For this purpose, the necessary budget and personnel should be secured.
(8) The equipment to be procured under Japan's Grant Aid should be maintained properly and used effectively. In addition, the utilization and condition of the equipment should be reported regularly to the Government of Japan.
(9) The Albanian side should bear the cost of installation works to prevent leakage from the X-ray room where the installation of an X-ray unit and CT scanner are planned.

(10) Medical equipment requiring special techniques for maintenance and management, should be engaged a maintenance agreement with the manufacturer's agents etc.

(11) For the implementation of this project, all expenses other than those covered by Japan's Grant Aid should be borne by the Albanian side.

2-4 Project Operation Plan

Public medical facilities in Albania have presently concluded maintenance service contracts with manufacturers' agencies for some existing equipment (X-ray units, CT scanners, ultrasound scanners, etc.). These contracts do not include periodical checking and are limited to repair of failures except for the CT scanner, due to the contract amount. To use the equipment in good condition for an extended period, periodical checking by specialized engineers is indispensable. For equipment requiring continuous maintenance/management plans such as X-ray units, CT scanners and ultrasound scanners, the procurement of which is planned in this project, a prerequisite is to secure costs for concluding the maintenance service contracts with manufacturers' agencies.

Of the equipment to be procured through this cooperation project, the following table shows that requiring annual maintenance contract services and the contract details, contract conditions, and costs:

Table 2-10 Estimated cost for the maintenance service with advanced medical equipment

(Unit: Lek)

Name of equipments	Quantity	Content of maintenance service contract	Terms of contract	Amount of contract fee by year (estimated)
CT- scanner	2	Half-yearly periodical maintenance service and also repair service when it breaks down	Technical suport only (Replacement parts cost is an additional cost)	Approx. 2.69 million
Fluoroscopy and Radiography X-ray Unit	4	Half-yearly regular service and repair service when it breaks down	Technical suport only (Replacement parts cost is an additional cost)	Approx. 2.27 million
Fluoroscopy X-ray Unit	1	Half-yearly regular service and repair service when it breaks down	Technical suport only (Replacement parts cost is an additional cost)	Approx. 0.4 million
			Lek：	Approx. 5.36 million (Approx. 5.2 million Yen)

2-5 Project Cost Estimation

2-5-1 Initial Cost Estimation

This cost estimate is provisional and would be further examinated by the Government of Japan for the approval of the Grant.

1) Cost to be borne by Albanian side:

Approximately 12 million Lek

Table 2-11 Rough estimated cost borne by Albanian side (unit:Lek)

Name of Hospital	Albanian Lek
Kukes Regional Hospital	
CT-scanner room	1,819,216
X-ray room	1,547,784
Girokaster Regional Hospital	
CT-scanner room	1,587,152
Elbasan Regional Hospital	
X-ray room	1,580,936
Lushnje District Hospital	
X-ray room	1,761,200
Diber Regional Hospital	
X-ray room	2,024,344
Sarande District Hospital	
X-ray room	1,792,694
Bank commission	358,750
In Total	12,472,076

2) Conditions of Estimation

1. Estimating time point : May, 2009
2. Exchange rate: 1 US dollar = 95.77 yen
   1 Euro = 125.38 yen
   1 Albanian Lek = 0.965 yen
3. Work period: One (1) period work. Detailed design and equipment procurement periods are shown in implementation schedule.
4. Other: This project is implemented in accordance with the Grant Aid scheme by the Government of Japan.

2-5-2 Operation and Maintenance cost

Most of the equipment to be procured in this cooperation project is intended for the renewal and replenishment of equipment currently in operation at the targeted facilities, hence there is through to be no major issue in terms of the operation and maintenance/management expenses. It is, however, expected that the replenishment and renewal of some equipment will result in an expanded range of medical activities and increased operating expenses, making it necessary for the Albanian side to take budget measures. As shown in the following table, the annual operation and maintenance/management expenses needed for the equipment to be procured in this project are calculated as about 11 million yen (about 11.4 million Lek). Of this, the maintenance/management expenses to be added due to increased quantities for replenishment, etc. are calculated as 40 to 100% (40% for radiation equipment to be renewed, 100% for CT scanners to be procured anew), or about 5.6 million yen (5.81 million Lek). The operational budgets of the primary and secondary medical budgets incorporating those required for emergency medical services in Albania are about 315.20 billion yen (about 324.64 billion Lek) in fiscal 2009, and the increase is minute, representing about 0.017% of the current budget for emergency medical services, namely within the possible range. Examining the planned budgets in fiscal 2009/2010 and 2010/2011, annual budget increases of 12.4% to 14.2% are planned, and we, therefore, consider that there will be no particular problem in securing the operation and maintenance/management expenses. Furthermore, the annual maintenance contract cost for planned procurement equipment is in a total of 5.36 million Lek. The Albanian MoH has guaranteed the securing of this budget, which is possible because the average annual maintenance cost of the targeted facilities is about 1.78% of 300 million Lek. The renewal and replenishment of equipment in this project will improve the medical services, and via the insurance system and hospital operation reforms promoted by the Government of Albania, promote increased income by medical treatment under insurance and charged treatment in future from which financial independence appears attainable.

Table 2-12 Estimation for annual maintenance cost for medical equipment

(Unit:Lek)

Equipment	consumption	Amount of money
Diagnosis of radiation image such as X-ray devices, CT-scanner,	Contrast medium, Film, Developer, etc.	3.92 million
Anesthesia apparatus, Syringe pump, Patient monitor, etc.	Anesthetic gas, Oxygen, nitrogen, Injection cylinder, Electrodes etc.	0.25 million
Ultrasound scanner equipment, ME equipment such as electrocardiographs	Contact gel, Recording paper, Electrodes, etc.	0.04 million
Clinical examination equipment such as Automatic blood cell counter, spectrophotometers	Lamp, Reagents, Electrodes, etc.	0.9 million
Ambulance	Filter, Lubricant, Fuel, etc.	0.7 million
Total annual maintenance cost		About 5.81 millon Lek (About 5.61 million yen)

2-6 Other Relevant Issues

Radiation rooms, in which there are plans to house CT scanners and X-ray units under this project, shall have appropriate measures regarding X-ray leakage protection especially applied for entrance and exit doors, and windows etc. Furthermore, the obsolete existing X-ray units must be removed at the same time. Since the renovation (construction) work such as X-ray room protection and removal of old X-ray machine shall be borne by the Albanian side, it is necessary to adjust construction schedule through frequent communication with the Albanian MoH, and targeted facilities when equipment is installed. In addition, there is an obligation to ensure a license is obtained when a new X-ray machine is installed. Thus, it is necessary to promote preparatory work and that involved in obtaining a license simultaneously.

Chapter 3 Project Evaluation and Recommendations

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

The following effects are expected to materialize when the current project is implemented:

◇ Current Situation and Problems

Currently, it is impossible to provide emergency treatment and first aid for the patients. This is because existing ambulances are obsolete or the equipment required to provide life saving support is lacking. Additionally, emergency sections at hospitals are not equipped with diagnostic and treatment equipment, thereby requiring serious patients be transferred to the capital of Tirana over long hours. As a result, the trust of Albanian nationals in their emergency medical services has declined due to the lack of comprehensive emergency medical services at regional hospitals, while the life saving rate has also decreased due to the delay in emergency treatment, and the fact that medical facilities in the capital city are occupied by patients referred from rural areas

◇ Counter-plan of the project

- Improvement of emergency transfer equipment, including ambulances
- Improvement of equipment used inside the ambulances
- Improvement of emergency lifesaving related medical equipment
- Improvement of medical equipment for the pediatric operation theater at the Mother Teresa Pediatric Hospital in Tirana

◇ Direct Effect and improvement indicators

① It will become possible to provide first aid for emergency patients during transportation due to the establishment of an emergency medical system.

② Mortality figures for circulatory related diseases are expected to drop from 281.9 persons (against 10 million population) in 2006.

③ Mortality figures related to traffic accidents are expected to drop from 44.4 persons (against 10 million population) in 2006.

④ The number of emergency call for ambulance (Table 3-1) from patients, which were 16,429 cases in metropolitan areas, and 56,255 cases in rural areas as of 2008 is expected to fall.

⑤ The number of emergency patients at regional and district hospitals, which was a total of 165,710 cases as of 2008, is expected to increase.

⑥ The number of emergency operation cases handled at the Mother Teresa Pediatric Hospital, which is currently zero (0) cases, is expected to increase.

⑦ Because of the input of soft components, the lifespan of equipment will be prolonged after the establishment of a “Preventive Maintenance System”.

Table 3-1 Number of emergency call for ambulance at each targeted facility

Targeted facilities	Numebr of emergency call	Targeted facilities	Numebr of emergency call
(1) The Pediatric Hospital "Mother Teresa" of University Center of Tirana	-	(9) Fier Regional Hospital	4,200 cases
(2) Emergency Dispatch Center in Tirana	**16,429** cases	(10) Berat Regional Hospital	4,500 cases
(3) Shkodra Regional Hospital	N/A	(11) Vlore Regional Hospital	8,030 cases
(4) Lezha Regional Hospital	6,205 cases	(12) Gjirokaster Regional Hospital	4,380 cases
(5) Kukes Regional Hospital	2,800 cases	(13) Korce Regional Hospital	4,425 cases
(6) Diber Regional Hospital	3,800 cases	(14) Lushnje District Hospital	2,500 cases
(7) Durres Regional Hospital	8,000 cases	(15) Sarande District Hospital	4,115 cases
(8) Elbasan Regional Hospital	3,300 cases	Emergency call for ambulance at rural facilities	**56,255** cases

◇ Indirect Effect and Improvement Indicators

① The patient’s economic burden is expected to be eased due to the reduction in the inpatient and treatment period thanks to early diagnosis and treatment.

② Inhabitants’ trust in emergency medical services is expected to be regained, hence an anticipated improvement in the lifesaving rate over the medium to long term. Consequently, Albanian nationals’ trust in public health and medical services will be regained following the establishment of a robust emergency medical service system.

③ Many Albanian nationals are expected to benefit thanks to the improvement in the emergency medical system. On the whole, Albanian nationals’ trust in public administrative services, not only the health and medical sectors but also others, is expected to return.

3-2 Recommendations

3-2-1 Issues and Recommendations, in which recipient country side should try to resolve

This project would lead to great effects mentioning above, and there is great significance to implement. In order to achieve expected effects and maintain those effects, following measures should be taken by Albanian side.

1) Due to one-driver and one-vehicle system at regional and district hospitals in Albania, ambulances, whose drivers are out of duty, are not used. Thus, it is reported that use rate of ambulance is Approx. 60% stemming from this ineffective operational system. In order to use procured ambulances and lifesaving medical equipment effectively in this project, it is recommended to improve driver’s and ambulance’s work formation.

2) This project is to support strengthening of emergency medical service system from hard face based on “The Strategy of Emergency Medical System Reform” promoted by the Government of Albania through procurement of quantitative and qualitative shortages of emergency medical equipment. On the other hand, it is necessary to support from soft face such as technical assistance to transfer laryngeal intubation technique for medical personnel at emergency fields. When this project is implemented, it is judged to enhance project effects in case that Albanian side would strengthen periodical training and continuous education for emergency medical personnel.

3-2-2 Technical Assistance/ Coordination with Other Donors

This project is based on “The Strategy of Emergency Medical System Reform” set forth by the Government of Albania in collaboration with the WHO and an Italian corporation. In order to achieve the set goal stated in this strategy, the Government of Japan shall procure emergency medical equipment, while the WHO, Italian corporation and other donors shall support the operational side, such as the establishment of an emergency medical system. Since donor coordination is a key factor in evolving the project effects for this “The Strategy of Emergency Medical System Reform”, it is important for Albanian Government Officials to communicate frequently with the relevant stakeholders on aspects such as the implementation schedule and input scale etc.

[Appendices]

1. Member List of the Study Team
2. Study Schedule
3. List of Parties Concerned in the Recipient Country
4. Minutes of Discussions
5. Soft Component (Technical Assistance)Plan
6. References

Appendix 1 Member List of the Study Team

Preparatory Survey (Basic Design)

Name	Field in charge	Survey Period	Affiliation
Yoshihide TERANISHI (Mr.)	Team Leader	17 May – 24 May	Deputy Director General for Planning and Coordination Human Department, JICA
Masayuki SUZUKAWA (Dr.)	Technical Advisor	17 May – 24 May	Professor & Chairman Department of Emergency and Critical Care Medicine Jichi Medical School
Takuya OTSUKA (Mr.)	Survey Planning	17 May – 24 May	Staff, General Coordination Division General Affairs Department, JICA
Shinichi KIMURA (Mr.)	Head /Planning of Equipment I	26 April – 24 May	Director General, Binko International Ltd.
Takashi OGAWA (Mr.)	Planning of Equipment II / Hospital Management	26 April – 24 May	Director, International Division, Binko International Ltd.
Akiko OKITSU (Ms.)	Strengthening Health System/Donor Coordination	26 April – 16 May	Senior Consultant Tac International Ltd.
Yasuko ASANUMA (Ms.)	Procurement Planning/ Cost Estimation	7 May –20 May	Manager, New Business Development Division, Binko International Ltd.

Explanation of Draft Report

Name	Field in charge	Survey Period	Affiliation
Tomoya YOSHIDA (Mr.)	Team Leader/ Planning	23 August – 31 August	Grant Aid Project Management Division 2, Financing Facilitation and Procurement Supervision Department, JICA
Shinichi KIMURA (Mr.)	Head /Planning of Equipment I	26 August – 30 August	Director General, Binko International Ltd.
Yasuko ASANUMA (Ms.)	Planning of Equipment II /Hospital Management	26 August – 30 August	Manager, New Business Development Division, Binko International Ltd.

Appendix 2 Study Schedule

(Preparatory Surevy (Basic Design Study)

Month date		Official Team	Consultant Team			
		Mr. Y.Teranishi(JICA) Dr. M.Suzukawa (Jichi Medical School.) Mr. T.Otsuka(JICA)	Mr. S.Kimura (Head/Planninng of Equipment Ⅰ)	Mr. T.Ogawa (Planninng of Equipment Ⅱ /Hospital Management)	Ms.A. Okitsu (Strengthening Health System/Donor Coordination)	Ms. Y.Asanuma Procurement Planning/ Cost Estimation
April 26th	S		Leave for Albania Arraival : Tirana			
April 27th	M		Ministry of Health Courtesy call Site survey: Emergency Unit of Pediatric Hospital of “Mother Theresa”			
April 28th	T		Site survey: Emergency Unit of Pediatric Hospital of “Mother Theresa” Site survey: Emergency Dispatch Center in Tirana			
April 29th	W		Meeting with Minister of MoH Site survey :Fier Regional Hospital			
April 30th	T		Site survey: Elbasan Regional Hospital Site survey: Lushnje District Hospita			
May 1st	F		Internal Meeting			
May 2st	S		Site survey:Tirana → Berat Regional Hospital →Tirana			
May 3st	S		Site survey:Tirana → Peshkopie Diber Regional Hospital			
May 4st	M		Site survey: Peshkopie →Shkodra Regional Hospital			
May 5st	T		Site survey: Shkodra→Kukes Regional Hospital			
May 6st	W		Site survey: Kukes→Lezha Regional Hospital →Tirana			
May 7st	T		Meeting with Ministry of Health		Survey: WHO,World Bank	Leave for Albania Arraival : Tirana
May 8st	F		Site survey: Emergency Unit of Pediatric Hospital of “Mother Theresa”	Site survey: Tirana →Durres Regional Hospital →Tirana		Agent survey
May 9st	S		Internal Meeting			
May 10st	S		Site survey:Tirana →Korce Regional Hospita			
May 11st	M		Site survey:Korce→ Gjirokaster Regional Hospital			Agent survey
May 12st	T		Site survey:Gjirokaster → Sarande District Hospital Vlore Regional Hospital →Tirana			Agent survey
May 13st	W		Site survey:Sarande → Vlore Regional Hospital →Tirana			Agent survey
May 14st	T		Site survey:National Biomedical Center Site survey:Emergency Unit of Pediatric Hospital of “Mother Theresa”			Forwder survey
May 15st	F		Meeting with Ministry of Health		Leave for Japan	Leave for Italy
May 16st	S		Internal Meeting		Arrival : Narita Airport	Agent survey
May 17st	S	Arrival: Tirana Internal Meeting	Internal Meeting			Documentation
May 18st	M	Ministry of Health Courtesy call Emergency Unit of Pediatric Hospital of “Mother Theresa”		survey: Healthl Insurance Institute		Agent survey
May 19st	T	Emergency Unit of Pediatric Hospital of “Mother Theresa” Emergency Dispatch Center in Tirana Donar survey(Tirana)				Leave for Japan
May 20st	W	Minute discussion				Arraival: Narita Airport
May 21st	T	Site survey: Tirana →Durres Regional Hospital →Tirana Donar survey(Tirana)				
May 22st	F	Conclusion of Minute of Discussion				
May 23st	S	Leave for Japan				
May 24st	S	Arrival :Tokyo Narita Airport				

(Explanation of Draft Report)

Month date		Official Team	Consultant Team	
		Mr. T.Yoshida (JICA)	Mr. S.Kimura (Head/Planninng of Equipment Ⅰ)	Ms. Y.Asanuma (Planninng of Equipment Ⅱ /Hospital Management)
Aug.23st	S	Leave for Albania Arraival : Tirana		
Aug.24st	M	Ministry of Health Courtesy call Explanation of Draft of Basic Study Report		
Aug.25st	T	Site survey: ・Ministry of Health Courtesy call Emergency Unit of Pediatric Hospital of "Mother Theresa" ・Emergency Dispatch Center in Tirana ・Tirana →Durres Regional Hospital →Tirana	Explanation of Draft Preparatory Report (Basic Design Study)	
Aug.26st	W	Minute discussion		
Aug.27st	T	Minute discussion Donar survey (Tirana)		
Aug.28st	F	Conclusion of Minute of Discussion		
Aug.29st	S	Leave for Japan		
Aug.30st	S	Leave for Selbia	Arrival :Tokyo Narita Airport	

Appendix 3 List of parties Concerned in the Recipient Country

1. The Government of Albania, and University

Ministry of Health

Dr. Anila Godo	Minister of Health
Dr. Fedor Kallajxhi	Director of Hospital Planning
Mr. Saimir Kadiu MSc	Director, Financial Planning Department & World Bank Project
Ms. Enida Xhumari	Director of Hospital

Tirana University Pediatric Hoapital

Dr. Ariel Como	Medical Vice General Director

Public Health Institute (Safety Radiation Department)

Mr. Russeor Paci	Head of Department
Ms. Lediana Abazi	Inspector
Ms. Spuyqyni Arofin	Inspector
Ms. Violanda Gjino	Laboratory Technician

National Biomedical Center

Mr. Fatos Sinoimeri	Director

Health Insurance Institute of Albania

Ms. Elvana Hana	General Eirector

Department of Strategy and Donor Coordination	Council of Ministers
Mr. Klodjan Seferaj	Consultant for IPS Coordination
Ms. Alpina Qirjazi	Consultant for IPS Coordination

2. Working Group to implement "Strategy of Emergency Medical System Reform in Albania"

Ministry of Health

Dr. Arjan Harxhi	General Director, Health Policies and Planning
Dr. Silva Novi	Head of Hospital Standards Sector, Hospital Directory
Ms. Ledina Picari	Biomedical Enginner, Hospital Planning, Medical Devises Specialist Sector

Tirana University Hospital

Dr. Edmond Zaimi	Head of Emergency Unit of Internal Medicine
Mr. Ervis Mance	Clinical Enginner

3. Regional Hospital, District Hospital, and Tirana Dispatch Center

Emergency Dispatch Center in Tirana

Dr. Blend Fuga	Chef of ESC
Dr. Ilir Baci	Director of Primary Health Care

Fier Regional Hospital

Dr. Najaola Jahiqi	Director
Dr. Leon Shpatoiroiku	Vice Director
Dr. Maksim Tanaka	Chief of Emergency
Dr. Aleks Sulejuarii	Chief of Internal department
Ms. Acma Bitri	Head Nurse

Elbasan Regional Hospital

Dr. Arben Paralloi	Dierctor
Eng. Derian Clluzlaqi	Clinical Engineer

Lushnje District Hospital

Mr. Bedrie Greca	Deputy Director, Economiy
Ms. Flora Haxhiu	Personal
Mr. Lefteri Alicka	Finance
Mr. Astrit Kanani	Logistic

Berat Regional Hospital

Dr. Julian Habibaj	Vice Director, Head of Department of Ob/Gy
Dr. Adrian Hyska	Emergancy Department
Mr. Alfred Luloy	Engineer

Diber Regional Hospital

Dr. Ardian Bitri	Ex Hospital Director
Mr. Gazmend Xhembulla	Chief of Emergency

Shokodra Regional Hospital

Dr. Namik Kameizi	Director
Dr. Bari Cukaj	Head of Emergency Service
Mr. Halil Golemi	General Director of Nursing
Dr. Filip Veco	AISPO (Italian NGO) Project Cordinator

Kukes Regional Hospital

Dr. Astrit Haziri	Director
Dr. Nikolin Martini	Deputy Director
Mr. Leke Deda	Deputy Director, Economy
Dr. Emin Ferati	Chief of Emergency Service

Dr. Agron Sula	Radiologist
Lezha Regional Hospital	
Dr. Pashk Gjoni	Director
Ms. Teuta Marku	Bio Medical Enginner
Durres Regional Hospital	
Dr. Neritan Myderrizi	General Director
Dr. Ashim Zocoy	Chief of Emergency Department
Dr. Ferid Domi	Emergency Doctor
Korce Regional Hospital	
Dr. Gjergji Denasi Director	
Dr. Dhimitraq Samara	Emergency Chief
Girokaster Regional Hospital	
Dr. Arben Kuro	Vice Director
Mr. Gazmend Bilbili	Vice Director, Economy
Ms. Valbona Bedaj	Finance
Ms. Fotini Shehy	Personal
Ms. Kristina Llane	Public Relation
Sarande District Hospital	
Dr. Niko Kuri	Deputy Director
Mr. Vasil Mitro	Deputy Director, Economy
Dr. Uenera Guri	Head of ESC
Dr. Enkela Malaj	Doctor, ESC
Vlore Regional Hospital	
Dr. Theodhori Muco	Chief of ESC
Dr. Agim Tetova	Chief of Surgery
Mr. Flamur Sulcaj	Technician
Mr. Admir Hysi	Ambulance Driver

4. Relevant Donors

Italian Development Cooperation	
Ms. Francesca Fondi	Technical Assistant
WHO	
Dr. Anshu Banerijee	Representative
Dr. Pier Luicri Wueassia	Consultant in Anesthesiology, ICU and Emergency Medicine
Dr. Vasil Miho	NPO Health System

World Bank

Ms. Lorena Kostallari	Senior Operations Officer (Human Development)

5. JICA (Albanian Local Coordinators)

Ms. Reko Dida	Technical Coordinator, Tirana
Mr. Sokol KONOMI	Technical Coordinator, Tirana

Appendix 4　Minutes of Discussions

（Basic Design Survey）

MINUTES OF DISCUSSIONS
PREPARATORY SURVEY (BASIC DESIGN)
ON THE PROJECT FOR IMPROVEMENT OF THE MEDICAL EQUIPMENT
OF THE REGIONAL LEVEL EMERGENCY CENTERS
IN THE REPUBLIC OF ALBANIA

Based on the results of the Preparatory Survey, the Government of Japan decided to conduct a Preparatory Survey (Basic Design) on the Project for Improvement of the Medical Equipment of the Regional Level Emergency Centers in the Republic of Albania (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Republic of Albania (hereinafter referred to as "the Albania") the Preparatory Survey (Basic Design) Team (hereinafter referred to as "the Team"), which is headed by Mr. Yoshihide Teranishi, Deputy Director General, Human Development Department, JICA, and is scheduled to stay in the country from April 26 to May 23, 2009.

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

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey (Basic Design) Report.

Tirana, May 22, 2009

Yoshihide Teranishi
Leader
Preparatory Survey (Basic Design) Team
Japan International Cooperation Agency
Japan

Arjan Harxhi
General Director
Policy and Planning
Ministry of Health
Republic of Albania

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve emergency medical service of the regional level in Albania.

2. Project Sites

The possible sites of the Project and their locations are shown in Annex-1.

3. Responsible and Implementing Agency

The responsible and implementing Agency is the Ministry of Health of the Albania.

4. Items Requested by the Government of Albania

After discussions with the Team, the items described in Annex-2 were finally requested by the Albanian side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

The Albanian side understands the Japan's grant aid scheme and the necessary measures to be taken by the Government of Albania described in Annex-3 and Annex-4.

6. Schedule of the Study

(1) JICA will prepare the draft report and dispatch a mission in order to explain its contents in August, 2009.

(2) In case that the contents of the draft report are accepted in principle by the Government of Albania, JICA will complete the final report and send it to the Government of Albania by October, 2009.

7. Other Relevant Issues

7-1. Selection of the Project Sites

Both sides agreed to select the targeted sites with the priority described in Annex-1 through the further studies. The priority is categorized as follows.

A: higher priority

B: middle priority

C: lower priority

7-2. Selection of the Targeted Equipment

Both sides mutually agreed to select the targeted equipment with the priority described in Annex-5 through the further studies. The priority is categorized as follows.

A: higher priority
B: middle priority
C: lower priority

7-3. Operation and Maintenance of the Equipment

(1) The Albanian side agreed to secure and allocate the enough budgets to operate and maintain the equipment procured under the Project properly and effectively.

(2) The Albanian side promised to take following measures, if the Computerized Tomography X-ray equipment (CT) is procured under the Project.

- to secure and allocate the enough budgets to operate and maintain the CT
- to allocate the appropriate staff to operate and maintain the CT
- to conclude annual maintenance contract for the CT with the manufacturers' agent

7-4. Expenses and Preparatory Work for the Installation of the Equipment

(1) The Albanian side will be responsible for renovating the facilities and removing the unnecessary equipment before the supply of the equipment procured under the Project.

(2) Especially for the X-ray-related equipment, the Albanian side agreed to bear the necessary expenses for renovating and/or improving the appropriate X-ray protection rooms to meet the Albanian standard.

7-5. Tax Exemption

The Albanian side will take necessary measures in order to ensure the tax exemption for the equipment procured under the Project.

7-6. Technical Assistance

The Albanian side requested the following technical assistance under the Project. The Team would convey the request to the Government of Japan.

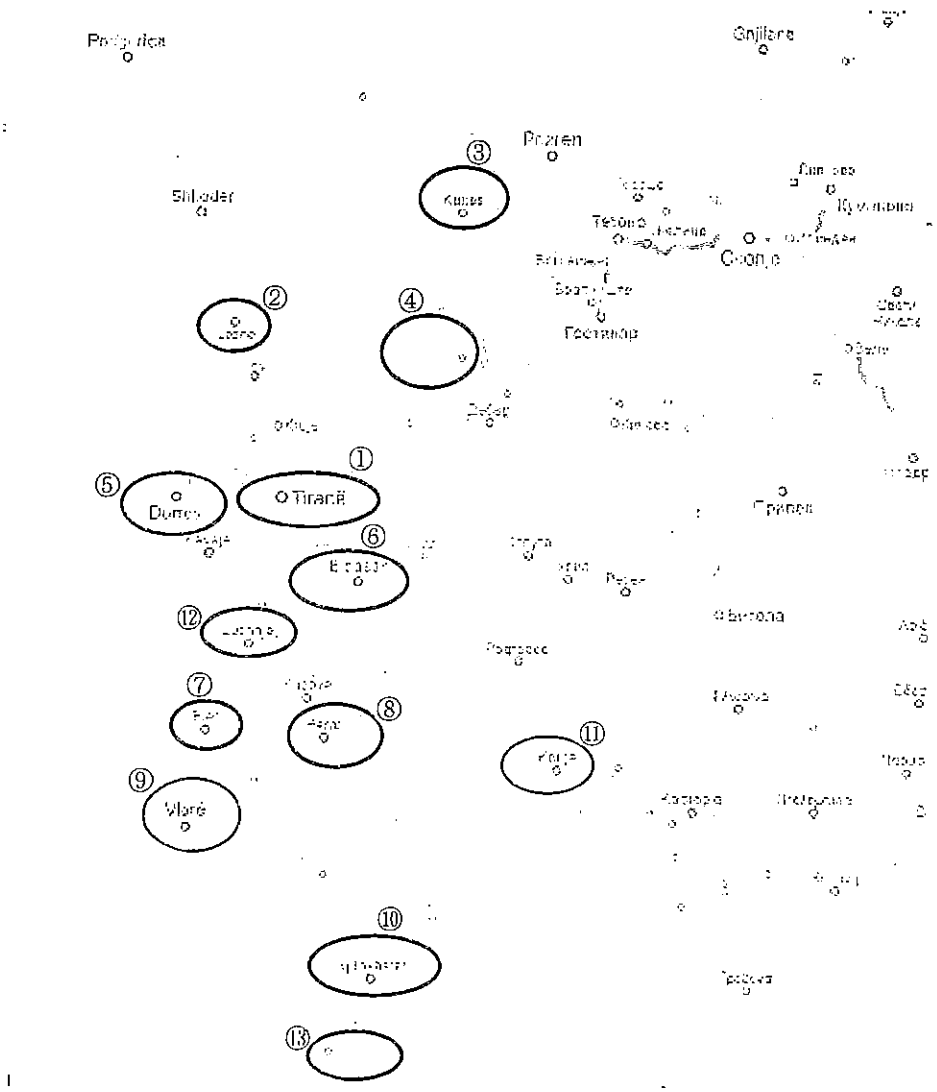
- seminars on "preventive maintenance"
- first training of medical staff for emergency centers with the laryngeal catheterization simulators

7-7. Donor Coordination

The Albanian side confirmed the coordination among donors to avoid the duplication of the equipment.

Annex-1: Project Sites
Annex-2: Requested Equipment
Annex-3: Japan's Grant Aid
Annex-4: Major Undertakings to Be Taken by Each Government
Annex-5: Priority of Requested Equipment

Project Sites



Location	No	Site Name	Priority
①	1	Emergency Unit of Pediatric Hospital of "Mother Theresa"	A
	2	Emergency Dispatch Center in Tirana	A
②	3	Lezha Regional Hospital	A
③	4	Kukes Regional Hospital	A
④	5	Diber Regional Hospital	A
⑤	6	Durres Regional Hospital	A
⑥	7	Elbasan Regional Hospital	A
⑦	8	Fier Regional Hospital	A
⑧	9	Berat Regional Hospital	A
⑨	10	Vlore Regional Hospital	A
⑩	11	Gjirokaster Regional Hospital	A
⑪	12	Korce Regional Hospital	A
⑫	13	Lushnje District Hospital	B
⑬	14	Sarande District Hospital	B

Requested Equipment

No.	Description
E-1	Respiratory Care Bag
E-2	Emergency Diagnos Set (Stethoscpe, Shygmanometr, etc.)
E-3	Resuscitator
E-4	Emergency Treatment Bag (Bandage,Gauze,etc.)
E-5	Suction unit, M size with cart
E-6	Suction unit, manual type
E-7	Patient Monitor for ESC
E-8	Defibrillator
E-9	Endotracheal Set
E-10	Syringe Pump
E-11	Pulse Oxymeter
E-12	Stretcher
E-13	Cloth Stretcher
E-14	Back Boad (spine board)
E-15	Neck Collar
E-16	Scoop Stretcher
E-17	Negative Pressure Fixed Implement
E-18	Examination Light
E-19	Examination Light (Mobile OT lamp)
E-20	Tourniquet
G-1	CT
G-2	X-ray fluoroscopy with general x-ray (dual type)
G-3	X-ray fluoroscopy
G-4	C-arm X-ray
G-5	Mobile X-ray
G-6	Ultrasound scanner with two probes (convex, sector)
G-7	ECG
G-8	Portable Glucometer
G-9	Blood cell counter
G-10	Blood gas analyzer
G-11	Centrifuge
G-12	Hematocrit Centrifuge
G-13	Autoclave
G-14	External Pacemaker
G-15	Spectrophotometer(Semi-automatic analyzer)
G-16	Nebulizer

30

AH

No.	Description
AA-1	Advanced Life support ambulance (Model A)
AA-2	Stretcher in vehicle use
AA-3	Defibrillator
AA-4	Pulse Oxymeter
AA-5	Emergency Diagnos Set In-vehicle use
AA-6	Scoop Stretcher
AA-7	Neck Collar
AA-8	Back Boad (spine board)
AA-9	Respiratory Care Bag
AA-10	Oxygen Bottles with Guedel cannula
AA-11	Suction unit ,portable
AA-12	Tourniquet
AB-1	Basic Life Support Ambulance (Model B)
AB-2	Emergency Diagnos Set In-vehicle use
AB-3	Respiratory Care Bag
AB-4	Oxygen Bottles with Guedel cannula
AB-5	Suction unit ,portable
AB-6	Tourniquet
T-1	Laryngeal catheterization simulator for adult (belong to MOH)
T-2	Laryngeal catheterization simulator for pediatric (belong to MOH)
ET-1	Patient Monitor for OT
ET-2	Suction unit, L size
ET-3	Operating table for pediatric
ET-4	Examination Light (Mobile OT lamp)
ET-5	Anesthesia Aparatus with Ventilator
ET-6	Electrosurgical unit
ICU-1	Automatic Ventilator
ICU-2	Patient Monitor for ICU
ICU-3	Suction unit, L size
ICU-4	Syringe Pump
ICU-5	Defibrillator
ICU-6	Endotracheal Set

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on the law and the decision of the Government of Japan (hereinafter referred to as "the GOJ"), JICA has become the executing agency of the Grant Aid for General Projects.

The Grant Aid is non-reimbursable fund to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is conducted as follows-

- Preparatory Survey (hereinafter referred to as "the Survey")
  - The Survey conducted by JICA
- Appraisal &Approval
  - Appraisal by The GOJ and JICA, and Approval by the Japanese Cabinet
- Determination of Implementation
  - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - Agreement concluded between JICA and a recipient country
- Implementation
  -Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide a basic document necessary for the appraisal of the Project by JICA and the GOJ. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

The Report on the Survey is reviewed by JICA, and after the appropriateness of the Project is confirmed, JICA recommends the GOJ to appraise the implementation of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the E/N will be singed between the GOJ and the Government of the recipient country to make a plead for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

The consultant firm(s) used for the Survey will be recommended by JICA to the recipient country to also work on the Project's implementation after the E/N and the G/A, in order to maintain technical consistency.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-4.

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

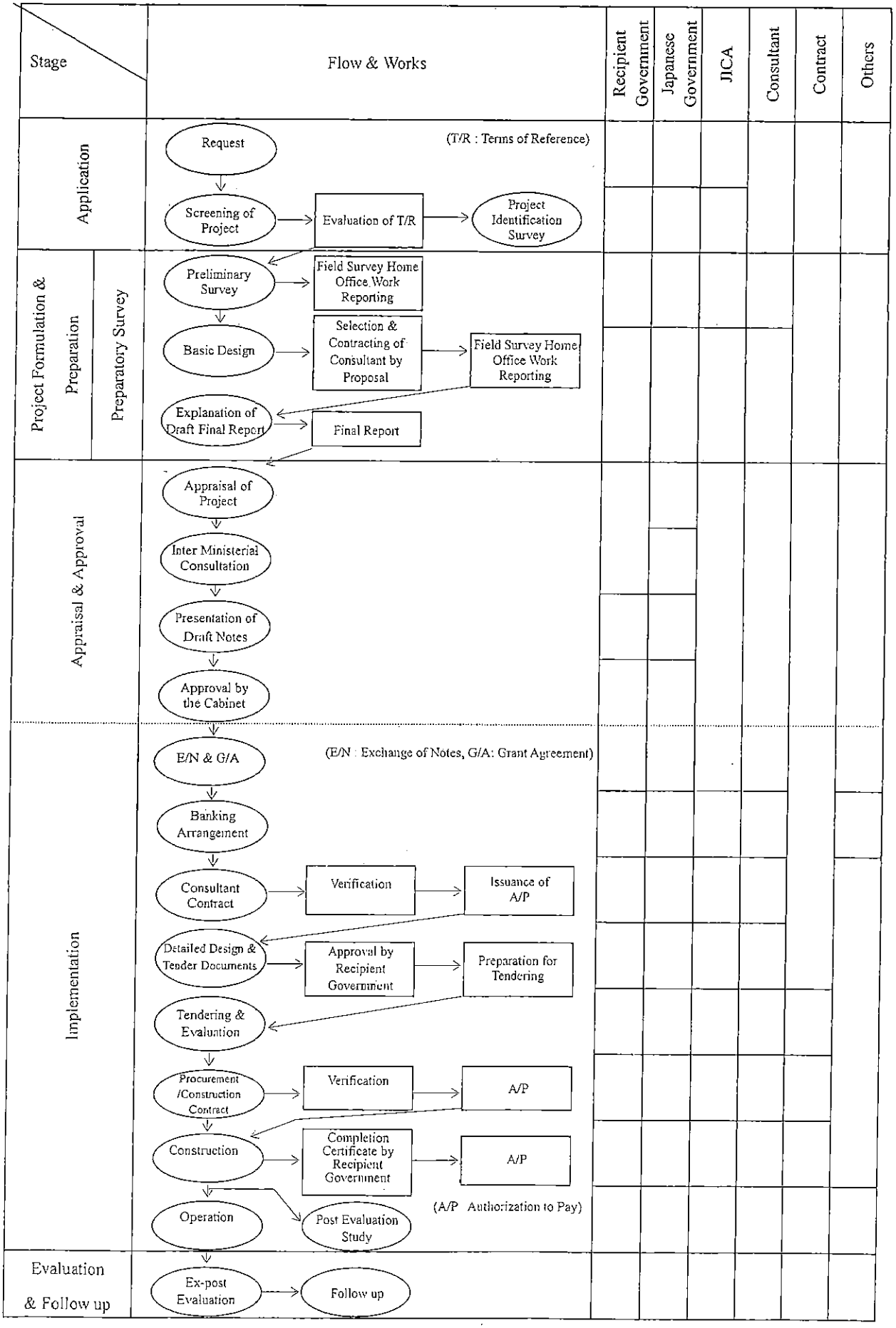
The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

(10) Social and Environmental Considerations

A recipient country must ensure the social and environmental considerations for the Project and must follow the environmental regulation of the recipient country and JICA socio-environmental guidelines.

Attachment

FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



Major Undertakings to be taken by Each Government

NO	Items	To be covered by the Grant	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
5	To maintain and use properly and effectively the equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

Priority of Requested Equipment

No.	Description	Priority by Previous Survey	1 Mother Teresa		2 Dispatch Center		3 Lezha		4 Kukes		5 Diber		6 Durres		7 Elbasan	
			Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty
E-1	Respiratory Care Bag	B	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-2	Emergency Diagnos Set (Stethoscope, Shygmanometr, etc.)	B	A	2	A	2	A	2	A	2	A	2	A	2	A	2
E-3	Resuscitator	A	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-4	Emergency Treatment Bag (Bandage,Gauze,etc.)	C	–	0	–	0	–	0	–	0	–	0	–	0	–	0
E-5	Suction unit, M size with cart	A	A	1	–	0	A	1	A	1	A	1	A	1	A	1
E-6	Suction unit, manual type	A	–	0	–	0	A	1	A	1	A	1	A	1	A	1
E-7	Patient Monitor for ESC	A	B	1	–	0	A	1	A	1	A	1	A	1	A	2
E-8	Defibrillator	A	B	1	A	1	A	1	A	1	A	1	A	1	A	1
E-9	Endotracheal Set	A	A	1	–	0	A	1	A	1	A	1	A	1	A	1
E-10	Syringe Pump	A	A	2	–	0	B	1	–	0	A	2	–	0	–	0
E-11	Pulse Oxymeter	A	A	1	–	0	A	1	A	1	A	1	A	1	A	1
E-12	Stretcher	A	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-13	Cloth Stretcher	B	–	0	A	1	A	1	A	1	A	1	A	2	A	1
E-14	Back Boad (spine board)	C	–	0	B	1	B	1	B	1	B	1	B	1	B	1
E-15	Neck Collar	A	A	2	A	3	A	2	A	2	A	2	A	2	A	2
E-16	Scoop Stretcher	B	–	0	A	1	–	0	A	1	A	1	A	1	A	1
E-17	Negative Pressure Fixed Implement	B	–	0	A	2	A	2	A	2	A	2	A	2	A	2
E-18	Examination Light	A	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-19	Examination Light (Mobile OT lamp)	A	–	0	–	0	A	1	A	1	A	1	–	0	A	1
E-20	Tourniquet	New	A	1	A	1	A	1	A	1	A	1	A	1	A	1
G-1	CT	B	–	0	–	0	–	0	B	1	–	0	–	0	–	0
G-2	X-ray fluoroscopy with general x-ray (dual type)	A	–	0	–	0	–	0	A	1	A	1	–	0	A	1
G-3	X-ray fluoroscopy	A	–	0	–	0	–	0	–	0	–	0	–	0	–	0
G-4	C-arm X-ray	A	–	0	–	0	–	0	–	0	–	0	–	0	A	1
G-5	Mobile X-ray	A	–	0	–	0	A	1	–	0	A	1	–	0	A	1
G-6	Ultrasound scanner with two probes (convex, sector)	A	–	0	–	0	B	1	A	1	A	1	–	0	B	1
G-7	ECG	A	A	1	B	1	A	1	A	1	A	1	A	1	A	1
G-8	Portable Glucometer	A	A	1	–	0	A	1	A	1	A	1	A	1	A	1
G-9	Blood cell counter	A	A	1	–	0	A	1	A	1	B	1	–	0	C	1
G-10	Blood gas analyzer	A	–	0	–	0	–	0	–	0	–	0	C	1	–	0
G-11	Centrifuge	A	A	1	–	0	–	0	A	1	A	1	C	1	A	1
G-12	Hematocrit Centrifuge	A	–	0	–	0	C	1	A	1	A	1	C	1	A	1
G-13	Autoclave	A	A	1	–	0	A	1	A	1	A	1	A	1	A	1
G-14	External Pacemaker	B	–	0	–	0	–	0	–	0	–	0	–	0	–	0
G-15	Spectrophotometer(Semi-automatic analyzer)	A	–	0	–	0	–	0	–	0	–	0	B	1	–	0
G-16	Nebulizer	A	B	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-1	Advanced Life support ambulance (Model A)	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-2	Stretcher in vehicle use	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-3	Defibrillator	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-4	Pulse Oxymeter	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-5	Emergency Diagnos Set In-vehicle use	B	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-6	Scoop Stretcher	B	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-7	Neck Collar	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-8	Back Boad (spine board)	C	–	0	B	1	B	1	B	1	B	1	B	1	B	1
AA-9	Respiratory Care Bag	B	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-10	Oxygen Bottles with Guedel cannula	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-11	Suction unit ,portable	A	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AA-12	Tourniquet	New	–	0	A	1	A	1	A	1	A	1	A	1	A	1
AB-1	Basic Life Support Ambulance (Model B)	A	–	0	–	0	–	0	–	0	–	0	–	0	–	0
AB-2	Emergency Diagnos Set In-vehicle use	B	–	0	–	0	A	3	A	1	A	5	A	3	A	2
AB-3	Respiratory Care Bag	B	–	0	A	6	A	3	A	1	A	5	A	3	A	2
AB-4	Oxygen Bottles with Guedel cannula	A	–	0	A	3	A	3	A	1	A	5	A	3	A	2
AB-5	Suction unit ,portable	A	–	0	A	6	A	3	A	1	A	5	A	3	A	2
AB-6	Tourniquet	New	–	0	A	6	A	3	A	1	A	5	A	3	A	2
T-1	Laryngeal catheterization simulator for adult (belong to MOH)	A	A	3	–	0	–	0	–	0	–	0	–	0	–	0
T-2	Laryngeal catheterization simulator for pediatric (belong to MOH)	A	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-1	Patient Monitor for OT	A	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-2	Suction unit, L size	A	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-3	Operating table for pediatric	New	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-4	Examination Light (Mobile OT lamp)	New	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-5	Anesthesia Apparatus with Ventilator	New	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ET-6	Electrosurgical unit	New	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ICU-1	Automatic Ventilator	A	A	2	–	0	–	0	–	0	–	0	–	0	–	0
ICU-2	Patient Monitor for ICU	A	A	6	–	0	–	0	–	0	–	0	–	0	–	0
ICU-3	Suction unit, L size	A	A	3	–	0	–	0	–	0	–	0	–	0	–	0
ICU-4	Syringe Pump	A	A	2	–	0	–	0	–	0	–	0	–	0	–	0
ICU-5	Defibrillator	A	A	1	–	0	–	0	–	0	–	0	–	0	–	0
ICU-6	Endotracheal Set	A	A	1	–	0	–	0	–	0	–	0	–	0	–	0

No.	Description	8		9		10		11		12		13		14	
		Fier		Berat		Vlore		Gjirokaster		Korce		Lushnje		Sarande	
		Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty	Priority	Q'ty
E-1	Respiratory Care Bag	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-2	Emergency Diagnos Set (Stethoscpe, Shygmanometr, etc.)	A	2	A	2	A	2	A	2	A	2	A	2	A	2
E-3	Resuscitator	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-4	Emergency Treatment Bag (Bandage,Gauze,etc.)	–	0	–	0	–	0	–	0	–	0	–	0	–	0
E-5	Suction unit, M size with cart	A	1	A	1	A	1	–	0	–	0	A	1	A	1
E-6	Suction unit, manual type	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-7	Patient Monitor for ESC	A	1	A	2	A	1	–	0	A	2	A	2	A	1
E-8	Defibrillator	A	1	A	1	A	1	–	0	–	0	A	1	A	1
E-9	Endotracheal Set	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-10	Syringe Pump	–	0	–	0	–	0	–	0	–	0	–	0	–	0
E-11	Pulse Oxymeter	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-12	Stretcher	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-13	Cloth Stretcher	A	2	A	1	A	2	A	2	A	1	A	1	A	1
E-14	Back Boad (spine board)	B	1	B	1	B	1	B	1	B	1	B	1	B	1
E-15	Neck Collar	A	2	A	2	A	2	A	2	A	2	A	2	A	2
E-16	Scoop Stretcher	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-17	Negative Pressure Fixed Implement	A	2	A	2	A	2	A	2	A	2	A	2	A	2
E-18	Examination Light	A	1	A	1	A	1	A	1	A	1	A	1	A	1
E-19	Examination Light (Mobile OT lamp)	B	1	A	1	B	1	A	1	B	1	A	1	A	1
E-20	Tourniquet	A	1	A	1	A	1	A	1	A	1	A	1	A	1
G-1	CT	–	0	–	0	–	0	B	1	–	0	–	0	–	0
G-2	X-ray fluoroscopy with general x-ray (dual type)	–	0	–	0	–	0	–	0	–	0	A	1	–	0
G-3	X-ray fluoroscopy	–	0	–	0	–	0	–	0	–	0	–	0	A	1
G-4	C-arm X-ray	–	0	A	1	–	0	–	0	–	0	–	0	–	0
G-5	Mobile X-ray	A	1	A	1	–	0	B	1	–	0	–	0	–	0
G-6	Ultrasound scanner with two probes (convex, sector)	A	1	A	1	–	0	–	0	–	0	B	1	A	1
G-7	ECG	A	1	A	1	A	1	A	1	A	1	A	2	A	1
G-8	Portable Glucometer	–	0	A	1	A	1	A	1	A	1	A	2	A	1
G-9	Blood cell counter	–	0	A	1	–	0	–	0	–	0	–	0	B	1
G-10	Blood gas analyzer	C	1	B	1	–	0	–	0	–	0	–	0	B	1
G-11	Centrifuge	–	0	A	1	–	0	–	0	C	1	A	1	–	0
G-12	Hematocrit Centrifuge	A	1	A	1	C	1	–	0	A	1	A	1	–	0
G-13	Autoclave	A	1	A	1	B	1	–	0	–	0	A	1	A	1
G-14	External Pacemaker	–	0	–	0	–	0	–	0	–	0	–	0	–	0
G-15	Spectrophotometer(Semi-automatic analyzer)	–	0	–	0	–	0	C	1	–	0	B	1	–	0
G-16	Nebulizer	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-1	Advanced Life support ambulance (Model A)	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-2	Stretcher in vehicle use	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-3	Defibrillator	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-4	Pulse Oxymeter	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-5	Emergency Diagnos Set In-vehicle use	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-6	Scoop Stretcher	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-7	Neck Collar	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-8	Back Boad (spine board)	B	1	B	1	B	1	B	1	B	1	B	1	B	1
AA-9	Respiratory Care Bag	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-10	Oxygen Bottles with Guedel cannula	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-11	Suction unit ,portable	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AA-12	Tourniquet	A	1	A	1	A	1	A	1	A	1	A	1	A	1
AB-1	Basic Life Support Ambulance (Model B)	–	0	–	0	–	0	–	0	–	0	–	0	–	0
AB-2	Emergency Diagnos Set In-vehicle use	A	3	A	2	A	3	A	1	A	4	A	4	A	2
AB-3	Respiratory Care Bag	A	3	A	2	A	3	A	1	A	4	A	4	A	2
AB-4	Oxygen Bottles with Guedel cannula	A	3	A	2	A	3	A	1	A	4	A	4	A	2
AB-5	Suction unit ,portable	A	3	A	2	A	3	A	1	A	4	A	4	A	2
AB-6	Tourniquet	A	3	A	2	A	3	A	1	A	4	A	4	A	2
T-1	Laryngeal catheterization simulator for adult (belong to MOH)	–	0	–	0	–	0	–	0	–	0	–	0	–	0
T-2	Laryngeal catheterization simulator for pediatric (belong to MOH)	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-1	Patient Monitor for OT	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-2	Suction unit, L size	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-3	Operating table for pediatric	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-4	Examination Light (Mobile OT lamp)	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-5	Anesthesia Aparatus with Ventilator	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ET-6	Electrosurgical unit	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-1	Automatic Ventilator	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-2	Patient Monitor for ICU	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-3	Suction unit, L size	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-4	Syringe Pump	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-5	Defibrillator	–	0	–	0	–	0	–	0	–	0	–	0	–	0
ICU-6	Endotracheal Set	–	0	–	0	–	0	–	0	–	0	–	0	–	0

Appendix 4　Minutes of Discussions

(Detailed Design Study)

MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY (BASIC DESIGN)
ON THE PROJECT FOR IMPROVEMENT OF THE MEDICAL EQUIPMENT
OF THE REGIONAL LEVEL EMERGENCY CENTERS
IN THE REPUBLIC OF ALBANIA
(EXPLANATION ON DRAFT REPORT)

From April to May 2009, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Republic of Albania (hereinafter referred to as "the Albania") a Preparatory Survey (Basic Design) Team on the Project for Improvement of the Medical Equipment of the Regional Level Emergency Centers (hereinafter referred to as "the Project"), and through discussions, field survey and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult with the concerned officials of the Government of Albania on the components of the draft report, JICA sent to Albania the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Tomoya Yoshida, Assistant Director, Financing Facilitation and Procurement Supervision Department, JICA , from August 23 to August 30, 2009.

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

Tirana, August 28, 2009

Tomoya Yoshida
Leader
Draft Report Explanation Team
Japan International Cooperation Agency
Japan

Arjan Harxhi
General Director
Health Policies and Planning
Ministry of Health
The Republic of Albania

ATTACHMENT

1. Components of the Draft Report

The Albanian side agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid scheme

The Albanian side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Albania as explained by the Team and described in Annex-3 and Annex-4 of the Minutes of Discussions signed by both parties on May 22, 2009.

3. Cost Estimation

Both sides agreed that the Project Cost Estimation, as attached in Annex-2, should never be duplicated or released to any third parties before the signing of all the Contracts for the Project.

4. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Albanian side around November 2009.

5. Confidentiality of the Project

Both sides confirmed that all information related to the Project including detailed specifications of the equipment and other technical information shall not be released to any outside party before the signing of all the Contract(s) for the Project.

6. Other relevant issues

6-1. Project Equipment

The both sides agreed to the contents of the medical equipment which will be procured in the Project, which are shown in Annex-1.

6-2. Undertakings of the Albanian Side

The Albanian side agreed to secure and allocate the necessary budget for undertakings to be done on a timely manner, based on the provisional amount shown in the draft report and in the Annex-2.

6-3. Preparatory Work for the Installation of the Equipment

The Albanian side reconfirmed that the preparatory work for the installation of the equipment, such as the renovation works of the room to install CT scanners in the Regional Hospitals in Kukes and Gjirokaster and to install X-ray unit in the Regional Hospitals in Elbasan, Diber and Kukes and in the District Hospital in Lushnje and Sarande, and obtaining necessary licenses to operate X-ray unit, would be undertaken by the Albanian side on the timely manner described in the schedule

shown in the Annex-3.

6-4. Operation and Maintenance of the Procured Equipment

The Albanian side agreed to secure and allocate enough budget and personnel to operate and maintain the procured equipment by the Project, including the periodical maintenance work and car insurance for the ambulances after the completion of the Project. The Albanian side also agreed to promote the effective and appropriate use, and maintenance of the procured equipment focusing on planned preventive maintenance.

6-5. Soft Component Program

Both sides agreed to implement a soft component program of Japan's Grant Aid, regarding maintenance and management system for the equipment shown in the draft report. The Albanian side agreed to make necessary arrangement for the soft component program such as securing the space for the seminar, inviting relevant staff from the hospitals and covering the necessary expenses for those participants.

6-6. VAT and Other Taxes

The Albanian side reconfirmed that the VAT and other taxes for the procured equipment shall be covered by the Albanian side.

6-7. Customs

The Albanian side reconfirmed to coordinate with relevant Ministries to clear the custom for the imported equipment in the timely manner to avoid the any delay to the implementation of the Project.

6-8. Rotation System of Drivers of Ambulances

The Albanian side agreed that the each hospital which will receive new ambulances and/or equipment to upgrade the ambulance will improve their rotation system of drivers of ambulances for full utilization of the new and upgraded ambulances.

Annex -1 Equipment List

Annex -2 Project Cost Estimation

Annex -3 Tentative Implementation Schedule

Code No.	Description	1	2	3	4	5	6	7	8	9
		Mother Teresa PH	Dispatch Center	Letha RH	Kukes RH	Diber RH	Durres RH	Elbasan RH	Fier RH	Berat RH
		Procure	Procure	Procure	Procure	Procure	Procure	Procure	Procure	Procure
1	Advanced Life support ambulance	0	1	2	1	3	1	1	1	1
2	Anesthesia Apparatus with Ventilator	1	0	0	0	0	0	0	0	0
3	Autoclave	1	0	0	1	1	1	1	1	1
4	Automatic Ventilator (for infant and pediatric)	2	0	0	0	0	0	0	0	0
5	Back Board (spine board)	0	2	2	2	2	2	2	2	2
6	Blood cell counter	1	0	1	1	0	0	0	0	1
7	Blood gas analyzer	0	0	0	0	0	0	0	0	0
8	C-arm X-ray Unit	0	0	0	0	0	0	1	0	1
9	Centrifuge	1	0	0	1	1	0	1	0	1
10	Cloth Stretcher	0	1	1	1	1	2	1	2	1
11	CT Scanner	0	0	0	1	0	0	0	0	0
12	Defibrilator	2	2	2	2	2	2	2	2	2
13	ECG 3ch	1	1	1	1	1	1	1	1	1
14	Electrosurgical unit	1	0	0	0	0	0	0	0	0
15	Emergency Diagnos Set	2	5	4	4	4	6	5	6	5
16	Endotracheal Set for adult, pediatric and infant	2	0	1	1	1	1	1	1	1
17	Examination Light , spot light	1	1	1	1	1	1	1	1	1
18	Examination Light (Mobile OT lamp with battery)	1	0	1	1	1	0	1	1	1
19	Hematocrit Centrifuge	0	0	0	1	1	0	1	1	1
20	Laryngeal catheterization simulator for continuous education	1	0	0	0	0	0	0	0	0
21	Laryngeal catheterization simulator for CPR and Airway management	2	0	0	0	0	0	0	0	0
22	Laryngeal catheterization simulator (new born baby)	1	0	0	0	0	0	0	0	0
23	Mobile X-ray Unit	0	0	1	0	1	0	1	1	1
24	Nebulizer	1	1	1	1	1	1	1	1	1
25	Neck Collar for adult and pediatric	2	4	3	3	3	3	3	3	3
26	Negative Pressure Fixed Implement	0	2	1	2	2	2	2	2	2
27	Operating table for pediatric	1	0	0	0	0	0	0	0	0
28	Oxygen Bottles with Guedel cannula	0	1	1	1	1	1	1	1	1
29	Oxygen Bottles with Guedel cannula(with installation materials)	0	2	1	1	1	3	2	3	2
30	Patient Monitor	8	0	1	1	1	1	2	1	2
31	Portable Glucometer	0	0	0	0	0	0	0	0	0
32	Pulse Oxymeter	1	1	2	2	2	2	2	2	2
33	Respiratory Care Bag (adult, pediatric and infant)	1	4	3	3	3	5	4	5	4
34	Resuscitator	1	1	1	1	1	1	1	1	1
35	Scoop Stretcher	0	2	1	2	2	2	2	2	2
36	Spectrophotometer(Semi-automatic analyzer)	0	0	0	0	0	1	0	0	0
37	Stretcher	1	1	1	1	1	1	1	1	1
38	Stretcher in vehicle use (Main and sub stretcher)	0	1	1	1	1	1	1	1	1
39	Suction unit ,portable (AC/DC)	0	3	2	2	2	4	3	4	3
40	Suction unit, L size	4	0	0	0	0	0	0	0	0
41	Suction unit, M size with cart	1	0	1	1	1	1	1	1	1
42	Suction unit, manual type(foot pedal type)	0	0	1	1	1	1	1	1	1
43	Syringe Pump	4	0	1	0	2	0	0	0	0
44	Tourniquet	1	4	3	3	3	5	4	5	4
45	Ultrasound scanner B&W (convex, sector)	0	0	1	1	1	0	1	1	1
46	Fluoroscopy X-ray Unit	0	0	0	0	0	0	0	0	0
47	Fluoroscopy and Pediography X-ray Unit (dual type)	0	0	0	1	1	0	1	0	0

Equipment List

Code No.	Description	10 Vlore RH Procure	11 Gjirokaster RH Procure	12 Korce RH Procure	13 Lushnje DH Procure	14 Sarande DH Procure	Total Quantity
1	Advanced Life support ambulance	1	0	2	3	1	18
2	Anesthesia Aparatus with Ventilator	0	0	0	0	0	1
3	Autoclave	1	0	0	1	1	10
4	Automatic Ventilator (for infant and pediatric)	0	0	0	0	0	2
5	Back Board (spine board)	2	2	2	2	2	26
6	Blood cell counter	0	0	0	0	0	4
7	Blood gas analyzer	0	0	0	0	0	0
8	C-arm X-ray Unit	0	0	0	0	0	2
9	Centrifuge	0	0	0	1	0	6
10	Cloth Stretcher	2	2	1	1	1	17
11	CT Scanner	0	1	0	0	0	2
12	Defibrillator	2	1	1	2	2	26
13	ECG 3ch	1	1	1	2	1	15
14	Electrosurgical unit	0	0	0	0	0	1
15	Emergency Diagnos Set	6	6	5	4	5	67
16	Endotracheal Set for adult, pediatric and infant	1	1	1	1	1	14
17	Examination Light , spot light	1	1	1	1	1	14
18	Examination Light (Mobile OT lamp with battery)	1	1	1	1	1	12
19	Hematocrit Centrifuge	0	0	1	1	0	7
20	Laryngeal catheterization simulator for continuous education	0	0	0	0	0	1
21	Laryngeal catheterization simulator for CPR and Airway management	0	0	0	0	0	2
22	Laryngeal catheterization simulator (new born baby)	0	0	0	0	0	1
23	Mobile X-ray Unit	0	1	0	0	0	6
24	Nebulizer	1	1	1	1	1	14
25	Neck Collar for adult and pediatric	3	3	3	3	3	42
26	Negative Pressure Fixed Implement	2	2	2	2	2	25
27	Operating table for pediatric	0	0	0	0	0	1
28	Oxygen Bottles with Guedel cannula	1	1	1	1	1	13
29	Oxygen Bottles with Guedel cannula(with installation materials)	3	3	2	1	2	26
30	Patient Monitor	1	0	2	2	1	23
31	Portable Glucometer	0	0	0	0	0	0
32	Pulse Oxymeter	2	2	2	2	2	26
33	Respiratory Care Bag (adult, pediatric and infant)	5	5	4	3	4	53
34	Resuscitator	1	1	1	1	1	14
35	Scoop Stretcher	2	2	2	2	2	25
36	Spectrophotometer(Semi-automatic analyzer)	0	1	0	1	0	3
37	Stretcher	1	1	1	1	1	14
38	Stretcher in vehicle use (Main and sub stretcher)	1	1	1	1	1	13
39	Suction unit ,portable (AC/DC)	4	4	3	2	3	39
40	Suction unit, L size	0	0	0	0	0	4
41	Suction unit, M size with cart	1	0	0	1	1	11
42	Suction unit, manual type(foot pedal type)	1	1	1	1	1	12
43	Syringe Pump	0	0	0	0	0	7
44	Tourniquet	5	5	4	3	4	53
45	Ultrasound scanner B&W (convex, sector)	0	0	0	1	1	8
46	fluoroscopy X-ray Unit	0	0	0	0	1	1
47	fluoroscopy and Radiography X-ray Unit (dual type)	0	0	0	1	0	4

Tentative Implementation Schedule

Annex-3

The Project for Improvement of Medical Equipment of the Regional Level Emergency Centers in the Republic of Albania

Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Cabinet approval	▲																							
Exchange of Notes		▲																						
Grant Agreement		▲																						
Consultant Agreement			■																					
Detail deign of Tender Procedures				■																				
Tender and Evaluation					■	■																		
Procurement Contract							▲																	
Manufacturering Equipment							■	■	■															
Shipment from Japan and/or the third countries									■	■														
Arrival of cargo at Albania/Import procedures										▲														
Inland Transportation to each sites										■	■													
Installation and Operation Training											■	■												
Handing Over of The Equipment													▲											
Soft Component Phase 1												■												
Soft Component Phase 2																								■
Measures taken by Albanian Side																								
Banking Arrangement		▲																						
Arrangement of Authorization toPay			▲																					
Arrangement of Authorization toPay							▲																	
Renovation Works of X ray Room for 6 Hospitals (7 Rooms)							■	■																
Acquisition of Licence for X-ray Room Protection for 6 Hospitals (7 Rooms)							■	■	■	■														
Preparation for Soft Component Phase 1									■	■	■													
Preparation for Soft Component Phase 2																						■	■	

Appendix 5 Soft Component (Technical Assistance) Plan

1. Background of the Soft Component Plan

1-1 Background of this project and contents of cooperation

The Project for Improvement of the Medical Equipment of the Regional Level Emergency Centers (hereinafter called "this project") is to support the establishment of high quality emergency medical services in Albania by procuring emergency medical equipment under Japan's Grant Aid Scheme to 14 targeted facilities based on the "Strategy of Emergency Medical System Reform", which is a positioned higher plan set forth by the Government of Albania.

Among 14 targeted hospitals under this Grant Aid project, the Mother Teresa Pediatric Hospital, Lezha and Berat Regional Hospitals have assigned biomedical engineers[1] (hereinafter called "BME") and biomedical engineers who belong to the National Biomedical Center[2] (hereinafter called "NBC") located in the capital of Tirana, maintaining medical equipment on a service call basis. However, the activity budget and personnel for NBC are insufficient to maintain equipment for all public medical facilities and their scope to assist is limited when equipment malfunctions. Equipment maintenance by special engineers is insufficient, thereby shortening the lifespan of equipment due to repeated defects stemming from a failure to determine early defect and an overall lack of optimum condition. The equipment thus needs to be replaced ahead of schedule, adversely affecting the hospital operational budget.

Conversely, medical personnel treating equipment in the medical field are medical specialists, and hence lacking in knowledge of machinery, electricity, and electronic engineering. Consequently, they lack basic operational knowledge concerning how to treat medical equipment daily in good condition for an extended period, and how to differentiate normal and abnormal operations.

To prolong the lifespan of equipment, it is important for medical personnel to apply preventive maintenance to equipment daily and directly. This is the concept of "Preventive Maintenance", although medical personnel are not always aware of the need to obtain this concept in reality.

In order to improve the current situation, exploit the sustainable effects of Japan's grant aid project and ensure the smooth launch of this project, this project plans to input soft components to establish a "Preventive Maintenance System", such as the preparation of working guidelines for start and end, daily and periodical checking, which can be used by medical equipment operators to understand how to manage and maintain equipment.

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[1] Medical facilities without BME, outsource repair work to external companies when there is a small defect, due to the distance to BME.

[2] The role of NBC is to maintain equipment based on the usable budget and personnel. However, at so-called repair facilities, NBC also provide maintenance management services additionally.

1-2 Maintenance budget of medical equipment

Currently, the Government of Albania is promoting health financial reform at a hospital level. Under this reform, the budget allocation mechanism will be shifted from an allocation system based on the number of beds and previous hospital activities to one based on self-statements. After shifting to a self-allocation system, the minimum necessary budget such as personnel costs, medicine consumables costs and maintenance fees for both facility and equipment, shall be reported to the Health Insurance Institute (hereinafter called "HII"), and allocated to the facility as a hospital activity budget. In addition, insurance contributions from individuals or companies are expected to increase due to the improved quality of public healthcare services, and the gradual upturn in economic standards. The total hospital budget would be decided by two components; namely the hospital activity budget allocated by HII, and insurance contribution. Thus, there is a significant potential to improve hospital management via an increase in the hospital budget by promoting health financial reform. Furthermore, diagnostic expenses, which are not covered by insurance, could become direct hospital revenue under the health reform currently being promoted, and the hospital can decide to list this additional budget under expenses for "equipment maintenance fees". In conclusion, by allocating an additional budget for equipment maintenance, which is currently insufficient, there is the potential to improve the lifespan of equipment through more careful periodical checking, and shifting the usage of fake consumables to manufacturer's own (genuine) consumables.

1-3 Concept of "Preventive Maintenance"

"Preventive Maintenance" means maintaining equipment in good condition without unnecessary expenses in order to ensure it can be operated for an extended period. The Basic Activities of "Preventive Maintenance" are as follows:

(A part of examples)

- Maintain equipment daily without any defect or damage (Start, end and daily checking)
- Resolve any small malfunctions and defects (methods to find defects, troubleshooting)
- Use properly after understanding the mechanism of the equipment (No unnecessary burden for switch)
- Manage equipment and facilities based on the 5S system (Seiri, Seiton, Seisou, Seiketsu, Shitsuke) (Sort, Set, Shine, Standardize and Sustain)
- Install equipment in a proper place (appropriate humidity, temperature and air conditioning environment)
- Know the equipment condition (previous repair records)
- Establishment of a repair route (obtain a repair budget, ensure proper selection of repair company)

- Establishment of a procurement route such as spare parts (to be managed by a procurement list, with information updated periodically)
- Formulate an equipment management system inside the hospital (equipment management team)
- Assign a person responsible for equipment management (assign tasks such as equipment operation and management)
- Obtain knowledge about how to engage maintenance contracts
- Draw up cost estimates for the maintenance management budget (equipment depreciation expenses, obtain information concerning periods of replacement, and replacement planning)

1-4 Merit to take the idea of ISO 9001 (Quality Management System)

The points mentioned in 1-3 "Preventive Maintenance System" are intended to prolong the lifespan of equipment by implementation of start, end, in-use and periodical checking under defined responsibility in terms of equipment maintenance. The idea of ISO 9001 is useful in establishing and retaining an "Equipment Maintenance Management System" containing the concept of preventive maintenance. This is because ISO 9001 is intended to ensure a certain quality of final products and services, including interim products and arranged products, the arrangement of which is requested by external companies, through continuous improvement activities.

Currently, there are several equipment operators due to the work shift in targeted facilities, leading to uncertainty about by whom and when start and end checking would be done. This uncertainty leads to extended downtime (during which equipment is inoperable) and adversely affects the lifespan of equipment because of the inability to find any defects at an early stage. In proposing a counter plan to deal with the current situation, it will be possible to maintain equipment in the same manner by everybody by documenting work responsibility and work operational steps involved in daily maintenance and repair work during equipments defects, etc. Furthermore, documentation helps to maintain systems and continue techniques if there is any staff turnover.

Considering the above, the current lifespan of medical equipment at targeted facilities is generally around six (6) years. However, input of this soft component is expected to prolong lifespan by up to ten (10) years, which is the original lifespan of the equipment.

The "Establishment of a Preventive Maintenance System" aims to establish and retain a "Preventive Maintenance" operational mechanism, and this support is important to provide stable medical services by using equipment in good condition for an extended period. Furthermore, the technical assistance required to establish a "Preventive Maintenance System" should be provided based on the concept of ISO 9001 (Quality Management System) by documenting each person's role in terms of equipment maintenance. After documentation, everybody can refer to it and

implement the system in the same manner. Therefore, this technical support should be implemented as a soft component.

2. Objectives of Soft Component

The objective of this soft component is to ensure that medical equipment can be used effectively and efficiently by establishing a "Preventive Maintenance System"; based on an understanding of the need for "preventive maintenance" by the operational responsible person (maintenance budget management in charge), equipment operators, and maintenance management in charge.

3. Effects of Soft Component

The following effects are expected as direct effects based on the input of this soft component:

① Equipment operators (doctors and nurses), and maintenance budget in charge, BME and maintenance in charge understand the importance of and implement preventive maintenance.

② Defining the work responsibility of each person in terms of equipment maintenance management

③ Establishing a repair request route during equipment defects

④ Enabling appropriate budgets for the following year to be requested based on maintenance expenses for the previous year.

⑤ Documenting the work procedure concerning equipment maintenance management (start, end, in-use and periodical checking).

4. Measurable indicators (Confirmation method of achievement)

It is proposed that achievement be confirmed by the following indicators:

Effect's No.	Confirmation method of achievement
①	If examination points exceed 80, it is possible to say that person understands the importance of "Preventive Maintenance". Contents of examination should be the same for equipment operators, budget management in charge, BME in order to establish structured maintenance management for whole hospital.
②	Defining work responsibility in terms of equipment maintenance in maintenance management manual. In order to confirm implementation situation, it can be confirmed whether start checking tag affixed with equipment is filled in or not.
③	Establish repair request route on equipment maintenance manual.
④	Confirm whether requested maintenance budget is based on maintenance expenses in previous year.

Effect's No.	Confirmation method of achievement
⑤	Equipment maintenance manual is always improved, and operational.

5. Activities of Soft Component (Input Plan)

5-1 Training target group and training places

The training target group is for operational responsible persons (maintenance budget management in charge), medical personnel and equipment management in charge for 14 hospitals. Training facilities are decided at three medical facilities, located in North-eastern, Central and South-western areas, and the training target group is to gather at the nearest facilities.

① Middle areas : Elbasan Regional Hospital

This facility is located Central Albania, and positioned as the central medical facility of the area. Geographically, personnel working at six (6) targeted facilities, which include two facilities located in Tirana, can access easily. Under this project, an X-ray unit, requiring preventive and periodical maintenance, would be procured. Using such procured equipment including the X-ray unit, it is expected that highly qualified training will be provided. Furthermore, BME is assigned to work at this hospital, and current maintenance problems and issues will be resolvable.

② North-eastern areas : Kukes Regional Hospital

This facility locates north-eastern areas of Albania, and positioned central medical facility in this area. Geographically, personnel working at two (2) targeted facilities can access easily. Under this project, the X-ray unit and the CT scanner, requiring preventive and periodical maintenance would be procured. Using such procured equipment including such diagnostic imaging equipment, it is expected that highly qualified training will be provided.

③ South-western areas : Gjirokaster Regional Hospital

This facility locates south-western areas of Albania, and positioned central medical facility in this area. Geographically, personnel working at three (3) targeted facilities can access easily. Under this project, the X-ray unit and the CT scanner, requiring preventive and periodical maintenance would be procured. Using such procured equipment including such diagnostic imaging equipment, it is expected that highly qualified training will be provided.

Table-2 Training facilities and Trainees

Targeted Facilities		Trainees				Training facilities
		Equipment operators	Budget management in charge	Maintenance section	BME	
1	The Pediatric Hospital "Mother Teresa" of University Center of Tirana	●	●	●	●	Go to Elbasan
2	Emergency Dispatch Center in Tirana	●	●	●		
3	Lezha Regional Hospital	●	●	●	●	Go to Kukes
4	Kukes Regional Hospital	●	●	●		North-eastern areas
5	Diber Regional Hospital	●	●	●		Go to Kukes
6	Durres Regional Hospital	●	●	●		Go to Elbasan
7	Elbasan Regional Hospital	●	●	●		Middle areas
8	Fier Regional Hospital	●	●	●		Go to Elbasan
9	Berat Regional Hospital	●	●	●	●	
10	Vlore Regional Hospital	●	●	●		
11	Gjirokaster Regional Hospital	●	●	●		South-western areas
12	Korce Regional Hospital	●	●	●		Go to Gjirokaster
13	Lushnje District Hospital	●	●	●		
14	Sarande District Hospital	●	●	●		

5-2 Contents of Training

This soft component is divided into two phases in the process of establishing a “Preventive Maintenance System”. The detailed curriculum of each phase is shown in the 5-4 Training Curriculum.

<Contents of Training>

① Facilitate efforts to assign equipment to responsible persons (place tags and write the names of those responsible)

② Preparation of work guidelines (manual including checklist) for start, end and daily checking

③ Preparation of work guidelines (manual including checklist) for periodical checking (for

every three (3), six (6), and 12 months respectively)

④ Preparation of work guideline (manual) when equipment defects occur

⑤ Guidance for how to engage maintenance contract (contents of contract, periodical check and scope of contract etc.)

⑥ Guidance for methods and need to detect equipment trouble through start and daily checking

⑦ Facilitate understanding of 5S of equipment, facilities and buildings (Sort, Set, Shine, Standardize, and Sustain)

⑧ Point guidance for daily and periodical checking and the importance of preventive maintenance

⑨ Method of troubleshooting (how to avoid trouble)

(Several conditions for prolonging the lifespan of equipment)

⑩ Prepare work guidelines (manual) in order to establish a repair request route

5-3 Implementation timing and its period

Table-3 Theme of Training, implementation timing and its period

	Theme	Implementation timing	Period	
First phase	Preparation of "Establishment of Preventive Maintenance System" and Practical training	Two (2) weeks before equipment installation	24 days	Training: 5 days x 3 places=15 days MOH meeting, preparation: 2 days Movement by air : 3 days Inland Movement : 4 days
Second phase	Completion training to establish "Preventive Maintenance System" Follow-up procured equipment	Eleven(11) months after equipment installation	21 days	Training: 4 days x 3 places= 12 days MOH meeting, preparation: 2 days Movement by air : 3 days Inland Movement : 4 days

5-4 Purpose of Training

The purpose of training is to learn about and understand details of the following issues in order to reduce equipment downtime for the provision of stable emergency medical services:

A) How to engage maintenance contracts

B) How to secure the procurement budget for spare parts etc.

C) The need to establish a maintenance management system in terms of finance

D) How to use medical equipment in good condition for an extended period

E) The kinds of daily maintenance required

F) The kinds of maintenance management system that contribute to reducing downtime[3] of equipment stemming from shortages of parts and consumables and equipment defects (for medical personnel and engineers)

5-5 Training Curriculum

The following tables are curriculums of training programs for both first and second phases, especially the contents of training participants.

<First phase> (Preparation of the "Establishment of a Preventive Maintenance System", practice guidance)

・Participatory technical transfer concerning the basic knowledge of "Preventive maintenance" and maintenance management system

・Preparation of work guidelines in order to establish a maintenance management system through practice guidance

[3] Downtime is the period of time for which equipment is inoperable due to defects and repairs.

Table-4 Soft Component Curriculums of First Phase (plan)

Day	Curriculums of first phase	Equipment operators	Emergency Medical Doctor	Radiologist	Nurses	Maintenance in charge
First (1)	・Lectures about importance of preventive maintenance	●	●	●	●	●
	・Lectures about the necessity to strengthen equipment maintenance management implementation system	●	●	●	●	●
	・Participatory seminor (What kinds of bad effects might cause if equipment maintenance management does not strengthen)、Training used by brain-storming method、improve participant's awareness about necessity of equipment management	●	●		●	●
Second (2)	Summary lecture of Preventive Maintenance ・Points of preventive maintenance、when、by whom、to which parts、how to implement preventive maintenance? If no maintenance, what would be happened? ・Start checking、points of daily maintenance、when、by whom、to which parts、how to implement、why daily mainteannce is so important、if no daily maintenance, what would be happened、Work procedure of Start checking and daily maintenance	●	●		●	●
	(Medical equipment maintenance system) ・How to maintain medical equipment (classification、recording、management check-point etc.) ＊procured year、repair history、maintenance situation、timing to replace、replacement priority、budget planning、approval route、necessity to know equipment history and how to keep recording	●	●		●	
	(Medical equipment maintenance system) ・Defining work responsibility in terms of maintenance ＊assign equipment maintenance in charge among equipment operator、preventive maintenance、reparing、reduce down-time	●	●		●	
Third (3)	(Medical equipment maintenance system) ・Scope of work of "Preventive maintenance"&"Daily maintenance" ＊eg.: equipment manager is not only equipment operator, but also procurement in charge of comsumables. If fake consumables are used, it would cause damage for equipment's life-span.	●	●			
	・Question and answer about equipment maintenance system training ＊for supplementaly lectures, if trainees do not understand well.		●			
	・Questionnaire about equipment maintenance management system	●	●	●	●	
Fourth (4)	・"Preventive maintenance and 5S		●		●	
	(Work guideline about preventive maintenance) Workshop for start,. End-up checking		●		●	
	(Work guidelibe about preventive maintenance) Workshop for Daily maintenance、periodical maintenance		●		●	
Fifth (5)	(Work guideline about preventive maintenance) Workshop for start,. End-up checking		●		●	
	(Work guidelibe about preventive maintenance) Workshop for Daily maintenance、periodical maintenance		●		●	
	・Questionnaire about establishment of preventive maintenance system and result of training	●	●		●	

<Second phase> (Complete guidance concerning the "Establishment of a Preventive Maintenance System", and following procured equipment up)

- Improved (revision) points of work guidelines (manual) through discussion with workshop participants, discussion about revision points, complete work guidelines (manual), which reflects the reality of the current maintenance management system in Albania
- Troubleshooting just before finalization of the warranty period, following up guidance

Table-5 Soft Component Curriculums of Second Phase (plan)

Day	Curriculums of second phase	Equipment operators	Emergency Medical Doctor	Radiologist	Nurses	Maintenance in charge
First (1)	・Reviewing bout the necessity of preventive maintenance and strengthning of equipment maintenance management, and Q&A		●	●		●
	・Participatory seminor（How to strengthen equipment management implementation system, remarks on use of newly procured equipment）、 Training by brain-storming method、improve awareness among participants in terms of maintenance management		●	●		●
Second (2)	Finalization of work guideline regarding Start-up, end-up checking、daily checking、periodical checking by opening workshop		●		●	
	Reviwing work guideline, revision		●		●	
	（Review of training） ・Reviwing training contents of first phase, and solve question and actual maintenance problem by Q&A method. This training is done after 11months of procurement in order to find out defects within warranty period. Questionnaire about contents of traiing ＊If trainees do not understand well, supplementary lectures would be planned.		●		●	
Third (3)	Finalization of work guideline regarding start, end-up, in-use, daily and pediodical checking		●		●	
	Workshop for finalization of fixation of repair request route	●				●
	（the necessity of equipment maintenance management system ） ・Lectures about scope of maintenance contract, calculation of maintenance management fees	●				
	（Training for procured equipment maintenance & management） ・By using procured eqquipment, training of equipment maintenance & management would implement. Solving problems such as how to treat equipment. This training would be done 11 months after equipment installation. (during warranty period, all problems found would be solved) Questionnaire to trainees about contents of training courses ＊In order to know the degree of understanding of trainees, supplementary lectures would be planned if necessary. ＊One of the activity of preventive maintenance, it is planned to follow procured equipment maintenance situation up, and trouble shooting.		●		●	
Fourth (4)	（Summary lecture ） ・Reviwing "Preventive maintenance" "Strengthning of equipment maintenance management system" etc., and Q&A. Does procedure of preventive maintenance is documented, and established? Does everybody can refer that documentation ? Does technical transfer become easier after documentation ? If there is any problem, confirming and solving by holding workshop.		●			●
	（Summary lecture ） ・Final workshop regarding establishment of "Preventive Maintenance System" ・How to reflect gains from this soft component at medical fields? If there any factors not to implement established system? If there is, how to avoide it? Questionnaire about summary lectures ・Re-confirmation and final distribution about work guideline regarding start, end-up, in-use, daily checking.	●	●	●	●	●

6. Method to procure implementation resources of Soft Component

<Arrangement by Japanese side>

This soft component is implemented by one Japanese engineer on a two–time basis, namely in the first and second phases, and adopting the direct support model. Training at each site takes around four (4) to five (5) days because most of the participants are busy with daily medical activities. Due to the difficulties in communicating in English in Albanian rural areas, one Albanian local consultant is assigned as a work assistant and accompanies the Japanese engineer.

- Engineer : In charge for equipment management system and maintenance (for general and sophisticated equipment) system

Duration of dispatch: first phase, second phase: One person (Qualified person, which has passed medical equipment engineering examination, and engineer of management engineering)

- Engineer : Local consultant (Work assistant)

  Duration of dispatch: first phase, second phase: One person (work coordinator)

7. Soft component implementation plan

As per attached "Annex 1".

8. Final Products of Soft Component

1) Completion report in English
2) Training materials both in English and Albanian
3) Questionnaire of training evaluation in English
4) Result of capability examination
5) Equipment Maintenance Manual (defining work responsibility, and repair route) in Albanian

9. Responsibility of recipient organization

The Albanian Ministry of Health realized the necessary arrangement borne by the Albanian side for soft components following explanation at a detailed design survey around the end of August, 2009, and also understood the importance of strengthening the medical equipment management system.

<Arrangement by Albanian side>

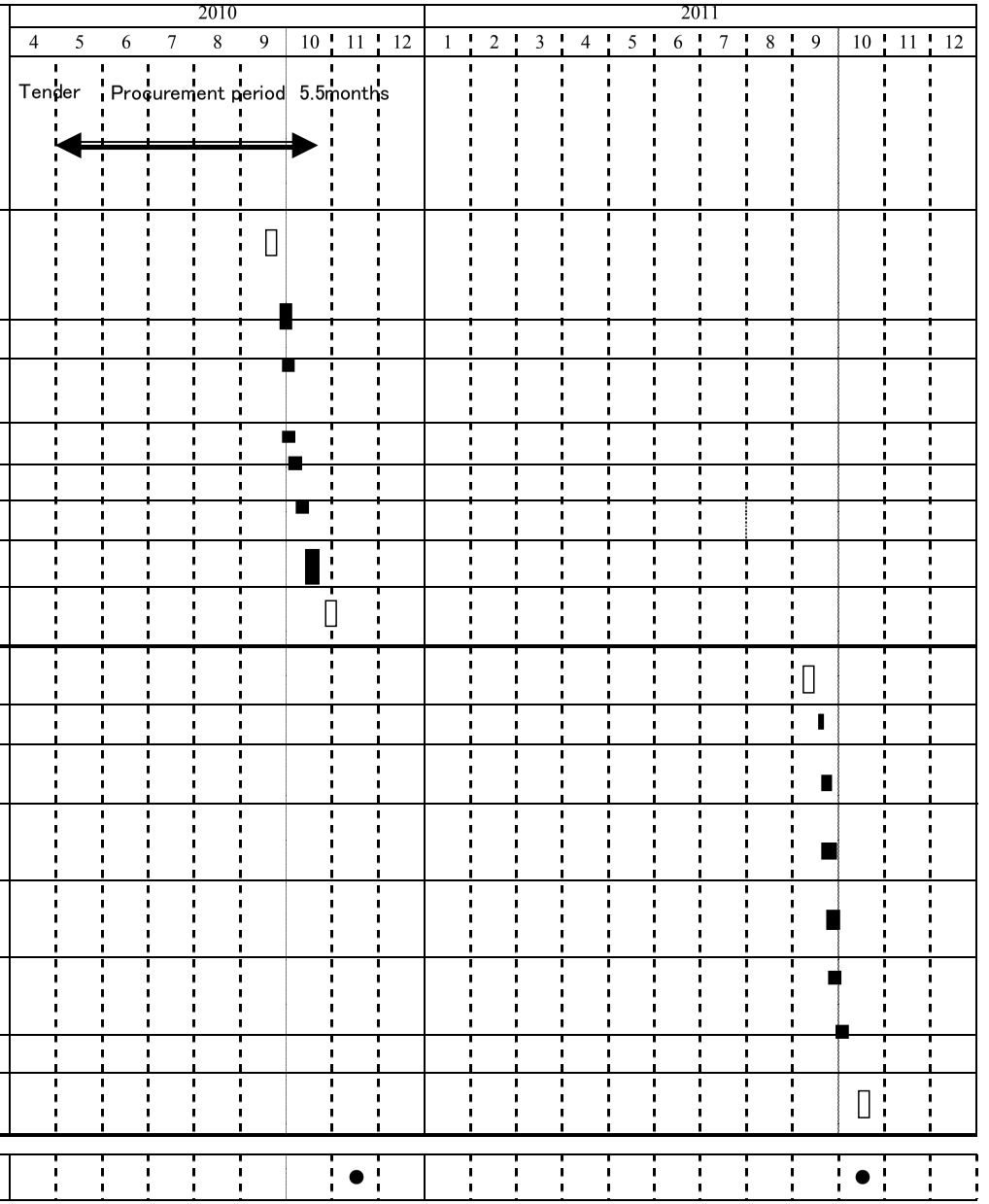
- Adjustment of work-shift and dispatch participants (trainees)
- Arrangement of training facilities
- Arrangement of transportation fees, and accommodation

Furthermore, the Albanian side would like to dispatch radiologists, who operate imaging diagnostic equipment daily, in addition to doctors and nurses. This is because the Albanian side is very much cooperative for efforts to establish an "Equipment Management System (including Preventive Maintenance)" by using newly procured equipment under Japan's grant aid project. However, it is necessary to adjust the work shifts of medical personnel because they are on duty for the diagnosis and treatment of emergency patients. In addition, it is vital to select appropriate persons who are capable of transferring training contents to other medical personnel unable to participate, in the form of TOT (Trainers of Trainees) at their working medical facilities.

Annex 1

Implementation schedule of Soft Component

	Activity	Contents of Activity	Duration of Activity	Japanese consultant	Local consultant
First phase (Training of Preventive Maintenance)	Domestic preparation Preoaration of training materials	Set up implementation planning document Preparation of training materials for preventive maintenance Preparation of questionnaire regarding training evaluation result	Discussion 1day document preparation、revision 3days	●	
	Moving by air	Going toward :Natira→Tirana	1day	●	
	Ministry of Health	Discussion about contents of training Arrangement of seminor, discussion and reporting	Discussion 1day Confirmation of arrangement 1day	●	
	Workshop at Kukes Regional Hospital	Training of preventive maintenance	5day ＋Movement 2days	●	●
	Workshop at Elbasan Regional Hospital	Training of preventive maintenance	5days＋Movement 1 day	●	●
	Workshop at Gjirokaster Regional Hospital	Training of preventive maintenance	5days＋Movement 1 day	●	●
	Moving by air	Going back :Tirana→Narita	2days	●	
	Domestic work for report writing	Preparation of training result reprot etc.	Discussion 1day Documentation、revision 4days	●	
Second Phase (Activity Review,Supplementary Training)	Domestic preparwation Training material, review and revision	Activity review Supplementary training materials etc.	Discussion 1day document preparation、revision 3days	●	
	Moving by air	Going toward :Natira→Tirana	1day	●	
	Arrangement of Seminor by MOH, discussion and reporting	Contents of training & Discussion Seminor arrangement, discussion and reporting	Discussion 1day Documentation、revision 1day	●	
	Workshop at Kukes Regional Hospital	Training of preventive maintenance supplementary training Training of equipment maintenance management & Supplementary training	4days＋Movement 2days	●	●
	Workshop at Elbasan Regional Hospital	Training of preventive maintenance supplementary training Training of equipment maintenance management & Supplementary training	4days＋Movement 2days	●	●
	Workshop at Gjirokaster Regional Hospital	Training of preventive maintenance supplementary training Training of equipment maintenance management & Supplementary training	4days＋Movement 2days	●	●
	Moving by air	Going back :Tirana→Narita	2days	●	
	Domestic Work	Submission of training materials revised Preparation of completion report	Discussion 1day Documentation、revision 4days	●	
	Progress situation、Activity reporting				



Appendix 6. References

No.	Reference	Style	Original /Copy	Issue	Year
1. National Development Strategy and Plan of the Republic of Albania					
1-1	National Policy for Management of Medical Devices in Albania	Document	Original	Swedish Health Care	2007
1-2	National Strategy for Development and Integration 2007-2013	Document	Copy	The Government of Albania	2008
1-3	Millennium Development Goals Report 2005	Document	Copy	UNDP, UN Country Team	2007
1-4	Poverty Reduction Strategy Paper	Document	Copy	IMF	2008
1-5	Poverty Reduction Strategy Paper- Joint staff advisory report	Document	Copy	IMF	2008
1-6	Donor Projects 2008	Document	Copy	The Government of Albania Donor coordination unit	2008
2. Health Situation in the Republic of Albania					
2-1	The long-term strategy for the development of the Albanian Health System 2004	Document	Copy	Ministry of Health, Republic of Albania	2004
2-2	WHO country cooperation strategy	Document	Copy	WHO	2007
2-3	Albania in Figures 2007	Document	Copy	The Government of Albania Institute of Statistics(INSTAT)	2007
2-4	Albania- Health Sector Note	Document	Copy	The World Bank	2006
2-5	Health Care Systems in Transitions 2002-Albania	Document	Copy	WHO	2002
3. Aid Policy and Plan					
3-1	Country Data Book(Albania)	Document	Copy	Ministry of Foreign Affairs The Government of Japan	—
3-2	Summary of Country Project (Albania)	Document	Copy	Ministry of Foreign Affairs The Government of Japan	—
3-3	Basic Design Report for the project for improvement of medical equipment for the Pediatric Hospital “Mother Teresa” of University Center of Tirana	Document	Copy	JICA/System Science Consultants Inc.	2000
3-4	Basic Design Report for the project for improvement of medical equipment on south regional and district hospital of Albania	Document	Copy	JICA/ICONS International Corporation	2004