

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
IMPROVEMENT OF MEDICAL EQUIPMENT
OF
RESPIRATORY FACILITY
IN
SKOPJE
IN
THE FORMER YUGOSLAV
REPUBLIC OF MACEDONIA**

MARCH 2003

**JAPAN INTERNATIONAL COOPERATION AGENCY
CRC OVERSEAS COOPERATION Inc.**

| |
|-----------------|
| G R 2 |
| CR (1) |
| 03 - 042 |

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
IMPROVEMENT OF MEDICAL EQUIPMENT
OF
RESPIRATORY FACILITY
IN
SKOPJE
IN
THE FORMER YUGOSLAV
REPUBLIC OF MACEDONIA**

MARCH 2003

**JAPAN INTERNATIONAL COOPERATION AGENCY
CRC OVERSEAS COOPERATION Inc.**

PREFACE

In response to a request from the Government of the Former Yugoslav Republic of Macedonia, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Macedonia a study team from December 4 to 25, 2002.

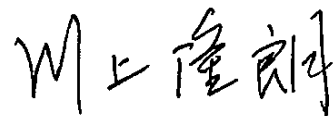
The team held discussions with the officials concerned of the Government of Macedonia, and conducted a field study at the study area.

After the team returned to Japan, further studies were made. Then, a mission was sent to Macedonia from January 27 to February 5, 2003 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 Macedonia for their close cooperation extended to the teams.

March, 2003



Takao Kawakami
President
Japan International Cooperation
Agency

March, 2003

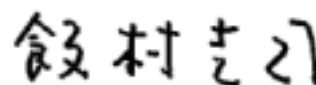
Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje in the Former Yugoslav Republic of Macedonia.

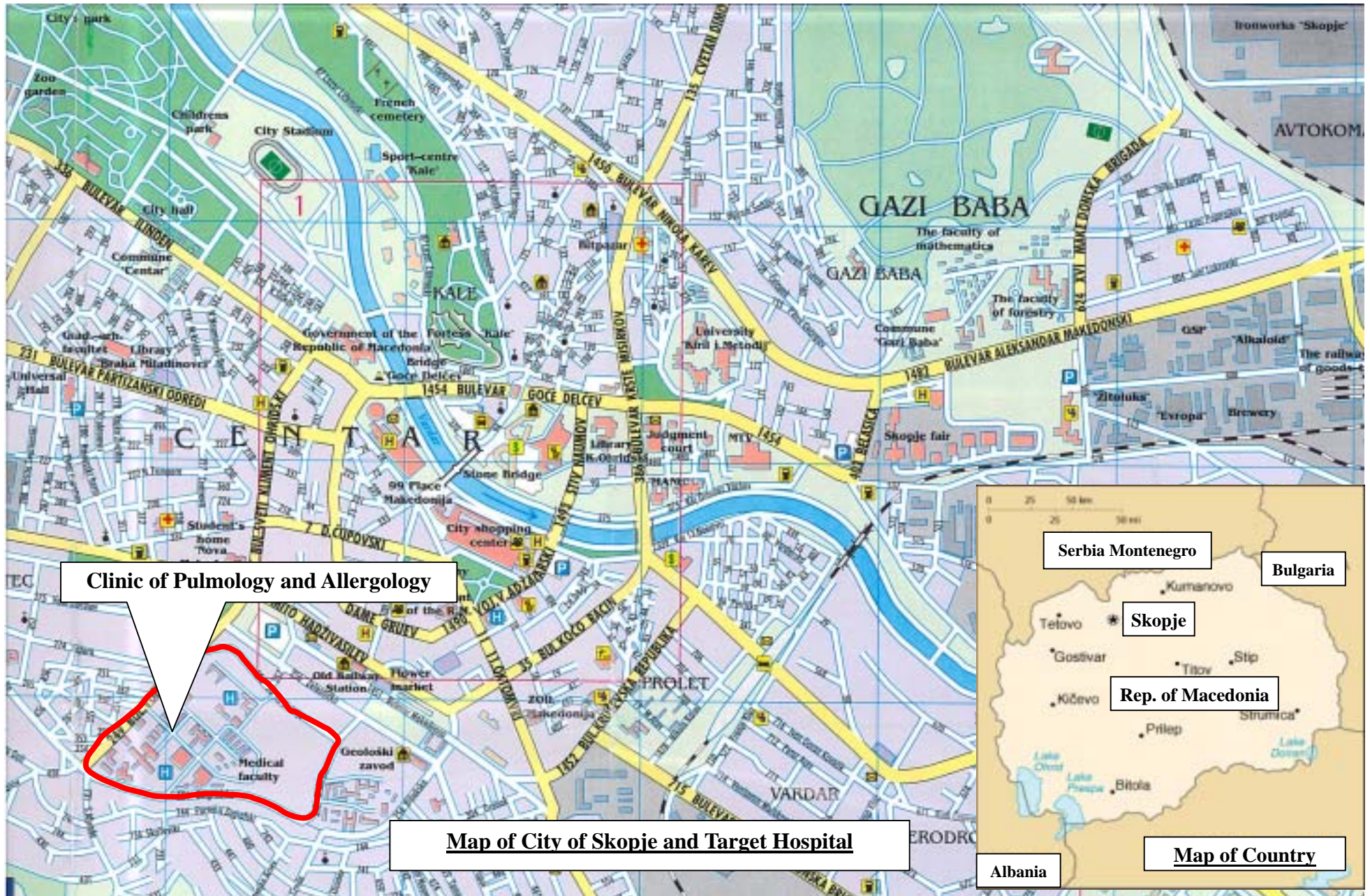
This study was conducted by CRC Overseas Cooperation Inc., under a contract to JICA, during the period from November 29, 2002 to March 31, 2003. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Macedonia and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

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

Very truly yours,



Keiji IIMURA
Project manager,
Basic design study team on
the Project for Improvement of
Medical Equipment of
Respiratory Facility in Skopje
CRC Overseas Cooperation Inc.



Clinic of Pulmology and Allergology

Map of City of Skopje and Target Hospital

Map of Country

Abbreviations

| | |
|--------|--|
| E/N | Exchange of Notes |
| EU | European Union |
| EURO | EURO (currency unit) |
| GDP | Gross Domestic Product |
| IC/R | Inception Report |
| ICU | Intensive Care Unit |
| IMF | International Monetary Fund |
| JICA | Japan International Cooperation Agency |
| M/D | Minutes of Discussion |
| MKD | Macedonian Denar (currency unit) |
| MOH | Ministry of Health |
| UNICEF | United Nations Children's Fund |
| US\$ | U.S. Dollar |
| WHO | World Health Organization |

Contents

CONTENTS

| | |
|---|------|
| Preface | |
| Letter of Transmittal | |
| Location Map / Perspective | |
| Abbreviations | |
| Summary | |
| Chapter 1 Background of the Project | 1-1 |
| Chapter 2 Contents of the Project | |
| 2-1 Basic Concept of the Project..... | 2-1 |
| 2-2 Basic Design of the Requested Japanese Assistance | 2-1 |
| 2-2-1 Design Policy | 2-1 |
| 2-2-2 Basic Plan..... | 2-3 |
| 2-2-3 Basic Design Drawing..... | 2-7 |
| 2-2-4 Implementation Plan | 2-10 |
| 2-2-4-1 Implementation Policy | 2-10 |
| 2-2-4-2 Implementation Conditions | 2-11 |
| 2-2-4-3 Scope of Works | 2-12 |
| 2-2-4-4 Consultant Supervision | 2-12 |
| 2-2-4-5 Procurement Plan | 2-13 |
| 2-2-4-6 Implementation Schedule | 2-14 |
| 2-3 Obligations of the Recipient Country | 2-15 |
| 2-4 Project Operation Plan | 2-16 |
| Chapter 3 Project Evaluation and Recommendations | |
| 3-1 Project Effect..... | 3-1 |
| 3-2 Recommendations | 3-2 |
| (Appendices) | |
| 1. Member List of the Study Team | |
| 2. Study Schedule | |
| 3. List of Party Concerned in the Recipient Country | |
| 4. Minutes of Discussions | |
| 5. Cost Estimation Borne by the Recipient Country | |
| 6. References | |

Summary

Summary

Macedonia is an inland country with a land area of some 26,000 km² (1.4 times that of Shikoku, Japan) and a population of approximately 2 million, composed of 67% Macedonians, 23% Albanians, 4% Turks, and others. It is situated on the Balkan Peninsular, surrounded by mountain ranges and bordered by Albania, Bulgaria, Greece and Serbia Montenegro (the name was formally changed from new Yugoslavia in February, 2003).

Macedonia became independent from former Yugoslavia in September 1991. However, the Macedonian economy had considerably weakened due to the complex political situation in the Balkan countries and the blockade of important commercial routes between north and south arising from a dispute with Greece concerning Macedonia's official country name. Under such economic circumstances, at the end of 1994 the Macedonian government implemented a new economic stabilization program backed up by the IMF and the World Bank, however rapid economic changes had made many domestic enterprises go bankrupt, increased the unemployment rate by 30%, and worsened the fiscal balance. The Macedonian government received cooperation from international organizations in order to overcome these domestic problems, and was able to stabilize the macro economy, fiscal balance, and inflation by the end of 2000. Meanwhile, the government had made sound progress in restoring political relations with Greece and in its diplomatic relations with new Yugoslavia. These advances were interrupted by the Kosovo crisis in February 2001 and the ensuing conflicts between different ethnic groups in Macedonia. These conflicts greatly harmed the economy, causing a more than 4% decrease in GDP and rapidly worsening fiscal and trade balances. Macedonia's economy has not yet recovered to pre-Kosovo crisis levels.

The Macedonian government has been working on medical health policies to equalize regional differences and unite the different ethnic groups within the country. The Ministry of Health has been putting transitional plans based on a market economy in the medical health sector into practice since 1997, in cooperation with the World Bank, WHO, etc. These plans include i) improvement of fiscal balance and management in the medical health sector, ii) provision of a basic medical health service, iii) maintenance of a medical goods supply system, etc. However, the deterioration in financial situation

makes these difficult to realize.

The Ministry of Health is considering implementation of a new policy: “Strategy for Improvement of Health Protection of the Population in the Republic of Macedonia” (formed by the Macedonian Academy of Science and Arts).

This strategy aims by 2010 to decrease the mortality rate by 30% through provision of adequate diagnosis and treatment services in the early stage of illness. The strategy focuses on the early stages of medical treatment, which would lead to decreases in the mortality rate, morbidity rate, the number of disabled, and an improvement of average life expectancy, etc. Moreover, it plans to reform the present medical health system, maintain primary health care services focusing on prevention and treatment in the early stages, and establish the central role of the referral system to secondary and tertiary level medical services. Cardiac disease is the largest cause of death in Macedonia, accounting for 56% of the mortality rate. This is followed by malignant tumor, 18% of the total. Respiratory disease is the fourth largest cause of death at 4% (statistical 2000).

Meanwhile, respiratory disease accounts for 42% of the total morbidity rate in Macedonia, much higher than the next in line, cardiac disease, at 7%. The Ministry of Health understands that the creation of a policy to fight respiratory disease should be given a high priority, with the Clinic of Pulmology and Allergology (hereafter referred to as the Clinic) at its care.

The Macedonian medical health service is based on a referral system (a system whereby patients who are, difficult to treat in the lower tier of medical facilities are introduced and sent to the tier above, which has more sophisticated capabilities, and so on). The referral system is divided into three levels, the primary level (the lowest level of medical facility where patients are first received and give early diagnosis and treatment - there are 1,500 such facilities in the nation), the secondary level (the second tier of medical facilities giving more sophisticated treatment to patients referred from the primary level - 17 secondary level facilities exist with inpatient services), and the tertiary level (the highest level of medical facility with the most sophisticated diagnostic and treatment capabilities for patients referred from primary and secondary levels). The referral system forms a pyramid with the Clinical Center located at the top.

The Clinic offers the most advanced medical services in the respiratory field under the Clinical Center. The majority of patients who visit the outpatient department at the Clinic are referred from primary and secondary facilities. The number of patients who

visit the Clinic without referral are very limited. In the year 2001, the total number of patients referred from lower level facilities to the Clinic was 8,854 (98.8% of the total 8,957 patients), and this number indicates that the Macedonian referral system is functioning noticeably well. However, most of the equipment at the Clinic is now superannuated and unable to operate as it should, even though the medical doctors at the Clinic have a high level of skills. The lack of medical equipment makes it difficult for them to provide even basic diagnosis and treatment as a tertiary level facility.

Under the current circumstances, the government of Macedonia has requested Japan to implement the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje to provide equipment for basic diagnosis and treatment. In response to a request from the government of Macedonia, Japan International Cooperation Agency (hereafter referred to as JICA) sent a Study Team (hereafter referred to as the Team) to Macedonia from December 4 to 25, 2002. After the Team returned, further study, based on the result of consultations with the Macedonian side, was made. A further a mission was sent to Macedonia from January 27 to February 5, 2003 in order to discuss a draft basic design.

The initial request from the Macedonian side regarding this Project was to procure 14 items of basic medical equipment for the Clinic. During the site survey, 7 more items were requested, bringing the total to 21.

In the process of the site survey, each requested item of equipment was reviewed based on a positive/negative point system of basic and additional criteria for Grant Aid. As a result, the equipment that 1) has limited benefit, 2) is not for treatment/diagnostic use, but for academic research purposes, 3) is not cost-effective, 4) the other clinics in the Clinical Center possess and that can be used by the Clinic were considered for deletion. Finally, a total of 16 items were selected including ICU related equipment, ME (Medical Electronics), Lab, Endoscopy, Ultrasound, and X-ray related equipment, etc.

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

(1) Direct Effects

Improvement of health care service in respiratory disease through enhancement of diagnostic and treatment capabilities at the Clinic

The procurement of basic medical equipment (mainly diagnostic equipment) at the Clinic will enhance its diagnostic capabilities, which have been in decline due to the

deterioration of the existing superannuated equipment, and also enable diagnosis and treatment more adequately and efficiently by doctors, nurses and other medical workers at the Clinic.

The renewal of medical equipment will enhance the level of diagnosis and treatment, and these improved capabilities will increase the number of patients that can be treated and rise the bed occupancy rate. As a result, those who suffer from respiratory diseases throughout Macedonia approximately 0.3 million people will benefit from the Project greatly. In addition, enhanced operating efficiencies will contribute to better management at the Clinic.

(2) Indirect Effects

Reduction of burden on patients

The superannuation of equipment at the Clinic causes inefficient diagnosis and treatment, and, as a result, creates a situation, where patients are forced to repeat tests multiple times, and endure frequent hospital visits. This burden makes it difficult for patients to continue their treatment, both physically and financially. The improvement of medical service at the Clinic lightens the burden on patients by decreasing the frequency of hospital visits and tests, and reducing the treatment period for both inpatients and outpatients.

As a result of the Study, the Project can be expected to bring great benefits, and it is believed that the Project will contribute to the enhancement of well-being for the people in Macedonia. In addition, there is no problem with regard to use and maintenance of the equipment, which will be operated by the doctors, nurses, and other medical workers at the Clinic with a high level of skills. Therefore, implementation of the Project, intended as a Project for Japanese Grant Aid, is deemed valid and beneficial.

We make 3 recommendations below in order to facilitate procuring equipment more effectively and efficiently.

(1) Adoption of principle of depreciation

In order to ensure the sustainable development of the Clinic, adoption of the

principle of depreciation is essential to establish a system under which equipment can be regularly renewed. Under the Project, the funds required for initial investment (equipment procurement cost) by the Clinic will be provided by Japanese grant aid. Were the Clinic to make the best of this opportunity by adopting the practice of equipment depreciation and regular saving in accordance with a relevant plan, the required funds for reinvestment would be available in 5 to 8 years time when this newly acquired medical equipment is in need of renewal. The establishment of this cycle, from procurement of new equipment to equipment renewal, would certainly contribute to the sustainable development of the subject of the Project.

For the purpose of making the increased income resulting from the newly installed equipment directly contribute to the accumulation of reinvestment funds, the Ministry of Health should provide guidance on the establishment of a system which will enable the Clinic to reinvest in new equipment without relying on external funding by means of including “a depreciation fund” in the Health Insurance Fund to forcibly make the Clinic save part of its income to cover the depreciation cost.

(2) Management stability of Health Insurance Fund

As the income of the Clinic is mainly in the form of transfer from the Health Insurance Fund, it is essential for the stable management of the Clinic that these transfers take place reliably.

A crucial requirement to stabilize the management of medical facilities at present is the establishment of sound financial conditions of the Health Insurance Fund. The Ministry of Health recently revised the Health Insurance Fund Law in order to improve the management of the Fund. This revision intends, among other things, (i) to stabilize income by reviewing insurance premiums and medical diagnosis and treatment fees and (ii) to reduce the expenses of medical activities to a reasonable level. It is important that these targets be met through the thorough implementation of the relevant measures envisaged by the revised Health Insurance Fund Law. The Ministry of Health has just initiated a new medical health policy, and it is important for the improvement of the medical health sector in Macedonia as a whole to put into effect and stabilize the new policy.

(3) Improvement of diagnostic and treatment systems

With the installation of new equipment, diagnostic capability at the Clinic will be greatly improved and diverse diagnostic and treatment needs are expected to arise. Although there are a sufficient personnel with a high level of technical skill, in order to provide a more effective and efficient treatment system, reallocation of human resources is crucial. In addition, improvement of technical skills, by training those who are engaged in medical practices is required.

Chapter 1

Background of the Project

Chapter 1 Background of the Project

The mortality rate in Macedonia in the year 2000 statistical data indicates that cardiac disease is the largest cause of death in Macedonia, accounting for 56% and this is followed by malignant tumor, 18% of the total. Respiratory disease is the fourth largest cause of death at 4%.

Meanwhile, the morbidity rate indicates that respiratory disease is the largest and accounts for 42% of the total morbidity rate in Macedonia. There is a large difference between cardiac disease, the next in line and 7% of total. It is considered that the causes of these diseases come from multiple factors relating to air pollution, etc. The Ministry of Health is going to formulate a policy that acknowledges respiratory disease as an important issue.

The target of this Project is the Clinic of Pulmology and Allergology (hereafter referred to as the Clinic) which functions as the only tertiary level hospital in respiratory disease to provide treatment for all the patients who come from all over the nation. However, the existing medical equipment in the Clinic is very deteriorated, superannuated, and, because of it, the shortage of equipment keeps the doctors with high level of skills from providing even basic diagnosis and treatment as enough as a tertiary level hospital.

Under the circumstances mentioned above, the government of Macedonia has requested to the government of Japan to implement the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje.

Chapter 2

Contents of the Project

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

The objective of the Project is to find ways of improving tertiary level medical services for respiratory disease by strengthening the system of diagnosis and treatment at the Clinic through provision of basic equipment the Clinic needs to carry out its central role in the field of respiratory disease in Macedonia's tertiary level medical service in order to provide adequate medical treatment for the patients.

As Macedonia's only medical facility specializing in respiratory disease, and in its position as a tertiary level referral medical organization, the Clinic, the target of this Project, aims to offer treatment to patients from city of Skopje and all regions of the country. The state of the Clinic's existing medical equipment is extremely poor; most of it is superannated, not in good working order, and despite the doctors' sound grounding in the techniques, the Clinic is able neither to perform its role and function as a tertiary level

medical hospital nor offer adequately the most basic diagnosis or treatment. Hence the request was made for procurement of equipment with a focus on respiratory diagnostic equipment.

The Project is going to implement 16 basic diagnosis and treatment medical equipment for the Clinic in order to achieve the improvement of diagnosis and treatment functions in respiratory disease. As a result, to increase the number of patients and other effects are expected, and the people with respiratory disease, populating 0.3million in the country, will benefit from the Project.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

(1) Basic Policy

The basic concept of the Project is to single out equipment for procurement that will be vital for the Clinic, that will bring powerful benefits and where sustained environment, operation and maintenance. Of the requested equipment, the majority falls into the category of basic medical equipment as a tertiary level medical service, and the focus is on vital equipment in order to offer a suitable level of service. Regarding the selection of equipment, in response to the plan according to the basic positive/negative guidelines of Japanese Grant Aid, assessing the benefits after transfer and whether equipment can also be effectively used in other Clinics that make up the Clinical Center.

(2) Policy concerning external climatic conditions

Macedonia has a varied climate; the eastern region and the central Vardar river basin region has a Mediterranean climate whilst the climate in the northern and southern regions is more continental with large seasonal temperature change-reaching 40 °C in summer to minus 20 °C at times in winter. Across the central and eastern regions summer brings extremely arid conditions. However, these conditions should not negatively affect the efficiency of any of the equipment to be supplied in this Project, and no additional measures need be taken to counter these natural conditions.

Geographically, Macedonia is restricted by its mountainous terrain; in these regions road widths are narrow and frequently steep and winding. In winter, there is high snowfall and freezing conditions can at times cause road conditions to deteriorate, bringing traffic to a standstill and making them dangerously slippery. Since this Project looks at the capital city of Skopje where road conditions are favourable, we do not anticipate the natural conditions to have any effect on inland transportation.

(3) Policy concerning operational, maintainable, and managerial capability

Most of the equipment to be procured in this Project is for basic diagnostic and treatment purposes as a tertiary level medical facility. Staff at the Clinic comprises of 22 doctors - of which 9 are Professor specialists - 24 nurses and 14 technicians and - a satisfactory staffing level to offer medical services. Since medical skill levels are high, operational training at the handover is judged sufficient to cover maintenance and operation of the new equipment. Therefore, no difficulties in the use or application of the medical equipment to be supplied are anticipated.

(4) Policy concerning equipment planning

Regarding grade and specifications of medical equipment, the equipment should be able to carry out their role and function in the context of our target hospital (a tertiary level medical facility for respiratory disease), possess a vital function and be of suitable quality and quantity to meet demands. Priority will be given to provision of equipment that can be run with little maintenance and operations burden after transfer.

(5) Policy concerning consumable goods and spare parts

In this Project, priority will be given to the provision of equipment with a low rate of

repair, and to equipment for which a fast and reasonably priced supply system for consumable goods and spare parts can be ascertained. Along with the delivery of equipment, the correspondent consumable goods will further be supplied to ensure the smooth start up operation of the new equipment. This supply can only extend to the start up phase however. Thereafter, responsibility for procurement and operation has been accepted by the Macedonian side.

(6) Policy concerning procurement from third-party countries and agents

Macedonia is located in the center of the Balkan peninsula. Not only is it geographically far away from Japan, but since independence only loose economic ties have been made with Japan compared to those with Europe and the US, and Japanese companies have made little advances. In the field of medical equipment too, excepting a small group of X-ray and endoscope manufacturers, private Japanese companies have made next to no inroads in Macedonia, nor in their record of supplying equipment. Apart from a small number of representatives of the larger manufacturers who were contracted to supply equipment as part of the five Grant Aid projects, no Japanese medical equipment companies have yet succeeded in signing effective agent contracts. Thus for equipment requiring regular maintenance or continuous provision of consumable goods and reagents, it is pertinent to consider those Japanese or third party manufacturers (from Europe or the US) that have either agents or representatives in Macedonia or neighbouring countries and it is these we will focus on for such equipment.

(7) Policy for the period of the execution of the Project

Our objective is to complete this Project within one fiscal year. Through this Project, 16 items of equipment are to be procured. Traffic conditions in Skopje are fair and there are no conceivable installation issues involved in installing the equipment, therefore no specific problems are anticipated in execution. However due attention must be paid to ensure that there are no delays to the supply, transportation and fit out periods etc. including instances where the supplier is in a third-party country.

2-2-2 Basic Plan (Equipment Planning)

(1) Total concept of the project planning

The target equipment to be supplied through this Project, includes 16 types of medical equipment, confirmed as appropriate for the Clinic. Most of the equipment will renew

superannuated equipment at the Clinic and therefore problems should not occur in securing space for installation. Special consideration will be given during planning to the management, maintenance and operation of the equipment after the handover, to the supply of consumables and technical servicing and to a continuous supply system.

Installation of the General X-ray System will require installation work. After an on-site meeting with the doctor in charge, we have been able to confirm that the system can be fitted in its designated area without interruption to ongoing medical services. We have received a definite promise from the Clinical Center that removal of the existing superannuated equipment will be their responsibility.

Additionally, due attention will be paid to the issues of operation, supervision, maintenance, inspection and repair, and the Project will give priority to the provision of equipment with low repair rates and for which a timely and reasonably priced supply of consumable goods and spare parts can be ensured. An appropriate volume of consumable goods to allow a smooth start up in the initial period will be reflected in this Project.

(2) Equipment plan

The procurement of the equipment was based on the basic diagnosis in respiratory disease, and the equipment, obviously for allergic disease was rejected from the list. All X-ray systems in the Clinical Center are used in a system of centralization, so that procuring General X-ray System and X-ray film developing equipment as the most basic diagnostic equipment for respiratory disease will be installed in the Institute of Radiology after the agreement between the people in charge. The basic specification and intended use of equipment for procurement of this Project are listed in the next page. (See **Table 2-1**)

Table 2-1 Basic Specification and Intended Use of Equipment for Procurement

| | Equipment Name | Basic Specification and Notes | Intended Use | Qty |
|-----|--|--|--|------------|
| 1 | Patient Monitor for ICU with Central Monitor | Equipment procuring in ICU requires bedside monitor and centralized system able to monitor HR, SpO2, body temp., NIBP, respiration like regular parameter in ICU. Specification Measure: ECG/HR/NIBP/TEMP./RESP./SPO2,color LCD monitor HR measure range: 12-300/min Respiration measure range: 4-150/min SPO2 measure range: 50-100%、 Body temp. measure range: 0 ° -45 ° NIBP measure type: Oscillometric | To enable centralized observation of intensive care patients | 1 |
| 2 | Ventilator | Specification CMV,CMV/ASIST,PEEP,CPAP,SIMV,APNEA Oxygen concentration:21-100% Tidal volume: 100-1,300ml or more wide range | To enable patients to breathe artificially using a mechanical ventilator. | 5 |
| 3 | Defibrillator with ECG and Resusitation set | Specification Defibrillator Output: 200J or more Input impedance: 90dB or more HR measuring range: 20-240 or more | Used in cardiopulmonary resuscitation in emergencies. Stops cardiac arrhythmia using a countershock in times of ventricular fibrillation, flutter, ventricular tachycardia, and restores sinus rhythm. | 1 |
| 4 | ECG (6ch) | Specification 12 leads Input impedance: 10M or more Display wavemode: 6ch | Used to observe change of electric potential to the heart over time during irregular pulse and myocardial ischemia. | 2 |
| 5.1 | Infusion pump | Specification Infusion pump: Drop type (Open type) | Used to administer strictly controlled doses of medication to patients. | 8 |
| 5.2 | Syringe pump | Specification Syringe pump: 10mm, 20mm, 30mm, 50mm syringe use | Used to administer strictly controlled doses of medication to patients. | 12 |
| 6 | Bronchoscope set | Composition of the system requires main unit, TV monitor, camera system, recorder, suction unit, washer unit, etc. Especially, accessories under endoscopy treatment require careful selection. Selecting the same manufacturer will be considered in order to utilize a part of existing equipment such as light source. Specification Fiberscope: End outer diameter6.0mm x 1, End outer diameter5.9mm x 2 Outer diameter3.6mm x 1 Monitor, video camera, video recorder, printer, suction unit, clamp, washer unit (US) | Used to perform endoscopies of the bronchial region, and endoscopic surgery for malignant neoplasms. | 1 |
| 7 | Electric cautery set | Specification High frequency: single/both ends, for endoscopy use Bipolar/Monopolar type, Output circuit: floating type、 Output mode: cutting, coagulate, both ends | Used to remove malignant neoplasms, and treat hemostatis with a high frequency current. | 1 |

| | | | | |
|----|--|--|---|---|
| 8 | US (B/M mode) | Equipment is widely used to visualize internal organs without radiation. The Project will provide the equipment with basic B/M mode for respiratory treatments. The probes are multi-frequency mode ones. Specification B/M mode, 12inch monitor, Black/White printer, Multi-frequency convex probe, Linear probe | Used to diagnose pleura, pneumonia, protopathic lung cancer, metastatic lung cancer, chest wall tumours, free echo space in the chest cavity, pleural effusion, atelectasis, mycoplasmic pneumonia, lung bscesses, tuberculosis, subcutaneous emphysema, mesothelial cancer and mediastinal tumours. | 2 |
| 9 | Blood Gas Analyzer | Equipment requires basic parameter for measuring blood gas and test drug/consumable should be purchased locally after procurement. Specification Measuring range: pH, PO ₂ , PCO ₂ PO ₂ : 0-740mmHg or more PCO ₂ : 8-200mmHg or more pH: about 5-8 Sample amount: 90 µ L or more | Tests for respiratory failure by directly measuring arterial oxygen tension (PaO ₂), arterial carbon dioxide tension (PaCO ₂) and pH and using these measurements to calculate arterial oxygen saturation (SaO ₂) bicarbonate HCO ₃ ⁻ and Base Excess (BE). | 1 |
| 10 | Spirometer | Specification Forced Expiratory Curve: (FVC, 1 second volume, 1 second rate, NMF, etc) Flow volume curve: (V ₅₀ , V ₂₅ , peak flow) Analyzed items: (SVC, FVC, MVV, B.D.test, etc) Maximal voluntary ventilation | Used to measure lung capacity with flow sensors to detect the respiratory airflow. | 2 |
| 11 | Diagnostic table for endoscopy | Specification Elevation range: 750mm-1,000mm or more, manual Lateral tilting: both sides 20 ° or more Trendelenburg: 17 ° or more | An examination table used in endoscopic consultation. | 1 |
| 12 | Ergometer | Specification Handle bar/Saddle adjustment: possible Display: pulse rate | can be used to measure breathing function as spirometer and for blood gas analyzer with load | 1 |
| 13 | General X-ray system | Equipment requires Bucky table, movable type for easy maintenance and operation. Technical service after procurement should be taken into consideration. Specification General X-ray system KV: 150kV MA: 500mA, X-ray generator: inverter X-ray tube unit capacity: 300 kHU or more X-ray tube support unit: movable on the floor or ceiling Table: floating bucky table | Used in the observation process of inpatients with respiratory illnesses, and for screening outpatients. | 1 |
| 14 | Mobile X-ray | Equipment requires little waiting time by quick electric adjustment. Specification Mobile X-ray: 40-125kV, 250mA or more X-ray tube unit: Focalspot 1mm or less | Used to screen seriously ill patients in ICU. | 1 |
| 15 | X-ray film developing equipment (dark room type) | Specification Speed of development: 100 sec. or less Film size: 4"x4"-14"x17" | To develop X-rays taken with the above 2 items of equipment. | 1 |

| | | | | |
|----|----------------|--|--|---|
| 16 | Pulse Oximeter | Specification Measuring range: 25-230bpm or more, SpO2 measuring range: 1-100%, with alarm | Used to monitor oxygen saturation of the arterial blood noninvasively and to diagnose hypoxemia. | 2 |
|----|----------------|--|--|---|

Not only is Macedonia geographically far away from Japan, but Japanese companies have made little advances. Thus for equipment requiring regular maintenance or continuous provision of consumable goods and reagents, it is pertinent to consider those Japanese or third party manufacturers (centering former Yugoslavia) that have either agents or representatives in Macedonia or neighbouring countries and it is these we will focus on for such equipment. Furthermore, among the various items of equipment, there are some that are not produced for export in Japan, so for the following items it will be necessary to look to third party countries in Europe and the US:

Table 2-2 Target Equipment and Countries

| Target Equipment | Target Countries |
|---|------------------|
| Ventilator | EU, US |
| Infusion pump, Syringe pump | EU |
| US (B/M mode) | EU, US |
| Blood Gas Analyzer | EU, US |
| General X-ray System, Mobile X-ray System | EU, US |
| X-ray film developing equipment | EU, US |

(3) Modifications required for installation

The General X-ray System is to replace the equipment currently in use and thus installation space is available. At the meeting during the Study, the necessary equipment for fitting the X-ray System and the schedule were discussed and it was confirmed that the costs of this preparation work will be born principally by the Ministry of Health and the Clinic. There are also sufficient levels of the necessary staff at the Institute of Radiology to remove the current equipment in use, and since removal is possible without recourse to a third party, the expenses incurred in their removal and thus the burden on the facility will be significantly slight.

2-2-3 Basic Design Drawing

(1) Facilities of the targeted hospital

There is no need for modification work, because most of equipment procuring for the Clinic is renewal of existing superannuated one. In addition, General X-ray System is going to install in the Institute of Radiology. **Figure 2-1** and **2-2** show the placements of the equipment for procurement.

Figure2-1 Layout of Clinic of Pulmology and Allergology

Names of Requested Equipment

- ① Patient Monitor for ICU with Central Monitor
- ② Ventilator
- ③ Defibrillator with ECG and Resusiatation Set
- ④ ECG (6ch)
- ⑤-1 Infusion Pump
- ⑤-2 Syringe Pump
- ⑥ Bronchoscope Set
- ⑦ Electric cautery Set
- ⑧ US(B/M mode)
- ⑨ Blood Gas Analyzer
- ⑩ Spirometer
- ⑪ Diagnostic Table for Endoscopy
- ⑫ Ergometer
- ⑬ General X-ray System
- ⑭* Mobile X-ray
- ⑮* X-ray film Developing Equipment (Dark room Type)
- ⑯ Pulse Oximeter

⑭* and ⑮* are listed in the next page.

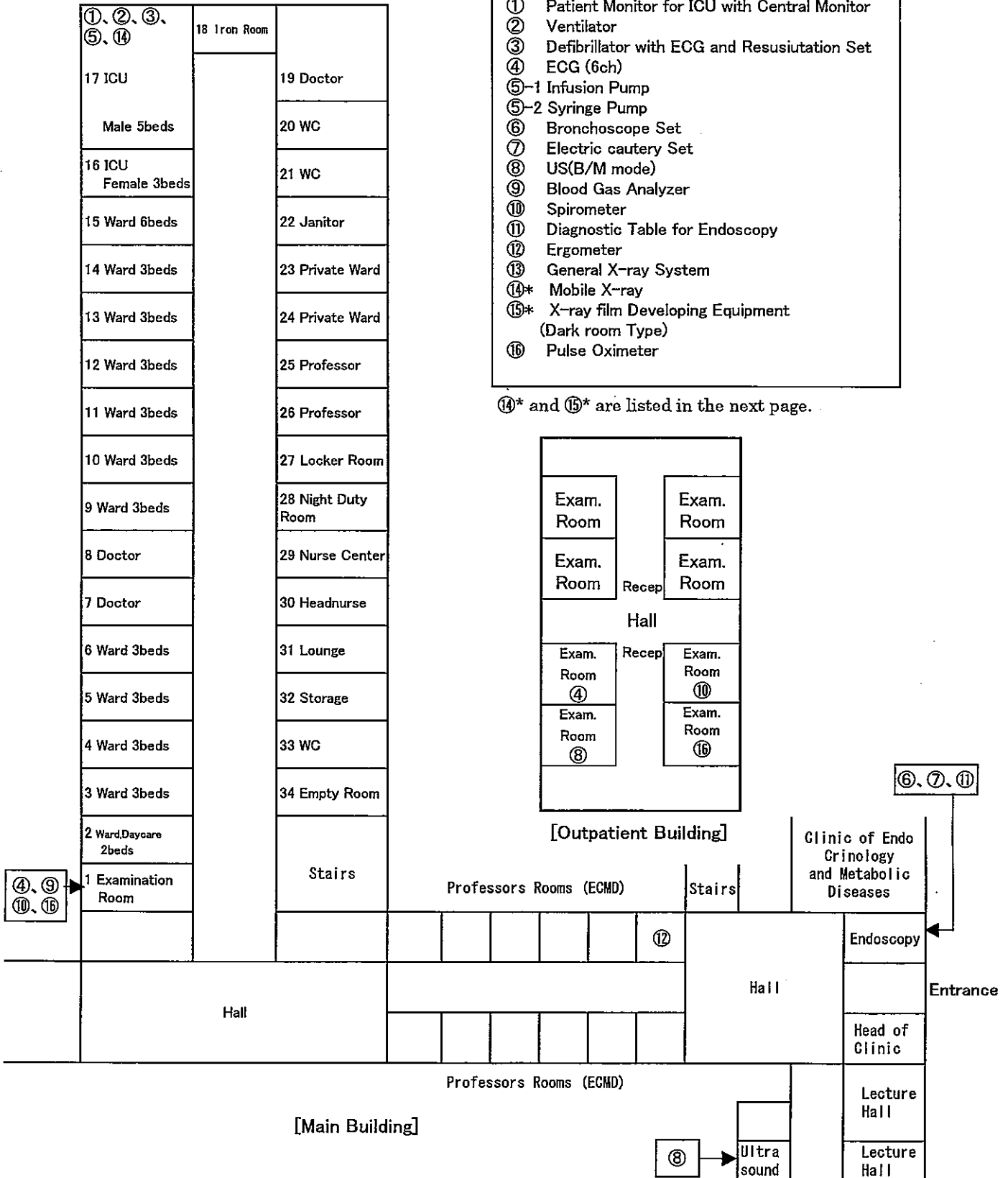
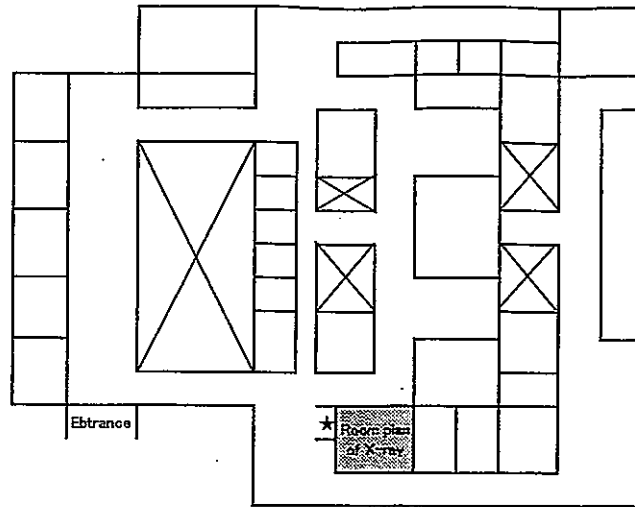


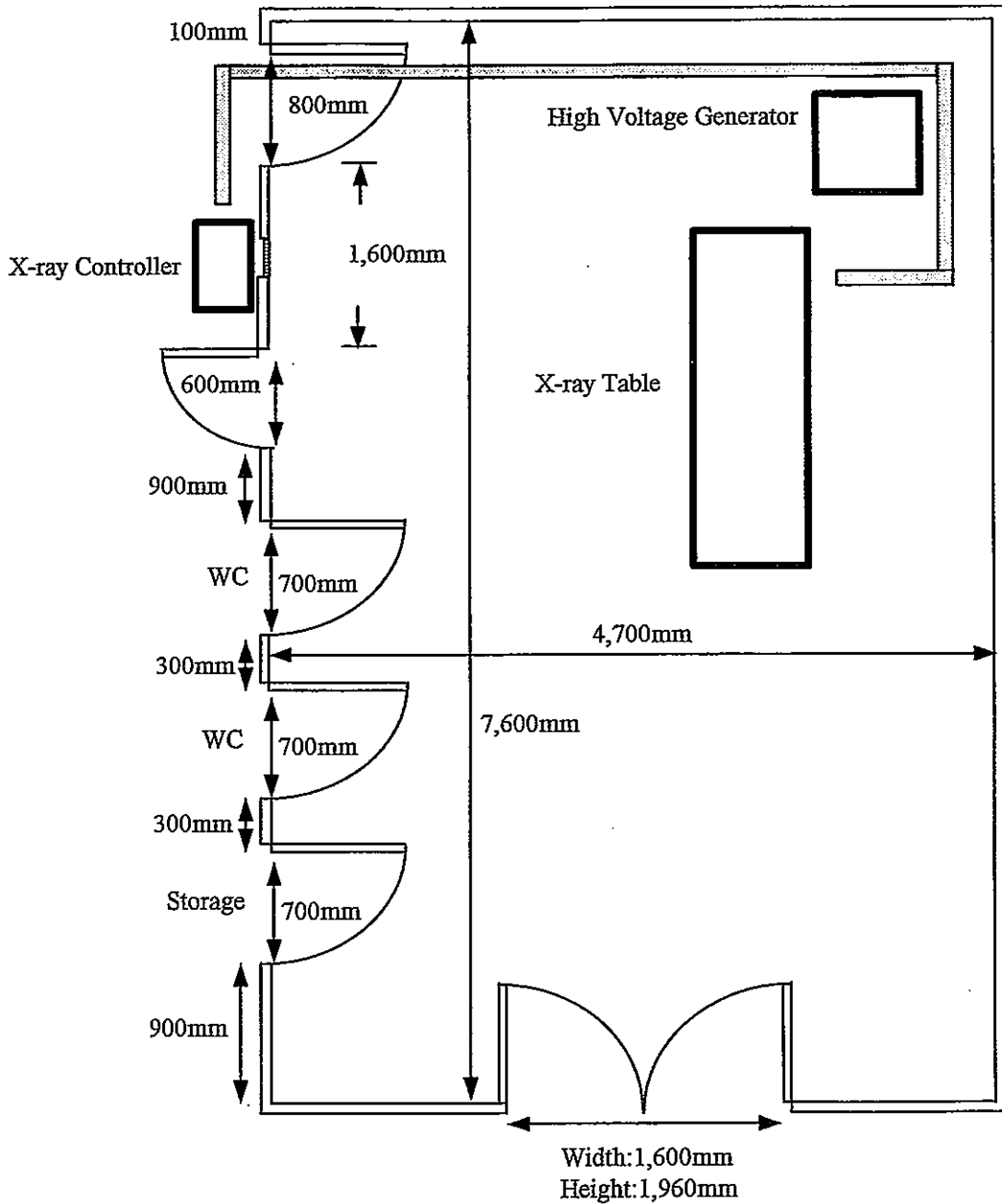
Figure 2-2 Layout Plan of the Room procuring General X-ray System

Layout of Institute of Radiology



Layout plan of procuring General X-ray System

Existing Supplying Electric Capacity : 80kVA



2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

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

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

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

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

(1) Party responsible for the implementation of the Project

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

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

(2) Consultant

Following the signing of the Exchange of Notes (E/N) between two governments concerned, the Ministry of Health shall sign a consultation agreement with a Japanese national consulting corporation for the detailed design of the equipment to be procured.

The work will also be associated with tendering and supervision of project implementation. The agreement will be verified subject to approval by the Japanese Government. The consultant shall be responsible for implementation of the following work under the agreement:

1) Detailed design phase

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

2) Implementation phase

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

(3) Suppliers of the equipment

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

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

2-2-4-2 Implementation Conditions

All possible measures shall be taken to ensure the implementation and a complete procedure for installation, which will conduct the quick and efficient completion of the procurement, transport, delivery, and installation of the equipment. The consultations with officials concerned are essential prior to customs clearance, internal transportation, and removal of old equipment, storage area for the procured equipment, route for carrying them in, etc.

2-2-4-3 Scope of Work

The work provided for the Project by the Recipient Country and covered by Japan's Grant Aid will be described below.

1) Work to be carried out by the Recipient Country

- Removal of existing equipment
- Connection of utilities at the designated points for the equipment to be procured
- Preparation of storage area for the equipment to be procured until the time of installation
- Preparation of the route for carrying the equipment to the room from the storage area
- Removal of existing equipment in the room planned to be procured (General X-ray System)

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

- Procurement of the new equipment
- Transport of the equipment to be procured
- Delivery, installation, and trial run of the equipment to be procured
- Technical transfer on operation and maintenance of the equipment to be procured

2-2-4-4 Consultant Supervision

A Japanese national consulting corporation shall provide fair guidance, advice, and coordination throughout the detailed design phase and implementation phase of the Project. Furthermore, this consulting firm shall do whatever is necessary in order to ensure the smooth implementation of the Project in accordance with the Japan's Grant Aid Scheme and the Basic Design Study Report. The consultant will be deemed to have completed its work when the equipment is completely installed, it is confirmed that all conditions of the contract have been met, the official delivery of the equipment is witnessed, and the approval of the Recipient Country is obtained.

(1) Framework of Implementation Supervision

- 1) Management of the completion dates for installation, maintaining close contact among all parties concerned
- 2) Supervision of installation work

- 3) Suggestions for maintenance after the official delivery of equipment

(2) Personnel Plan

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

- 1) Project Manager One (1)

This project manager shall be responsible for the comprehensive supervision of work.

- 2) Equipment Planner 1 One (1)

This person shall be responsible for the re-examination of the Project and the confirmation of the equipment specification, and for the preparation of tender documents and evaluation of the contents of the tender.

- 3) Equipment Planner 2 One (1)

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

2-2-4-5 Procurement Plan

(1) Procurement of the equipment

Most of the equipment will be procured within Japan, but certain items that will require regular maintenance, frequent procurement of spare parts and consumables, or those that come with doctors' convenience such as operating instruments, may be acquired from third-party countries. Also, following the official delivery of the equipment, the Ministry of Health shall be promptly provided with technical service, spare parts, and consumable at a reasonable price. The procurement plan for the equipment shall be drafted so as to favor either manufacturer that have agents capable of providing technical service (repair and maintenance services) in the Recipient Country or in neighboring countries, or those that have a sufficient stockpile of spare parts and consumables.

Procuring Bronchoscopy Set requires to procure from the same production manufacturer as the existing equipment such as light source that can only utilize in a total

system.

(2) Inland transportation route

The route of the inland transportation will be from the port of Thessaloniki in Greece (the closest port with the best roads) to the Clinic via Skopje. In case the equipment is transported by air, Skopje International Airport will be available.

(3) Plan of the dispatch of engineer

Personnel, including laborers required for the installation of equipment, shall be secured from Technical department in Clinical Center in principle, while engineers shall be dispatched from Japan and other countries to supply equipment requiring special skills and techniques. Laborers shall install the equipment under the guidance and supervision by the engineers at project site. The procedure for test runs and adjustment of the equipment will be planned to allow enough time for technical transfer to the doctors and engineers concerned at Clinic. (see **Table 2-2**)

Table 2-2 Engineer Dispatch Plan

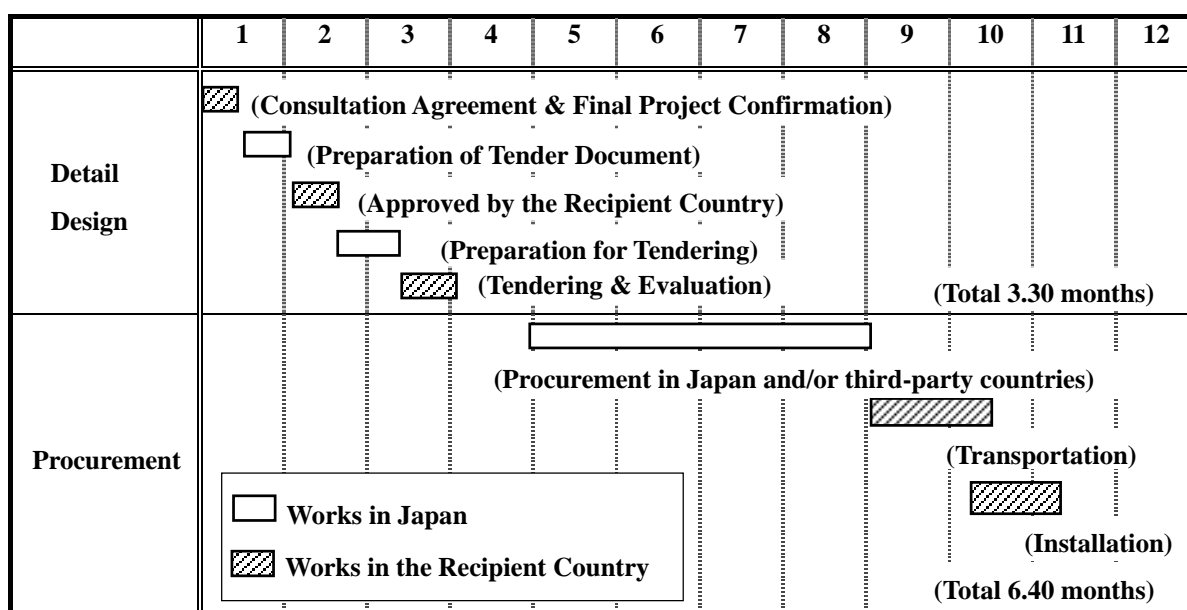
| Engineer | Number | Days | Period (M/M) |
|------------------------------|---------------|-------------|---------------------|
| Local procurement management | 1 | 20 | 0.67 |
| X-ray equipment relation | 1 | 13 | 0.43 |
| ME equipment relation | 1 | 9 | 0.30 |
| Endoscopy relation | 1 | 9 | 0.30 |

2-2-4-6 Implementation Schedule

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

The Project implementation schedule is given in **Table 2-3**.

Table 2-3 Project Implementation Schedule



2-3 Obligations of the Recipient Country

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

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

There is no need for additional budget settings in terms of removing the existing General X-ray System in the Institute of Radiology, because the Technical department in the Clinical Center and the technicians in the Institute of Radiology will carry on the removal mainly, so that the expense of removal is significantly slight.

For removing the existing General X-ray System, the Recipient country needs to bear the expense of General X-ray System removal work totally US\$ 260.00.

2-4 Project Operation Plan

2-4-1 Operation Maintenance Cost

Among the 22 doctors at the Clinic, there are 9 professors and many who have studied abroad in Europe, Japan and other developed countries; 24 nurses and 14 technicians – these are sufficient staffing levels. The Clinical Center also houses an internal technical department, thus a back-up system is in place for daily mechanical maintenance.

The equipment procuring for the Project does not require additional high priced operation maintenance cost, because most of procuring equipment purposes renewal of existing superannuated one. The operations and maintenance cost including maintenance, consumable goods, and spare parts for the General X-ray System, Mobile X-ray and the Blood Gas Analyzer are expected to arise, but the influence on the Clinic's overall operation is considerably insignificant. There is a comparatively high knowledge and skill level of maintenance of the equipment can be adequately covered during the operation training at hand-over time regarding the equipment having different operations and maintenance methods.

Of the 16 types of equipment to be procured through this Project, the General X-ray System, Mobile X-ray and the Blood Gas Analyzer are expected to put pressure on the Clinic's operations and maintenance bottom line. Thus, the cost burden to the Clinic was investigated.

The results of this investigation can be seen in **Table 2-8**. The increase in costs for consumable for the 3 types of equipment above, calculated using expected numbers and increased number of films used for each item, came to an annual 261,000 Denar (4,350 Euro).

Table 2-8 Expected Cost Increasing by Procurement in Consumable

| Equipment Name | Consumable | Cost |
|---|---------------|------------------|
| General X-ray System | Film | 2,500EURO |
| Mobile X-ray | Film | 1,000EURO |
| Blood Gas Analyzer | Reagent, Tube | 850EURO |
| Total Annual maintenance cost | | 4,350EURO |
| Total Annual maintenance cost (Denar) (1EURO = 60Denar) | | 261,000 |

Table 2-9 indicates that, taking a 3-year average, the Clinic accounts for 1.80% of the Clinical Center's total expenditure. Drugs/consumable where expenditure is likely to be affected makes up 1.08% of the 3-year average.

The forecast increase in this area as a result of procured equipment is, as stated above, 261 thousand Denar (4,350 Euro). From 1999-2001, the 3-year average cost for drugs/consumable in the Clinic topped 9,201 thousand Denar (153,350 Euro); if this were to increase by 261 thousand Denar (4,350 Euro) to 9,462 thousand Denar (157,700 Euro), it would amount to only a 0.02% rise in the Clinical Center's average 855,605 thousand Denar (14,260 thousand Euro) expenditure for this cost item, and thus is judged to have a relatively insignificant influence on the overall operations of the Clinical Center.

Table 2-9 Rates of the Clinic in the Revenue of Clinical Center

| | 1999 | 2000 | 2001 | 3 -year Average | Prediction after Procurement | Difference |
|----------------------|-------|-------|-------|--------------------|---------------------------------|------------|
| Expenditure | 1.82% | 1.46% | 2.08% | 1.80% | 1.81% | 0.01% |
| (Drugs/Consumable) | 1.67% | 1.08% | 0.70% | 1.08% | 1.10% | 0.02% |

On the contrary, thanks to the other equipment to be procured through the Project, the overall efficiency of the Clinic is expected to increase, enabling a larger number of patient consultations and tests to take place, in turn leading to increased revenues. If we take into account that a) the equipment to be procured will not require expensive maintenance, b) the Project has used the prerequisite that equipment will be supplied by manufacturers with representatives in either Macedonia or neighbouring countries, thus ensuring a speedy maintenance service and new replacement parts and consumables at a reasonable price, and c) the General X-ray System and Blood Gas Analyzer, both requiring regular inspection, will replace superannuated equipment, thus lowering maintenance costs

compared with the current machines which are constantly breaking down and piling up repair costs, then it is clear that the arrival of the new equipment will put minimal financial pressure on hospital management.

Chapter 3

Project Evaluation and Recommendations

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

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

(1) Direct Effect

Improvement of health care service in respiratory disease through enhancement of diagnostic and treatment capabilities at the Clinic

The procurement of basic medical equipment (mainly diagnostic equipment) at the Clinic will enhance its diagnostic capabilities, which have been in decline due to the deterioration of the existing superannuated equipment, and also enable diagnosis and treatment more adequately and efficiently by doctors, nurses and other medical workers at the Clinic.

The renewal of medical equipment will enhance the level of diagnosis and treatment, and these improved capabilities will increase the number of patients that can be treated and rise the bed occupancy rate. As a result, those who suffer from respiratory diseases throughout Macedonia approximately 0.3 million people will benefit from the Project greatly. In addition, enhanced operating efficiencies will contribute to better management at the Clinic.

(2) Indirect Effects

Reduction of burden on patients

The superannuation of equipment at the Clinic causes inefficient diagnosis and treatment, and, as a result, creates a situation, where patients are forced to repeat tests multiple times, and endure frequent hospital visits. This burden makes it difficult for patients to continue their treatment, both physically and financially. The improvement of medical service at the Clinic lightens the burden on patients by decreasing the frequency of hospital visits and tests, and reducing the treatment period for both inpatients and outpatients.

3-2 Recommendations

We propose 3 recommendations written below in order to facilitate procuring equipment more effectively and efficiently.

(1) Adoption of principle of depreciation

In order to ensure the sustainable development of the Clinic, adoption of the principle of depreciation is essential to establish a system under which equipment can be regularly renewed. Under the Project, the funds required for initial investment (equipment procurement cost) by the Clinic will be provided by Japanese grant aid. Were the Clinic to make the best of this opportunity by adopting the practice of equipment depreciation and regular saving in accordance with a relevant plan, the required funds for reinvestment would be available in 5 to 8 years time when this newly acquired medical equipment is in need of renewal. The establishment of this cycle, from procurement of new equipment to equipment renewal, would certainly contribute to the sustainable development of the subject of the Project.

For the purpose of making the increased income resulting from the newly installed equipment directly contribute to the accumulation of reinvestment funds, the Ministry of Health should provide guidance on the establishment of a system which will enable the Clinic to reinvest in new equipment without relying on external funding by means of including “a depreciation fund” in the Health Insurance Fund to forcibly make the Clinic save part of its income to cover the depreciation cost.

(2) Management stability of Health Insurance Fund

As the income of the Clinic is mainly in the form of transfer from the Health Insurance Fund, it is essential for the stable management of the Clinic that these transfers take place reliably.

A crucial requirement to stabilize the management of medical facilities at present is the establishment of sound financial conditions of the Health Insurance Fund. The Ministry of Health recently revised the Health Insurance Fund Law in order to improve the management of the Fund. This revision intends, among other things, (i) to stabilize income by reviewing insurance premiums and medical diagnosis and treatment fees and (ii) to reduce the expenses of medical activities to a reasonable level. It is important that these targets be met through the thorough implementation of the relevant measures

envisaged by the revised Health Insurance Fund Law. The Ministry of Health has just initiated a new medical health policy, and it is important for the improvement of the medical health sector in Macedonia as a whole to put into effect and stabilize the new policy.

(3) Improvement of diagnostic and treatment systems

With the installation of new equipment, diagnostic capability at the Clinic will be greatly improved and diverse diagnostic and treatment needs are expected to arise. Although there are a sufficient personnel with a high level of technical skill, in order to provide a more effective and efficient treatment system, reallocation of human resources is crucial. In addition, improvement of technical skills, by training those who are engaged in medical practices is required.

Appendices

Appendices-1 Member List of the Study Team

(1) Field Survey

| | | | |
|---|-------------------------|----------------------------------|---|
| 1 | Dr. Junichi INABA, M.D. | Team Leader Technical Adviser | Technical Official, Experts Service Division, Bureau of International Medical Center of Japan, Ministry of Health, Labour and Welfare |
| 2 | Mr. Yoshimasa TAKEMURA | Project Coordinator | Staff, Second Management Division Grant Aid Management Department Japan International Cooperation Agency |
| 3 | Mr. Keiji IIMURA | Project Manager | CRC Overseas Cooperation Inc. |
| 4 | Mr. Yoshiharu HIGUCHI | Equipment Planner I | CRC Overseas Cooperation Inc. |
| 5 | Mr. Tamotsu NOZAKI | Equipment Planner II | CRC Overseas Cooperation Inc. (Fujita Planning Co.,Ltd.) |
| 6 | Mr. Koji NAGATA | Cost and Procurement Planner | CRC Overseas Cooperation Inc. |

(2) Explanation of Draft Report

| | | | |
|---|-----------------------|---------------------|--|
| 1 | Mr. Keiichi MURAOKA | Team Leader | Resident Representative, JICA Austria Office |
| 2 | Mr. Keiji IIMURA | Project Manager | CRC Overseas Cooperation Inc. |
| 3 | Mr. Yoshiharu HIGUCHI | Equipment Planner I | CRC Overseas Cooperation Inc. |

Appendices-2 Study Schedule

(1) Field Survey

| Date | Movement | Accommodation | Activities |
|----------------|--|---|---|
| Dec. 4 (Wed.) | Narita- Vienna ^(A) | Vienna | Move to Vienna ^(A) |
| Dec. 5 (Thu.) | Vienna - Skopje ^(A) | Skopje | Visit the Office of JICA in Vienna ^(A) Visit the Embassy of Japan in Vienna ^(A) Arrival in Skopje ^(A) |
| Dec. 6 (Fri.) | Haneda - Osaka- Vienna - Skopje ^(B) | - do - | Courtesy call on the MOH ^(A) Explanation of Inception Report ^(A) Arrival in Skopje ^(B) |
| Dec. 7 (Sat.) | | - do - | Courtesy call on the Targeted Hospital ^(A) ^(B) Explanation of Inception Report ^(A) ^(B) |
| Dec. 8 (Sun.) | Narita - Vienna - Skopje ^(C) | - do - | Meeting within the Study Team Arrival in Skopje ^(C) |
| Dec. 9 (Mon.) | | - do - | Inspection of Targeted Hospital ^(A) ^(B) ^(C) Site Survey ^(A) ^(B) ^(C) |
| Dec. 10 (Tue.) | | - do - | Site Survey ^(A) ^(B) ^(C) |
| Dec. 11 (Wed.) | | - do - | Site Survey ^(A) ^(B) ^(C) |
| Dec. 12 (Thu.) | | - do - | Site Survey ^(A) ^(B) ^(C) |
| Dec. 13 (Fri.) | | - do - | Site Survey ^(A) ^(B) ^(C) |
| Dec. 14 (Sat.) | | - do - | Site Survey ^(A) ^(B) ^(C) |
| Dec. 15 (Sun.) | Narita - Vienna ^(L) ^(*) - Skopje ^(L) | Vienna ^(*) Skopje ^(L) | Site Survey ^(A) ^(B) ^(C) Arrival in Skopje ^(L) |
| Dec. 16 (Mon.) | Vienna - Skopje ^(*) | Skopje ^(*) | Visit the Embassy of Japan in Vienna ^(*) Visit the Office of JICA in Vienna ^(*) Site Survey ^(A) ^(B) ^(C) Arrival in Skopje ^(*) ^(L) |
| Dec. 17 (Tue.) | | - do - | Site Survey ^(A) ^(B) ^(C) Visit Honorary Consulate General of Japan, MOH, MOFA ^(*) ^(L) |
| Dec. 18 (Wed.) | | - do - | Site Survey ^(*) ^(L) ^(A) ^(B) ^(C) |
| Dec. 19 (Thu.) | | - do - | Site Survey ^(*) ^(L) ^(A) ^(B) ^(C) |
| Dec. 20 (Fri.) | | - do - | Discussion of M/D ^(L) ^(*) ^(A) Site Survey ^(B) ^(C) |
| Dec. 21 (Sat.) | | - do - | Discussion of M/D ^(L) ^(*) ^(A) |
| Dec. 22 (Sun.) | | - do - | Site Survey Meeting within the Study Team |
| Dec. 23 (Mon.) | Skopje - Vienna ^(L) ^(*) ^(A) | Vienna ^(L) ^(*) ^(A) | Signing of M/D ^(L) ^(*) Site Survey ^(A) ^(B) ^(C) |
| Dec. 24 (Tue.) | Skopje ^(B) ^(C) - Vienna ^(L) ^(*) ^(A) ^(B) ^(C) - | | Visit the Embassy of Japan in Vienna ^(L) ^(*) ^(A) Visit the Office of JICA in Vienna ^(L) ^(*) ^(A) |
| Dec. 25 (Wed.) | - Narita ^(L) ^(*) ^(A) ^(B) ^(C) | | Arrival in Japan ^(L) ^(*) ^(A) ^(B) ^(C) |

^(L) Official Member (Team Leader)

^(*) Official Member (Project Coordinator)

^(A) Consultant (Project Manager)

^(B) Consultant (Equipment Planner I, Equipment Planner II)

^(C) Consultant (Cost and Procurement Planner)

MOFA : Ministry of Foreign Affairs

MOH : Ministry of Health

M/D : Minutes of Discussion

(2) Explanation of Draft Report

| Date | Movement | Accommodation | Activities |
|----------------|--------------------------------|----------------|--|
| Jan. 27 (Mon.) | Narita- Vienna (A) (B) | Vienna (A) (B) | Move to Vienna (A) (B) |
| Jan. 28 (Tue.) | Vienna - Skopje (A) (B) | Skopje | Visit the Office of JICA in Vienna ^{(A) (B)} Visit the Embassy of Japan in Vienna (A) (B) Arrival in Skopje (A) (B) |
| Jan. 29 (Wed.) | Vienna - Skopje ^(L) | - do - | Courtesy call on the MOH (A) (B) Explanation of Draft Report (A) (B) |
| Jan. 30 (Thu.) | | - do - | Courtesy call on the MFA and MOH (L) (A) Discussion of M/D (L) (A) Study of Equipment Detail ^(B) |
| Jan. 31 (Fri.) | Skopje - Vienna (L) | - do - | Discussion of M/D (L) (A) Signing of M/D (L) (A) Study of Equipment Detail ^(B) |
| Feb. 1 (Sat.) | | - do - | Study of Targeted Hospital (A) (B) Study of Equipment Detail ^{(A) (B)} |
| Feb. 2 (Sun.) | | - do - | Study of Local Agents (A) (B) |
| Feb. 3 (Mon.) | Skopje - Vienna (A) | Vienna (A) | Study of Targeted Hospital (B) Study of Equipment Detail ^(B) |
| Feb. 4 (Tue.) | Skopje - Vienna (B) - | | Visit the Embassy of Japan in Vienna (A) Visit the Office of JICA in Vienna (A) |
| Feb. 5 (Wed.) | - Narita (A) (B) | | Arrival in Japan (A) (B) |

(L) Official Member (Team Leader)

(A) Consultant (Project Manager)

(B) Consultant (Equipment Planner I)

MOFA : Ministry of Foreign Affairs

MOH : Ministry of Health

M/D : Minutes of Discussion

Appendices-3 List of Party Concerned in the Recipient Country

| Position & Specification | Name |
|--|---------------------------------------|
| Ministry of Foreign Affairs | |
| State Counselor | Ms. Vera Modanu |
| Head of the Unit | Ms. Lidija Ristovska |
| Ministry of Health | |
| Minister | Dr. Rexhep Seljmani |
| Deputy Minister | Prof. d-r Nikola Panovski, M.D.,Ph.D. |
| State Secretary | Dr Avzilatif Xhemaili |
| Assistant Chief of the Dept., Humanitarian Aid and Donations | Ms. Katerina Ismanovski |
| Health Insurance Fund | |
| Director | Mr. Zlate Shulevski |
| Chief of the Financial Sector | Ms. Ljubica Dimitrovska |
| Republic Institute for Health Protection | |
| Director | Prof. Dr. Elisaveta Stikova |
| Clinical Center-Skopje | |
| Director | Dr.Tihomir Krckovski |
| Clinic of Pulmology and Allergology | |
| Head of the Clinic, Prof. | Dr. Dejan Dokic |
| Internist-pulmoalergolog, Prof | Dr. Ljube Gligorovski |
| Prof. | Dr. Tome Stefanovski |
| Pulmo-allergolog, Prof | Dr. Angelko Gjorcev |
| Ass. Prof. (Endoscopy) | Dr. Elizabeto Kovkatova |
| Prof. (Spirometry) | Dr. Bravislav Gerovski |
| Prof. (US) | Dr. Biserka Kaeva |
| Clinical Biochemistry Lab | |
| Head of Department | Dr. Saska Domazetovska |
| Department of OB and GY | |
| Head of Department, Prof. | Dr. Jovan Tofoski |
| Clinic of Gastroenterohepatology | |
| Prof. | Dr. Vasko Vasilevski |

| Position & Specification | Name |
|---|----------------------------|
| Institute of Radiology | |
| Head of the Clinic | Dr. Mirodrag Vrcakovski |
| Grad. Eng. Head Engineer | Mr. Roland Stamenov |
| Ass.Prof. | Dr. Michael Grunevsci |
| Prof. | Prof. Dr. Tane Markoski |
| Technical Dept | |
| Head of Department | Mr. Mijovski Dushan |
| Medical Center (Bitla) | |
| Director | Dr. Dejan Risevski |
| | Dr. Jovan Shteyanovski |
| ICU Dep. | Dr. Vaso Radiovjevich |
| Engineer | Mr. Ivanovski Risto |
| Engineer for Medical Equipment | Mr. Zoran Aleksovski |
| Medical Center (Ohrid) | |
| Director | Dr. Violeta Pavloska |
| | Dr. Elizabeta Sapkar Marin |
| World Bank Office | |
| Social Sectors Program Officer | Ms. Rajna Krtova Cemerska |
| Embassy of Japan, Vienna | |
| First Secretary | Mr. Shinichi Nakatsugawa |
| Honorary Consulate General of Japan | |
| Honorary Consul General | Dr. Kosta Balabanov Ph.D., |
| Macedonia Liaison Office of Embassy of Japan | |
| Staff | Ms. Kazu Lesnikovska |

Appendices-4 Minutes of Discussion

December 23,2002

Dr.Avzilatif Xhemaili
State Secretary
Ministry of Health

Dear Dr.Xhemaili,

I have the honor to refer to our recent discussions regarding the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje (hereinafter referred to as "the Project").

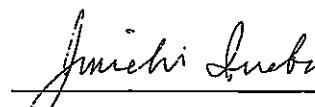
In response to the request of the Government of the Former Yugoslav Republic of Macedonia (hereinafter referred to as "Macedonia"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA"). JICA sent to Macedonia a study team headed by myself for examining the viability of the Project from December 5 to December 23,2002.

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

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

On behalf of all the members of the Team, I wish to express my sincere appreciation to the officials concerned of your government for their kind assistance and close cooperation extended to the team. I hope that the Project will contribute to the enhancement of friendly relations between our two countries.

Yours Sincerely,



Junichi INABA
Leader/Technical Adviser
Basic Design Study Team
JICA



РЕПУБЛИКА МАКЕДОНИЈА
МИНИСТЕРСТВО ЗА ЗДРАВСТВО
REPUBLIC OF MACEDONIA
MINISTRY OF HEALTH

УЛУГОВИТЕЛНИ СЛУЖБИ

Skopje, December 23, 2002 .

*Dr. Junichi INABA
Leader
Basic Design Study Team
JICA*

Dear Dr.Inaba

I have herein acknowledged your letter dated December 23, 2002 and have confirmed the contents of the attachment of the letter.

Yours Sincerely,

STATE SECRETARY,

D-r Ayzitanif Xhemaili

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve and strengthen the medical services of the Clinic of Pulmology and Allergology, Clinical Center, Skopje through the procurement of medical equipment.

2. Project site

The site of the Project is the Clinic of Pulmology and Allergology, Clinical Center, Skopje.

3. Responsible and Implementing Agency

Responsible and Implementing Ministry is the Ministry of Health.

4. Items requested by the Government of Macedonia.

After discussions with the Team, the items described in Annex-1 were finally requested by the Macedonian 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

5-1 The Macedonian side understood the Japan's Grant Aid Scheme explained by the Team, as described in Annex -2.

5-2 The Macedonian side will take the necessary measures, as described in Annex-3, for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study


6-1 The consultant will proceed to further studies in Macedonia until December 24, 2002.

6-2 JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in January 2003.

6-3 In case that the contents of the report are accepted in principle by the Government of Macedonia, JICA will complete the final report and send it to the Government of Macedonia around April, 2003.

7. Other relevant issues

7-1 The Macedonian side stressed that the respiratory diseases control is one of the most



important health issues to be improved for its high morbidity among the Macedonian nation.

- 7-2 The Macedonian side agreed to secure and allocate enough budget and personnel to operate and maintain the medical equipment to be procured by the Grant Aid properly and effectively.
- 7-3 The Macedonian side ensured that the implementation of this project would not have negative effects on the other health development plans.
- 7-4 The both parties agreed that the General X-ray System described in Annex-1 would be installed at the Clinic of Radiology in order to avoid duplication of X-ray function between the Clinic of Pulmology and Allergology and the Clinic of Radiology. And the both parties confirmed that the directors of those two clinics would take necessary measures for installation works and also take responsible for maintenance and operation of the equipment in cooperation as described in Annex-4.
- 7-5 The Macedonian side pointed out the need for technical training of counterpart personnel in Japan in order to deepen their operation skills on Bronchoscopic Electric Caутery equipment.

Annex-1: List of Equipment

Annex-2: Japan's Grant Aid Scheme

Annex-3: Major Undertakings to be taken by Each Government

Annex-4: An understanding of the General X-ray System

Equipment List

| No. | Equipment | RQ | A | B | C |
|-----|---|----|----|---|---|
| 1 | Patient Monitor for ICU with Central Monitor | 8 | 8 | | |
| 2 | Ventilator | 8 | 4 | | 4 |
| 3 | Defibrillator with ECG and Resuscitation set | 1 | 1 | | |
| 4 | ECG (6ch) | 2 | 2 | | |
| 5.1 | Infusion pump | 8 | 8 | | |
| 5.2 | Syringe pump | 12 | 12 | | |
| 6 | Bronchoscope set (3 fiber scopes, 1 monitoring set, 1 suction, 1 Disinfection unit, Forceps) | 1 | 1 | | |
| 7 | Electric cautery set | 1 | 1 | | |
| 8 | US (B/M mode) | 1 | 1 | | |
| 9 | Blood Gas Analyzer (PO ₂ , PCO ₂ , pH) | 1 | 1 | | |
| 10 | Sleep analysis system | 1 | | | 1 |
| 11 | Spirometer | 2 | 2 | | |
| 12 | ELISA | 1 | | | 1 |
| 13 | Sinus fiberscope | 1 | | | 1 |
| 14 | Diagnostic table for endoscopy | 1 | | 1 | |
| 15 | Ergometer | 1 | | 1 | |
| 16 | Densitometer | 1 | | | 1 |
| 17 | General X-ray System | 1 | 1 | | |
| 18 | Mobile X-ray | 1 | 1 | | |
| 19 | X-ray film developing equipment (dark room type) | 1 | 1 | | |
| 20 | Pulse Oximeter | 2 | 2 | | |

A High Priority

B 2nd Priority (required more detail study in Japan)

C Low Priority

Japan's Grant Aid Scheme

1. Japan's Grant Aid Procedures

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

Application (request made by a recipient country)

Study (Basic Design Study conducted by JICA)

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

Determination of Implementation (Exchange of Notes between both Governments)

Implementation (implementation of the Project)

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

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

Fourth, the project approved by the cabinet becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

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

2. Contents of the Study

(1) Contents of the Study

The purpose of the Basic Design Study conducted by JICA on a requested project is

to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

- a) confirmation of the background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
- b) evaluation of the appropriateness of the project for the Grant Aid Scheme from a technical, social and economical point of view,
- c) confirmation of items agreed on by the both parties concerning a basic concept of the project,
- d) preparation of a basic design of the project,
- e) estimation of cost of the project.

The contents of the original request 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 Japan's Grant Aid Scheme.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request. Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

(2) Selection of Consultants

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

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

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

(2) Exchange of Notes (E/N)

Both Governments concerned extend Japan's Grant Aid in accordance with the Exchange of Notes in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid etc., are confirmed.

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

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

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. The Government of Japan shall verify those contracts. The "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings Required to 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 the following:

a) to secure land necessary for the sites of the project prior to the installation work in case the project is providing equipment,

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

c) to secure buildings prior to the installation work in case the project is providing equipment,

d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,

f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) Proper Use

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

(8) Re-export

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

(9) Banking Arrangement (B/A)

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

b) The payments will be made when payment requests are presented by the bank to the Government of Japan under an Authorization to Pay issued by the Government of the recipient country or its designated authority.

Major Undertakings to be taken by Each Government

| NO | Items | To be covered by Grant Aid | 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) Interrial 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 facilities constructed and 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 | | ● |

CLINIC FOR PULMOLOGY AND ALLERGOLOGY
CLINICAL CENTER-SKOPJE
 Vodnjanska 17, 1000 Skopje

E-mail: dejand@hotmail.com tel:00 389 113302, Fax: 00 389 2 239030

Skopje, December 19, 2002

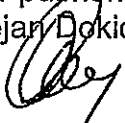
Subject: Agreement between the Clinical for pulmology and allergology with the Institute for radiology

If Japanese Government will donate the General X-ray system with X-ray developing equipment (dark room type) to the Clinic for pulmology and allergology, it will be placed into the standard premises at the Institute for radiology. This equipment will be the property of the Clinic for pulmology and allergology and it will be used for the patients with respiratory diseases and for performing lung X-rays.

In the period when this equipment will not be used for the needs of the Clinic for pulmology and allergology, it can be available for the needs of the Institute for radiology.

All consumable materials will be supplied by the Clinical center, Skopje at the request by the Clinic for pulmonology and allergology. All the expenditures for patient performed services from the organizational unit - pulmonology and allergology will be invoiced at the expense of the patients, i.e. The Health Insurance Fund.

Clinic for pulmology and allergology
 Prof. Dejan Dokic, MD,Ph.D



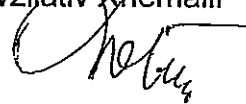
Director of the Clinical center
 Prof. Tihomir Krckovski, MD,Ph.D



Institute for radiology
 Prof. Miodrag Vrcakovski, MD,Ph.D



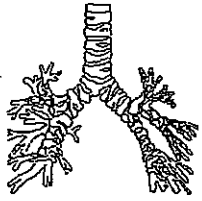
Ministry of Health
 Avzilativ Xhemaili



КЛИНИКА ЗА ПУЛМОЛОГИЈА И АЛЕРГОЛОГИЈА

Клинички центар-Скопје
Водњанска 17, 1000 Скопје

E-mail: dejand@hotmail.com тел: 00 389 2 113302, факс: 00 389 2 239030



Скопје, 19.12.2002 год.

Предмет: Спогодба помеѓу Клиниката за пулмологија и алергологија и Институтот за радиологија

Рентгенолошкиот систем со опрема за развивање на рентгенграфиите (темна комора), доколку биде дониран од Јапонската влада на Клиниката за пулмологија и алергологија, ќе биде сместен во стандардни простории на Институтот за радиологија. Таа опрема ќе биде сопственост на Клиниката за пулмологија и алергологија и е наменета за пациенти со респираторни заболувања и правење рентгенграфиите на белите дробови.

Во периодот кога нема да се користи за потребите на Клиниката за пулмологија и алергологија, опремата ќе биде на располагање на Институтот за радиологија за нивни потреби.

Сите потрошни материјали ќе се набавуваат преку Клинички Центар Скопје, на барање на Клиниката за пулмологија и алергологија. Трошоците за направените услуги, по основ на услуги за пациенти од организационата единица Пулмологија и алергологија, истата ќе ги фактурира на терет на пациентите, односно Фондот за здравство.

Клиника за пулмологија и алергологија
Проф. Др. Дејан Докиќ

Директор на Клинички Центар
Проф. Др. Тихомир Крцковски

Институт за радиологија
Проф. Др. Миодраг Врчаковски

Министерство за Здравство
Авзиљатиф Цемаили

January 31, 2003

Dr. Avzilatif Xhemaili
State Secretary
Ministry of Health

Dear Dr. Xhemaili,

I have the honor to refer to our recent discussions regarding the Project for Improvement of Medical Equipment of Respiratory Facility in Skopje (hereinafter referred to as "the Project").

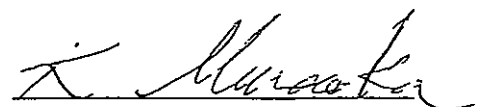
In December 2002, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project to the Former Yugoslav Republic of Macedonia (hereinafter referred to as "Macedonia"), and through discussions, field survey and technical examination of the results in Japan, JICA has prepared a draft report of the study.

In order to explain and consult with the Macedonian side on the components of the draft report, JICA sent the Draft Report Explanation Team to Macedonia (hereinafter referred to as "the Team"), which is headed by myself, and is scheduled to stay in the country from January 28 to February 4, 2003.

As a result of discussions, I believe that the main items described on the attached sheet has been confirmed.

On behalf of all the members of the Team, I wish to express my sincere appreciation to the officials concerned of your government for their kind assistance and close cooperation extended to the Team. I hope that the Project will contribute to the enhancement of friendly relations between our two countries.

Yours Sincerely,



Keiichi MURAOKA
Leader
Draft Report Explanation Team
JICA



РЕПУБЛИКА МАКЕДОНИЈА
МИНИСТЕРСТВО ЗА ЗДРАВСТВО
REPUBLIC OF MACEDONIA
MINISTRY OF HEALTH

МИНИСТЕР/MINISTER

Skopje, January 31, 2003

Mr. Keiichi MURAOKA
Leader
Draft Report Explanation Team
JICA

Dear Mr. Muraoka

I have herein acknowledged your letter dated January 31, 2003 and have confirmed the contents of the attachment of the letter.

Yours Sincerely,

STATE SECRETARY,

D-r Avzilatif Xhemaili

ATTACHMENT

1. Components of the Draft Report

The Government of Macedonia has agreed and accepted in principle the components of the draft report explained by the Team. The items described in ANNEX-I are finally requested by the Government of Macedonia after the discussion of both parties. Both parties confirmed that the items to be included in the Project would be finalized after further analysis in Japan.

2. Japan's Grant Aid Scheme

The Macedonian side understands the Japan's Grant Aid Scheme and necessary measures to be taken by the Government of Macedonia explained by the Team, described in Annex-2 and Annex-3 of the Minutes of Discussions signed by the both parties on December 23, 2002.

3. Schedule of the Study

- 3-1. The consultant members will proceed to conduct further study in Macedonia until February 4, 2003.
- 3-2. JICA will complete the final report in accordance with the confirmed item and send it to the Government of Macedonia around April 2003.

4. Other Relevant Issues

- 4-1. The Macedonian side requested additional items as ANNEX-II in order to perform more effective basic diagnosis and treatment of respiratory diseases.
- 4-2. The both parties confirmed that the Macedonian side should secure and allocate enough budgets to operate and maintain the medical equipment to be procured through the Grant Aid properly and effectively.
- 4-3. The both parties confirmed that Macedonian side should finish preparatory works of X-ray room for installation of X-ray equipment before its delivery.
- 4-4. The Ministry of Health has responsibility to conduct periodical monitoring such as operation, maintenance of the equipment and budget allocation.
- 4-5. The Macedonian side requested the technical training of counterpart personnel in Japan in order to deepen their operation skills on Bronchoscopic Electric Cautery equipment to the Team.

ANNEX-I List of equipment requested by the Macedonian side

ANNEX-II Request letter for additional items issued by Macedonian side

ANNEX-I

List of equipment

| No. | Equipment | Qty |
|-----|--|-----|
| 1 | Patient Monitor for ICU with Central Monitor | 8 |
| 2 | Ventilator | 5 |
| 3 | Defibrillator with ECG and Resusitation set | 1 |
| 4 | ECG (6ch) | 2 |
| 5.1 | Infusion pump | 8 |
| 5.2 | Syringe pump | 12 |
| 6 | Bronchoscope set (4 fiber scopes, monitoring set, suction unit, Disinfection unit, Forceps etc.) | 1 |
| 7 | Electric cautery set | 1 |
| 8 | US (B/M mode) | 2 |
| 9 | Blood Gas Analyzer (PO ₂ , PCO ₂ , pH) | 1 |
| 10 | Spirometer | 2 |
| 11 | Diagnostic table for endoscopy | 1 |
| 12 | Ergometer | 1 |
| 13 | General X-ray System | 1 |
| 14 | Mobile X-ray | 1 |
| 15 | X-ray film developing equipment (dark room type) | 1 |
| 16 | Pulse Oximeter | 2 |

Ker

Ket-h



РЕПУБЛИКА МАКЕДОНИЈА
МИНИСТЕРСТВО ЗА ЗДРАВСТВО
REPUBLIC OF MACEDONIA
MINISTRY OF HEALTH

Skopje, January 30, 2003

TO JICA Study Team

SUBJECT: *Request of additional equipment for the Project for Improvement of Medical Equipment in the Clinic for Respiratory Diseases in Skopje*

Dear Sirs,

The Ministry of Health of the Republic of Macedonia would like to request the additional equipment as follows could be included in the project:

1. Ventilator one
2. Bronchofiber scope one
3. Ultra sound one

The above equipment will help in diagnosis and treatment of the great number of respiratory disease patients, thus enabling us to respond to the need for adequate providing of health care to the patients in the Republic of Macedonia.

State Secretary

Dr. Avzilatif Khemali

КИ/ЉМ

ATTACHMENT

1. Components of the Draft Report

The Government of Macedonia has agreed and accepted in principle the components of the draft report explained by the Team. The items described in ANNEX-I are finally requested by the Government of Macedonia after the discussion of both parties. Both parties confirmed that the items to be included in the Project would be finalized after further analysis in Japan.

2. Japan's Grant Aid Scheme

The Macedonian side understands the Japan's Grant Aid Scheme and necessary measures to be taken by the Government of Macedonia explained by the Team, described in Annex-2 and Annex-3 of the Minutes of Discussions signed by the both parties on December 23, 2002.

3. Schedule of the Study

3-1. The consultant members will proceed to conduct further study in Macedonia until February 4, 2003.

3-2. JICA will complete the final report in accordance with the confirmed item and send it to the Government of Macedonia around April 2003.

4. Other Relevant Issues

4-1. The Macedonian side requested additional items as ANNEX-II in order to perform more effective basic diagnosis and treatment of respiratory diseases.

4-2. The both parties confirmed that the Macedonian side should secure and allocate enough budgets to operate and maintain the medical equipment to be procured through the Grant Aid properly and effectively.

4-3. The both parties confirmed that Macedonian side should finish preparatory works of X-ray room for installation of X-ray equipment before its delivery.

4-4. The Ministry of Health has responsibility to conduct periodical monitoring such as operation, maintenance of the equipment and budget allocation.

4-5. The Macedonian side requested the technical training of counterpart personnel in Japan in order to deepen their operation skills on Bronchoscopic Electric Cautey equipment to the Team.

ANNEX-I List of equipment requested by the Macedonian side

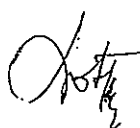
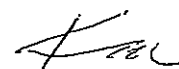
ANNEX-II Request letter for additional items issued by Macedonian side



ANNEX-I

List of equipment

| No. | Equipment | Qty |
|-----|--|-----|
| 1 | Patient Monitor for ICU with Central Monitor | 8 |
| 2 | Ventilator | 5 |
| 3 | Defibrillator with ECG and Resusitation set | 1 |
| 4 | ECG (6ch) | 2 |
| 5.1 | Infusion pump | 8 |
| 5.2 | Syringe pump | 12 |
| 6 | Bronchoscope set (4 fiber scopes, monitoring set, suction unit, Disinfection unit, Forceps etc.) | 1 |
| 7 | Electric cautery set | 1 |
| 8 | US (B/M mode) | 2 |
| 9 | Blood Gas Analyzer (PO ₂ , PCO ₂ , pH) | 1 |
| 10 | Spirometer | 2 |
| 11 | Diagnostic table for endoscopy | 1 |
| 12 | Ergometer | 1 |
| 13 | General X-ray System | 1 |
| 14 | Mobile X-ray | 1 |
| 15 | X-ray film developing equipment (dark room type) | 1 |
| 16 | Pulse Oximeter | 2 |



РЕПУБЛИКА МАКЕДОНИЈА
МИНИСТЕРСТВО ЗА ЗДРАВСТВО
REPUBLIC OF MACEDONIA
MINISTRY OF HEALTH

Skopje, January 30, 2003

TO JICA Study Team

SUBJECT: Request of additional equipment for the Project for Improvement of Medical Equipment in the Clinic for Respiratory Diseases in Skopje

Dear Sirs,

The Ministry of Health of the Republic of Macedonia would like to request the additional equipment as follows could be included in the project:

1. Ventilator one
2. Bronchofiber scope one
3. Ultra sound one

The above equipment will help in diagnosis and treatment of the great number of respiratory disease patients, thus enabling us to respond to the need for adequate providing of health care to the patients in the Republic of Macedonia.

State Secretary

Dr. Avzilatif/Xhemaili

Appendices-5 Cost Estimation Borne by the Recipient Country

Expense borne by Macedonia is for removing the existing X-ray equipment in the Institute of Radiology.

Table Cost Estimation Borne by the Recipient Country

| Contents of Work | Amount (US\$) |
|------------------------------------|----------------------|
| Removing the existing X-ray System | 260.00 |

Appendices-6 References

| | Name | Publisher | Year |
|---|--|--|-------------|
| 1 | Health Map In the Republic of Macedonia for 1999, 2000, 2001 part I, II, III Situation According Regions in the Republic of Macedonia | Republic Institute for Health Protection Skopje | 2002 |
| 2 | Strategy for Improvement of Health Protection of the Population in the Republic of Macedonia (Excerpt) | Macedonian Academy of Sciences and Arts Ministry of Health | 2001 |
| 3 | Staff Appraisal Report Former Yugoslav Republic of Macedonia Health Sector Transition Project | The World Bank Human Resources Sector Operations Division Country Department I Europe and Central Asia Region | 1996 |
| 4 | Statistical Year Book of the Republic of Macedonia 2001 | Republic of Macedonia State Statistical Office | 2001 |
| 5 | Health Insurance Law General Provisions | Health Insurance Fund | |