NO.

BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
ESTABLISHMENT OF REGIONAL HEALTH SERVICE
AND
DIAGNOSIS CENTERS
IN
MONGOLIA

JANUARY 2000

JAPAN INTERNATIONAL COOPERATION AGENCY

BINKO LTD.

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PREFACE

In response to a request from the Government of the Republic of Mongolia, the Government of Japan decided to conduct a basic design study on the project for Establishment of Regional Health Services and Diagnosis Centers in Mongolia and entrusted the study to the Japan International Cooperation Agency (JICA).

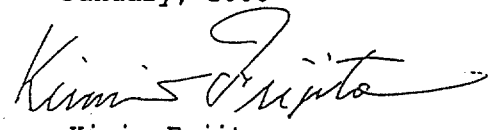
JICA sent to Mongolia a study team from July 27th to September 8th, 1999.

The team held discussions with the officials concerned of the Government of Mongolia, 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 Mongolia in order to discuss a draft basic design from October 25th to November 19th, 1999, 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 Mongolia for their close cooperation extended to the teams.

January, 2000



Kimio Fujita
President
Japan International Cooperation Agency

January, 2000

LETTER OF TRANSMITTAL

We are pleased to submit you the basic design study report on the project for Establishment of Regional Health Services and Diagnosis Centers in Mongolia.

This study was conducted by Binko Ltd., under a contract to JICA, during the period from July 23rd, 1999 to February 23rd, 2000. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Mongolia 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,

Hiroaki Narita
Project manager,
Basic design study team on
Establishment of
Regional Health Services and
Diagnosis Centers
in Mongolia
Binko Ltd.

Location Map

Project Facility

①Hovd Health Service & Diagnosis Center
②Dornod Health Service & Diagnosis Center
③Ovorhangai Health Service & Diagnosis Center
④Dornogovi General Hospital
⑤Bayan-Olgii General Hospital
⑥Bulgan General Hospital
⑦Govi-Altai General Hospital

ABBREVIATIONS

ADB	Asian Development Bank
AIFO	Associazione Italiana Amici di Raoul Follerau
AVR	Automatic Voltage Regulator
BHN	Basic Human Needs
CVD	Cardiovascular Diseases
DANIDA	Danish International Development Agency
E/N	Exchange of Notes
GDP	Gross Domestic Product
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit
HMIEC	Health Management, Information and Education Centre
JICA	Japan International Cooperation Agency
KVA	Kilo Volt Ampere
LKA	(NGO in Finland)
MOHSW	Ministry of Health and Social Welfare
NGO	Non Governmental Organization
SANTE-SUD	(NGO in France)
STD	Sexually Transmitted Disease
TACIS	Technical Assistance for CIS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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CHAPTER 1

BACKGROUND OF THE PROJECT

CHAPTER 1 BACKGROUND OF THE PROJECT

1-1 Details of the Request

Mongolia was the second oldest socialistic country in the world following Soviet Union, and had been received a strong influence of the former Soviet Union after having its independence in 1921. Against the deadlock situation of the socialistic state-planned economy, free-market economy has been embraced since 1987. As the system reformation advanced, the democracy movement began to activate at the end of 1989. One party dictatorship regime by the Mongolian People's Revolutionary Party was driven into the mass resignation and the coalition cabinet was born in 1990.

As the result of victory of coalition of democratic power, the transitional parliament adopted and enforced new constitution in 1992, guaranteeing human rights and private ownership. The first parliamentary election in accordance with the new constitution was held in 1992 to form the Ikh Hural that is one house parliament. In this election the Mongolian People's Revolutionary Party won and its single-party government was started again, in which a structural adjustment was executed under the guidance of IMF. While this reformation brought the success on decreasing the inflation rate and outgrowing from negative economic growth rate, people's dissatisfaction had expanded for the problems such as the increase of the unemployment and the expansion of gulf between wealth and poverty.

Not only the deterioration of national economy but also the suspension of economical assistance from Russia and change of political system tight the financial condition of the government, so that it is difficult to secure the appropriation for the health and medical service sector. Especially, a regional difference between the city part and the rural village part is becoming egregious. While most people reside in the capital Ulaanbaatar and its suburbs are able to access appropriate medical treatment service, those who reside in the rural area can not. The general hospital of the

aimag (or prefecture) class exists in the heartland in the region, however, being not able to perform enough medical treatment service to the local residents because of an insufficient medical treatment system in the current status.

In the field of health and medical services in Mongolia, Grant Aid from Japan has been contributing to the improvement of medical services in the Ulaanbaatar metropolitan area and on the aimag level in the province, through implementation of "the Project for Improvement of Basic Medical Equipment, phase I (1/2)" in 1991, "the Project for Improvement of Basic Medical Equipment, phase II (2/2)" in 1993, and "the Project for Improvement of Medical Equipment for Second General Hospital" in 1998.

As of January 2000, the equipment procured under "the Project for Improvement of Medical Equipment for Second General Hospital" has been carried into the hospital concerned, and the installation has already been completed for most of those equipment. Those are expected to reach completion of the hand-over shortly, and be put into regular operation in April 2000 and after. According to disposition of the equipment procured under those projects, it will be possible to provide more substantial medical services in the metropolitan area.

However, many of the existing equipment (products of former Soviet Union) used in the medical facilities of regional areas are in the long service, and the malfunction due to deterioration is a serious concern. The countermove to such situation is now required. For the equipment of aimag general hospitals installed under “the Project for Improvement of Basic Medical Equipment” by Japan’s grant aid, some of the equipment are now fairly deteriorated because 6～10 years have passed since implementation of the projects. Therefore, renewal and supplementation of those equipment are urgently required.

Under such circumstances, the Mongolian government, while promoting a plan for establishing three regional health service and diagnosis centers, selected four aimag general hospitals having a problem of deterioration

of medical equipment and requiring urgent improvement of those equipment. The government established a plan for improving the medical service system on a local scale through procuring medical equipment to those facilities, so as to gradually rectify regional gaps between cities and rural areas.

However, it takes a very long time for Mongolia to promote this plan as a project of its own because of limited funds, and this is the reason why the Mongolian government made a request for a Grant Aid to Japan this time.

1-2 Outline of the Request

1-2-1 Purpose of the Request

The Mongolian government divided the national territory other than Ulaanbaatar region and the southern part region into three zones (the plan currently under promotion), nominated three aimag general hospitals (in Hovd aimag, Dornod aimag and Ovorhangai aimag) located in the heartland of the respective zones as a top referral hospital in each zone, and promote them to the higher rank as the regional health and diagnosis centers. The government intends to reinforce the regional health and medical system with the regional health service and diagnosis centers and to improve the medical services on regional level which are not satisfactorily carried out.

At the same time, the Mongolian government intends to improve other four aimag general hospitals, which are appointed as hospitals in priority area for improvement of medical services, and where the existing medical equipment is very much deteriorated and its urgent improvement is required. The government also intends to establish such system that enables to improve medical services on the 3rd level in provincial areas and to contribute to supply of proper medical services to the local residents. Accordingly, the dependence on the above-mentioned health service and diagnosis centers and other upper-level medical facilities

in the metropolitan area is reduced, and the regional gaps between cities and rural areas are rectified.

1-2-2 Contents of the Request

(1) Project Facilities

The project facilities are the following seven facilities.

Regional Health Service and Diagnosis Center (3 facilities)

① Hovd Health Service and Diagnosis Center
② Dornod Health Service and Diagnosis Center
③ Ovorhangai Health Service and Diagnosis Center

Aimag General Hospital (4 facilities)

④ Dornogovi General Hospital
⑤ Bayan-Olgii General Hospital
⑥ Bulgan General Hospital
⑦ Govi-Altai General Hospital

(2) Equipment in request

The equipment requested for procurement in this project is 174 items, and the contents are as follows.

1. Diagnostic Rooms

Stethoscope, Sphygmomanometer (desk type), Sphygmomanometer (pocket type), Obstetric stethoscope, Distance test chart, Percussion hammer, Diagnostic set, Spirometer, Infant scale, ECG, Portable ECG, Electroencephalograph, Cysto-urethroscope (B set), Gastrointestinal fiberscope, Laparoscope set, Endoscopic TV system, Light source for endoscopes, Ultrasound system, Ultrasound doppler examination system, Portable ultrasound system, Laryngoscope set, Bronchofiberscope

2. Surgery Department

Operating light (built-in), Operating light (floor mobile stand type), Operating table, Suction unit, Operating microscope, Coagulator, Stand, Revolving chair, Instrument cabinet, Patient cart, Pulmonary surgery instrument set, Hepato-cholecystotomy instrument set, Osteosurgery instrument set, Nephrectomy instrument set, Manual dermatome, Standard plastic surgery set, Surgical instrument set for infant, Neurosurgery instrument set, Gastrectomy instrument set, Microvascular surgical instrument set, Operating instrument set, Surgical suture needle set, Blood vessel suture needle set, Intestinal suture needle set, Needle holder, Operating knife set, Prostatomy instrument set, First aid surgery instrument set, Small operating instrument set

3. Emergency & Reanimation Department

Bedside monitor, Defibrillator, Ventilator, Anaesthesia apparatus with monitor, Anaesthesia ventilator, Suction unit, Endtracheal set, Venotomy instrument set, Emergency tracheotomy instrument set, Emergency aid box

4. Obstetrics & Gynaecology Department

Vacuum extractor, Gynaecological examining unit, Aus-suction unit, Artificial abortion instrument set, Gynaecology stereoscope set, Fetal actocardiograph, Cryosurgery system for gynaecology, Obstetrics operation instrument set, Gynaecology examination instrument set, Cusco‘s vaginal speculum, Delivery table, Examining table, Ultrasound system (with options), Gynaecologic examining instrument set, Gynaecologic operation table, Infant ventilator

5. Laboratory

Laboratory monocular microscope, Laboratory binocular microscope, Thermostat, Blood cell counter, Differential leukocyte counter, Hemoglobinmeter, pH meter, Vacuumtaner, Needles for cacuumtaner, Auto

diluter, Analytical balance, Distilling apparatus, Biochemical analyser, Urine analyser, Bacteriological analysis set, Drying oven, Clinical spectrophotometer, Automatic biochemical analyser, Electrophoresis system

6. Radiology Department

Angiographic X-ray system, Mobile X-ray unit, Fluorography unit, Dental X-ray unit, Processing tank, X-ray film dryer, X-ray film cassette, X-ray film illuminator, Protective gloves, Dosimeter & charger, Mammographic X-ray stand, Darkroom lamp, Protective glasses

7. Dental Department

Portable treatment unit, Dental examination instrument set, Dental treatment instrument set

8. Paediatrics Department

Infant incubator, Infant ventilator, Infant warmer, Oxygen concentrator, Infant sphygmomanometer, Infant rectal thermometer, Suction unit, Oxymeter

9. Ophthalmic Department

Ophthalmic operation instrument set, Cornea transplantation instrument set, Trial lens set, Synoptiscope, Binocular ophthalmoscope, Ophthalmic YAG laser system, Indirect ophthalmoscope with halogen lamp, Universal trial frame, Cross cylinder, Universal ophthalmic measure, Stereo fundus camera, Echo scan, Ophthalmic operation microscope, Slit lamp microscope set

10. ENT Department

Otosurgery instrument set, Head mirror, Sinus surgery instrument set, Audiometer, ENT surgery instrument set, Chair-mounted unit, Laryngoscope set, Oto-nasal scope set, Portable treatment unit, Operating stool

11. Physiotherapy Department

Ultrasound therapy unit, Microwave therapy unit, Inductothermal treatment apparatus, Electric traction, Restrator, Curved back board exerciser

12. Others

Medical refrigerator, High pressure steam sterilizer, Autoclave, Drying cabinet, Instrument table, Autopsy instrument set, Morgue refrigerator, Sliding microtome, Ultraviolet air sterilizer, Refrigerated centrifuge, Instrument cabinet, Bactericidal lamp, Patient cart, Freezer, Buret support, Water boiler, Personal computer, Printer, Copier, Examination light, Ambulance (4×4), Height/weight scale, Folding litter, I.V. hanger stand

CHAPTER 2

CONTENTS OF THE PROJECT

CHAPTER 2 CONTENTS OF THE PROJECT

2-1 Objectives of the Project

The Ministry of Health and Social Welfare elaborated a new scheme for improvement of the regional health and medical services in Mongolia to divide the whole country, excepting Ulaanbaatar region and the southern part region, into three regions, and to enhance the function of the three hospitals nominated as “regional health service and diagnosis center” which is the top referral facility for each region.

For aimag general hospitals that offer health and medical services on the 3rd level (aimag level), the Ministry is also promoting a plan to improve the medical functions of four hospitals among them, where the existing equipment is especially superannuated and renewal or supplementation of the medical equipment is urgently required.

The objectives of this project are to reduce regional gaps in medical sector between cities and rural areas by improving medical services at those facilities through Japan’s support in improvement of medical equipment.

2-2 Basic Concept of the Project

The regional gaps between the city part and the rural village part are egregious in Mongolian health sector. So it is strongly desired to reform the health and medical system and to offer enough health and medical services to the local residents.

The facilities nominated as “regional health and diagnosis center” are requested to provide central medical activities as the top of health care system in the region. However, superannuating of medical equipment unwillingly causes problems in those hospitals, such as functional depression of the facilities, and qualitative and quantitative lack of equipment due to the trouble and damage.

In consideration of such a situation, this project shall benefit to diagnosis and medical treatment of the local residents by recovering function of the facilities through renewal and/or replacement of the medical equipment. The enhancement of referral system at regional health service and diagnosis centers will evade centralization of the high-level medical care in the metropolitan area. Consequently, it shall contribute to reduce total economic burdens of the patients living in local areas.

Moreover, this project is implemented with a view to establishing the systems that reduce the dependency on the high ranking medical facilities in the metropolitan area. By including aimag general hospitals, which provide medical services on the 3rd level (aimag level), to the project, the project assumes to be more effective. Therefore, the renewal and/or replacement of the basic medical equipment of other four aimag general hospitals by this project is necessary.

2-2-1 Cooperation Policy

The cooperation policy of this project was planned based on the above-mentioned basic concept. The contents are as follows.

① In this project, such equipment shall be procured, which benefits to the diagnosis, treatment and disease prevention of the local residents.

② This project shall be such an equipment procurement plan that enables the project facilities to contribute to enhancement of the regional referral system as regional health service and diagnosis center or aimag general hospital. In principle, the equipment procurement shall be done by renewal or supplementation of the existing equipment that admittedly loses its original function for superannuating or runs quantitatively short, and which is admitted the necessity of prompt procurement.

③ The equipment shall need neither securing new personnel, acquisition of the operation techniques nor a large sum of operation and maintenance budget.

④ The equipment shall be selected to meet the current status of the project facilities by examining the scale, contents of the activities, the number of patients, and disease tendencies.

⑤ The equipment of which reagents and consumables can be procured in a local domestic market, shall be selected for the project.

⑥ The level of the equipment procured in the past Japan's Grant Aid projects is assumed to be a standard bench mark of equipment selection for this project.

2-2-2 Study in Contents of the Request

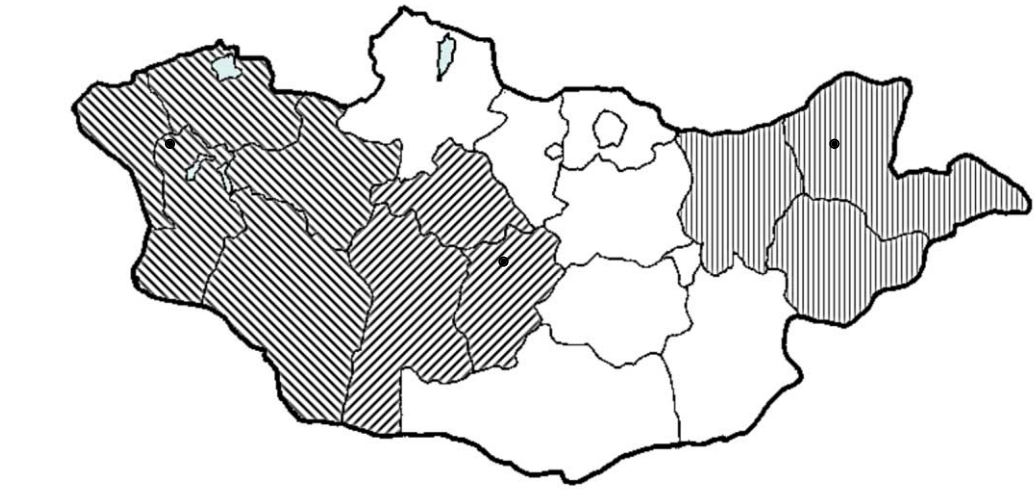
(1) Confirmation of project site (designated facilities)

The designated facilities are three regional health service and diagnosis centers and four aimag general hospitals, and all are important medical facilities, which fulfil the functions as a key medical facility in the region.

Regional Health Service and Diagnosis Centers ('000 persons)

	Name of Facilities	Area to be covered	Persons of area
1	Hovd Health Service and Diagnosis Center	・Bayan-Olgii Aimag ・Uvs Aimag ・Zavhan Aimag ・Hovd Aimag ・Govi-Altai Aimag	469.6
2	Dornod Health Service and Diagnosis Center	・Dornod Aimag ・Suhbaatar Aimag ・Hentii Aimag	221.7
3	Ovorhangai Health Service and Diagnosis Center	・Arhangai Aimag ・Ovorhangai Aimag ・Bayanhongor Aimag	312.2

Figure 2-1 Area to be covered by
Regional Health Service and Diagnosis Centers

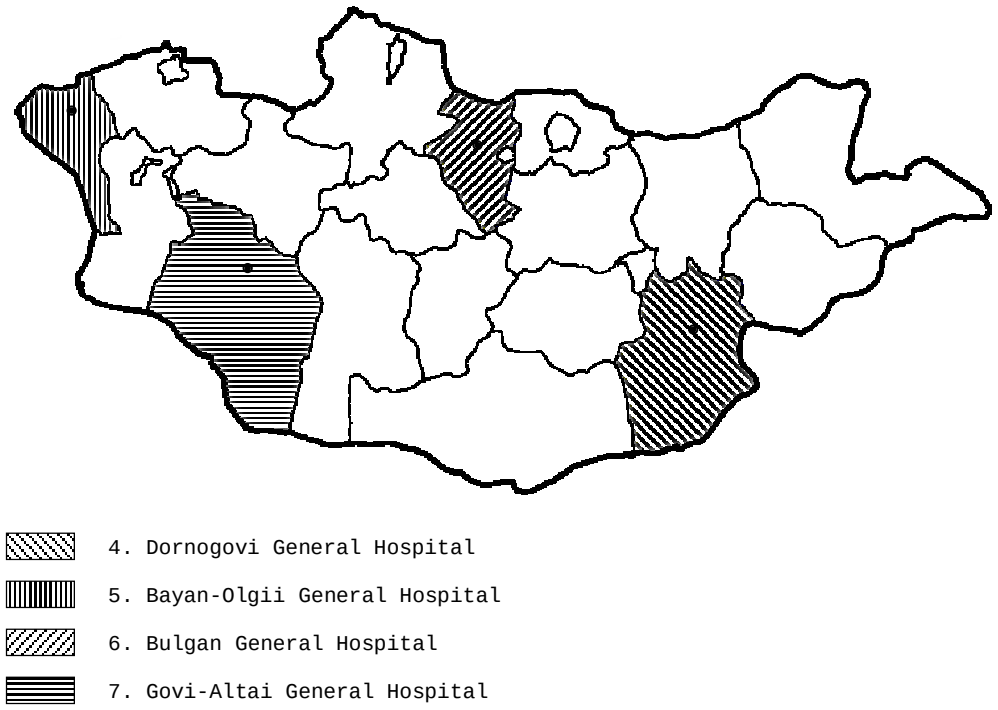


1. Hovd Health Service and Diagnosis Center
2. Dornod Health Service and Diagnosis Center
3. Ovorhangai Health Service and Diagnosis Center

Aimag General Hospitals ('000 persons)

	Name of Facilities	Area to be covered	Persons of area
4	Dornogovi General Hospital	(Sainshand City) Dornogovi Aimag	49.9
5	Bayan-Olgii General Hospital	(Olgii City) Bayan-Olgii Aimag	96.2
6	Bulgan General Hospital	(Bulgan City) Bulgan Aimag	66.1
7	Govi-Altai General Hospital	(Altai City) Govi-Altai Aimag	74.9

Figure 2-2 Area to be covered by Aimag General Hospitals



(2) Study in the project facilities

① Regional Health Service and Diagnosis Center (3 facilities)

In establishing those centers, the Mongolian government designated, as facilities of top priority, the Hovd Health Service and Diagnosis Center, covering 5 aimags in the western part region, and the Dornod Health Service and Diagnosis Center, covering 3 aimags in the eastern part region, and also intends to improve the Ovorhangai Health Service and Diagnosis Center, covering 3 aimags in the southwestern part region.

Especially Hovd aimag and Dornod aimag, which are more than 1,000 km away from the capital, have poor access to upper-level medical facilities in Ulaanbaatar, and the referral patients in those aimags are subject to a lot of physical, mental and financial burdens.

Ovorhangai aimag is comparatively closer to Ulaanbaatar than the above 2 aimags, and transfer of the referral patients is made mainly by land and by means of vehicles.

Although the situation of roads is comparatively well maintained, it takes at least 6~7 hours for transfer of the referral patients and the transfer is rather difficult during the winter season.

On the other hand, the Ulaanbaatar metropolitan area and the southern part region do not have any health service and diagnosis center but have comparatively easy access to Ulaanbaatar and a benefit of the availability of railway network in those areas. For that reason, necessity of establishing such centers in those areas is rather low.

Judging from such situation, the improvement of the three selected health service and diagnosis centers is expected to contribute to the improvement of medical services in the regions concerned, and play an important role in reducing regional gaps between cities and rural areas in the field of health and medical services.

② Aimag General Hospital (4 facilities)

Under the current medical service system, the general hospitals of aimag level are the facilities providing medical services of the 3rd level and are positioned as top referral hospitals in the respective aimags.

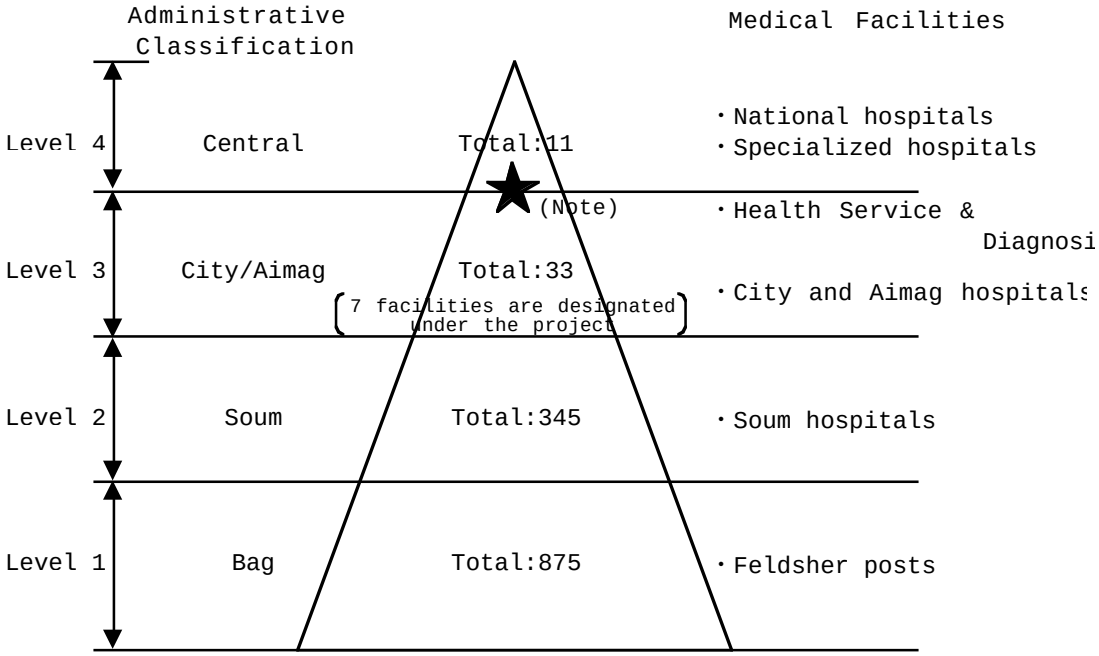
Dornogovi General Hospital and Bulgan General Hospital are located in areas with no plan for establishment of health service and diagnosis center, but are expected to contribute to qualitative and quantitative improvement of medical services in the areas through renewal and supplementation of the existing but deteriorated equipment in those hospitals.

Also, for the western part region where a health service and diagnosis center is to be established, the center covers wide area (total 5 aimags including Hovd aimag) as its service area, and referral of the patients to Ulaanbaatar is rather difficult. Due to the above reasons, the reinforcement of health and medical service system in the respective area will be possible by including the general hospitals in 2 aimags (Bayan-Olgii and Govi-Altai aimags) as the project facilities.

(3) Study in the role and function of the project facilities

The role of the Ministry of Health and Social Welfare in the capital Ulaanbaatar is to present national health policy, action plan, long-term development strategy, and short-term strategy for health sector. Most of the health and medical facilities are under jurisdiction of the ministry. As the medical facilities at a central level, there are 11 national hospitals and specialized hospitals. There are 33 general hospitals of aimag or city level, 345 soum hospitals and 875 feldsher posts of bag level.

The medical treatment system has been established as Figure 2-3. Medical services are provided along such a hierarchy of the medical treatment system that consists of 4 tiers. National hospitals and specialized hospitals of 4th level constitute the summit and under which is followed by other 3 tiers, city and aimag hospitals of 3rd level, soum hospitals of 2nd level, and feldsher posts of 1st level at the bottom of hierarchy. The medical treatment system is shown in the following.



Source: MOHSW (1999)

Figure 2-3 Chart of the medical treatment system

★(Note) Three designated Health Service and Diagnosis Centers are located to the intermediate of the level 4 and the level 3 of the above chart, which is introduced under a new plan promoted by the Ministry of Health and Social Welfare.

As described above, the regional health service and diagnosis centers are expected to reduce number of the patients who have so far been referred to 4th level medical facilities in Ulaanbaatar and thus assume the role of correcting regional differences between cities and rural areas in the field of health and medical services, by providing medical services of intermediate level between 3rd level and 4th level medical services and improving services in prevention, diagnosis and treatment on local level.

On the other hand, the aimag general hospitals providing inhabitants of the aimag with the 3rd level medical services are positioned as important leading medical facilities in the respective aimags.

By renewing and/or supplementing the existing but deteriorated equipment in those facilities, it becomes possible to restore the functions, which have so far been stagnant because of equipment failures or troubles, and to provide medical services improved both qualitatively and quantitatively.

Such improvement will enable to indirectly support achievement of the "strategic targets" of the "national health policy" promoted by the Mongolian government.

(4) Study in the requested equipment

1) Requested equipment list

Japanese Basic Design Study Team executed a site survey (August 1999) on the equipment requested in the list presented from the designated facilities. Afterwards, various conferences on contents of the requested equipment list were run over between the Basic Design Study Team and the related parties in each hospitals. And some proposal was made to enhance the basic function of the project facilities as regional health service and diagnosis center or aimag general hospital. As the conclusion of conferences, some corrections and changes were

made on the contents. This modified list was presented as the final of the requested equipment list from each project hospital, and both parties had agreed to fix priority A, B and C to each item in the list.

After running through complete investigation and conferences at each hospital, the final conference on the requested equipment was held with the Ministry of Health and Social Welfare, who is the responsible agency of the project. The result was appended as a requested equipment list to the Minutes of Discussions.

2) Study in the equipment

This project supports the "National Health Policy" promoted by the Ministry of Health and Social Welfare. And the aim of the project is to rectify the regional gaps in the health and medical services between metropolitan area and rural areas. For this purpose, the functions of high-rank referral facilities in the region and aimag shall be enhanced under this project. It contributes to the improvement of health and medical service system in the rural areas and the provision of proper medical services to the local residents.

Accordingly, the equipment used not directly to diagnosis and treatment activity (e.g. computer and copy machine in the administrative department) shall not be included in this project. The medical equipment, necessary for the essential activity performed in actual status of the project facilities and for accomplishment of the functions as regional health service and diagnosis center or aimag general hospital, shall be provided.

Based on the above-mentioned concept, the necessity, urgency and adequacy of the requested equipment were examined, considering the role, function and current status of the project facilities. The equipment for the consideration was mainly of which fixed priority B evaluation in each facility. The result of the examination is shown as follows.

① **Hovd Health Service and Diagnosis Center**

Electroencephalograph (A1-12)

Requested:1 Priority:B⁻ Planned:0

This is auxiliary equipment used for diagnosing the state of central nervous system about epilepsy and other abnormalities such as cerebral tumor, trouble of cerebral blood vessel, external wound in the head, etc. Once there was a time when this equipment was used for checking presence of local cerebral tumor, but today its use is almost restricted to diagnosis of epilepsy and judgement of brain death.

Neurology Department & Psychiatry Department are provided in this Center, but they have no electroencephalograph nor is there anybody capable of operating this equipment among the doctors of these Departments. Moreover, because a large amount of special recording paper is used for a single inspection (approximately 30 minutes per patient), appropriateness of procurement in this project is judged low, considering education of operating personnel, procurement of consumables, etc., in the future.

Laparoscope set (A1-15)

Requested:1 Priority:B⁻ Planned:0

This is equipment used for direct observation of the surface of the liver, and for diagnosis and operation of tumor in gall bladder, stomach, intestines and gynecology. Inspection and operation made by using a laparoscope provide such advantages as possibility of direct observation, small wound and short working time. On the other hand, it requires a high degree of skill on the doctors because it involves a risk of large loss of blood.

This Center is ranked as a diagnosing organization of lower class than national university hospital on the 4th level among the health & medical system in Mongolia. Considering the diagnosing techniques and referral

system, appropriateness of preparation is judged as low. Therefore, this equipment will not be procured in this project.

Ultrasound doppler examination system (A1-20)

Requested:1 Priority:B^{-} Planned:0

This is a system used mainly for peripheral hematoncometry, judgement of arteriosclerosis, narrowing or blockade of an artery, inspection of heart and judgement of rise in portal vein pressure.

In this Center, patients with heart diseases such as cardiamorphia, are referred to a national hospital in Ulaanbaatar, and no operation related to such diseases is performed. For that reason, appropriateness of procurement in this project is judged low.

Neurosurgery instrument set (A2-18)

Requested:1 Priority:B^{+} Planned:1

This is a set of forceps and other equipment and devices used for the operation of head. At this Center, several patients fallen from horse are carried in monthly, and some patients with wound in the head are included among them. There are cases where, for those patients, it becomes necessary to perform an operation of opening the skull for removing blood lumps accumulated in the brain. At present, the drills for opening the skull, the forceps and other related devices are rather old because they were purchased no later than 1975, and they are also insufficient in types. Considering the emergency of head operations, it is believed appropriate to renew at least one set of this item in this project.

Ventilator (A3-3)

Requested:1 Priority:B^{+} Planned:1

Ventilator is used for patients with serious disease of respiratory organ and weak spontaneous respiration as well as for patients under operation and in convalescence after operation. At present, there is a ventilator

attached to anesthesia apparatus in the operation room, but no independent ventilator is available. In case of an emergency, the ventilator is borrowed from the operation room. It is highly necessary to prepare independent ventilator urgently, and it is judged appropriate to prepare this item at the irreducible minimum of a necessity in this project.

Emergency tracheotomy instrument set (A3-9)

Requested:1 Priority:B^- Planned:0

This is an instrument set used for emergency tracheotomy practiced to patients with cardiac standstill and stop of respiration. At present, primary lifesaving measures are taken for emergency patients carried in this Center, but no secondary lifesaving measures are taken for them. The reason is that the hospital has no equipment necessary for emergency resuscitation nor doctor skilled in secondary lifesaving. It is believed essential to train doctors on treating methods of secondary lifesaving, before preparing equipment necessary for secondary lifesaving and, therefore, preparation in this project is considered as inappropriate.

Hemoglobinmeter (A5-6)

Requested:3 Priority:B^+ Planned:1

This equipment is used for measuring the amount of hemoglobin. While this Center has a hemoglobinmeter of Japanese make purchased 5 years ago, it is currently using a colorimeter made in former Soviet Union to make measurement for approximately 30 patients a day, because said hemoglobinmeter is in trouble. However, the colorimeter of Soviet make is rather old and deteriorated, and the Center has much trouble with the daily inspection. For that reason, it is quite appropriate to procure minimum one unit of this equipment in this project because improvement of inspection function can be expected with its renewal.

Auto diluter (A5-10)

Requested:1 Priority:B+ Planned:1

This apparatus automatically performs dilution and admixture of reagents. It is used for diverse and complicated dilution and admixture, such as repetition and continuation, requested for the preparation of samples, i.e. blood serum, etc. While a manually operated dispenser is used currently, it requires high skill and experience for the preparation of samples. It is judged appropriate to procure an auto diluter in this project, because accurate admixture and convenience of work can be expected with introduction of this apparatus.

X-ray film dryer (A6-6)

Requested:1 Priority:B+ Planned:1

This equipment is used for drying developed X-ray films. One dryer manufactured in former Soviet Union is disposed, but is now unfit for use because of deterioration. For that reason, developed X-ray films are currently submitted to natural drying. The time required for drying X-ray films can be shortened by providing a dryer in this project.

Dosimeter and charger (A6-10)

Requested:2 Priority:B+ Planned:1

This equipment is used for measuring the amount of X-ray exposure. It will be carried by the doctor in the X-ray room, to measure the amount of X-ray exposure per day so as to control safety of the doctor. As this equipment is not used in actual medical services, one unit will be prepared in this project, despite the request of two units.

Darkroom lamp (A6-12)

Requested:1 Priority:B+ Planned:1

This lamp is used in the darkroom. Although this item is included in the onerous equipment preparation plan of the Asian Development Bank, procurement of one piece is planned as it is believed appropriate to

prepare the lamp in this project considering high frequency of use of this item.

Cornea transplantation instrument set (A9-2)

Requested:1 Priority:B+ Planned:1

This is an instrument set of forceps, etc., used in operations for transplantation of cornea. While no less than 30 operations for cataract, glaucoma and excision of crystalline lens are being made annually in this Center, no transplantation of cornea is made at present because of restriction of the operation equipment. However, the onerous equipment preparation plan of the Asian Development Bank includes procurement of ophthalmic operation microscope (1 unit), but not that of any operation instruments such as forceps and so on. Considering future utilization of ophthalmic operation microscope and the synergic effects with the onerous equipment preparation plan of the Asian Development Bank, it is believed appropriate to prepare one set of cornea transplantation instrument set in this project.

Synoptiscope (A9-4)

Requested:1 Priority:B+ Planned:1

This equipment is used for the measurement of angle of squint, inspection of cardinal ocular movements, training after strabismus correcting operation and diagnosis of ophthalmoplegia. At present, approximately 40 ophthalmologic operations are annually conducted in this Center, and about one half of them are in youth and those for correction of strabismus. There is good reason to plan this item in this project, because it will enable the patients to receive training after strabismus correcting operation which could not be done in the past and to also expect improvement in the rate of complete recovery by postoperative training.

Indirect ophthalmoscope with halogen lamp (A9-7)

Requested:1 Priority:B+ Planned:1

The apparatus is used for checking the depth of lesion at eyeground, and for inspection of turbidity of retina or optic media such as cataract. At present, 20 patients per day are diagnosed, and improvement in the rapidity and accuracy of diagnosis can be expected with introduction of an indirect ophthalmoscope.

Procurement of one unit is planned in this project.

Morgue refrigerator (2 Body) (A12-7)

Requested:1 Priority:B- Planned:0

This refrigerator is used for storing dead bodies. The morgue room in this facility does not have function of cold storage. This hospital is located in a dry area in the western part of the country, at high altitude and low humidity. It is judged as low in necessity or urgency for the morgue of corpses and dissection. Therefore, this equipment will not be procured in this project because it is an "equipment with small effects against cost".

Ambulance (A12-24)

Requested:2 Priority:B+ Planned:2

This hospital has no ambulance and is using jeeps of Russian make with a capacity of 5 seats each for the daily first aid services. In the cabin there is no space for laying the patient for emergency treatment nor is there any space for loading first aid equipment. On the other hand, this Center covers 5 aimags in the western region and receives referral patients in an area up to 250km in the north and 200km in the south. Currently, the average monthly distance covered by a single vehicle is approximately 7,000km, and the total number of dispatches is approximately 2,300 times.

Preparation of ambulances in this project is judged as appropriate, considering the benefits and the frequency of use of ambulances.

I.V. hanger stand (A13-3)

Requested:20 Priority:B- Planned:0

This I.V. hanger stand is used for holding infusion bottles and bags. Since this is a simple stand and also from the viewpoint that this item may well be procured by self efforts of this Center, there is no sufficient reason to procure this item in this project and, therefore, it will not be supplied in this project.

② **Dornod Health Service and Diagnosis Center**

Electroencephalograph (A1-12)

Requested:1 Priority:B- Planned:0

This is auxiliary equipment used for judging epilepsy, state of brain death, etc. This Center has Neurology Department & Psychiatry Department, and is daily providing 20 inpatients with neural diseases with medication services. At present, this Center has no electroencephalograph nor is there any staff capable of operating this equipment. Moreover, there is no plan for formation of operating personnel in the future, and it is extremely difficult to procure necessary consumables in the local market. For that reason, appropriateness of preparation is judged as low and, therefore, this equipment will not be supplied in this project.

Laparoscope set (A1-15)

Requested:1 Priority:B- Planned:0

This is equipment used for direct observation and treatment of diseases in internal organs such as liver, etc. This Center does not have any doctor capable of operating this equipment, and the Center is ranked as facilities of lower class than national university hospital on the 4th level in the health & medical system in Mongolia. Judging from the current diagnosing techniques and referral system, it seems better to put procurement of this equipment in this project on the shelf.

Ultrasound doppler examination system (A1-20)

Requested:1 Priority:B- Planned:0

This is a system used for peripheral hematoncometry, inspection of heart, etc. In the ultrasound examination at this Center, the inspections are mainly practiced with priority given to the epigastrium. At present, patients with heart diseases requiring ultrasound examination of circulatory system such as heart, etc. are referred to a national hospital in Ulaanbaatar. This Center does not have any doctor capable of operating

this equipment, nor any plan for disposing such doctor in the near future. For that reason, use of this equipment under the current situation is difficult.

Neurosurgery instrument set (A2-18)

Requested:1 Priority:B^{+} Planned:1

This is a set of forceps and other equipment and devices used for the operation of head. At present, this Center is performing neurosurgical operations, at a non-scheduled basis, by inviting a doctor from a national hospital in Ulaanbaatar. However, since the equipment owned by this Center is rather old and is also short in the types of forceps, the doctor of the national hospital must carry the equipment necessary for the operation with him on each occasion. Because this kind of treatment by visiting doctor must be made during a period when the neurosurgical equipment is not used in the national hospital, the frequency of the visit and the period of treatment by visiting doctor of a national hospital are rather limited. Procurement of this item in this project is expected to facilitate treatment by visiting doctor of national hospital and, therefore, it is judged appropriate to supply this equipment in this project.

Urine analyser (A5-14)

Requested:1 Priority:B^{-} Planned:0

This is a system for automatically performing urine inspection. This equipment, characterized with a capacity of dealing with a large volume of samples in a short time, is widely used in hospitals dealing with a large number of samples. At this Center, 2 examination doctors are inspecting samples of approximately 50 patients each day. This is not a volume requiring use of a urine analyzer for the job. Moreover, a large volume of consumables such as reagents, recording paper, etc. are used in connection with the treatment with this equipment, and it is believed difficult to procure those materials continually in the local market.

Procurement of this item in this project will be put on the shelf, from the viewpoint that this item is "equipment with small effects against cost, and equipment of which consumables and spare parts are difficult to procure in the local market".

Dosimeter and charger (A6-10)

Requested:2 Priority:B^+ Planned:1

This equipment is used for measuring the amount of X-ray exposure. It will be carried by the doctor in the X-ray room, to measure the amount of allowable X-ray exposure per day so as to control the doctor's safety. As this equipment is not used in actual medical services, one unit will be prepared in this project, yet the request is procurement of two units.

Portable Treatment Unit (A7-1)

Requested:1 Priority:C→B^+ Planned:1

At the time of explanation on Draft Basic Design Study, a strong request of procurement for one set of this portable dental treatment unit (Priority:C) has been passed from the reason that the effective medical service can not be extended by existing ones.

This Center is monthly providing the respective areas under its coverage with medical services by holding traveling clinic to 13 soum hospitals in the aimag. However, the portable treatment unit carried for the traveling clinic is a product of former Soviet Union made in 1970s, and is already deteriorated. It was found that continuous execution of the traveling clinic is not possible as it stands. The 80% of the patients visiting this Center for treatment are the serious cases who have aggravating dental caries due to not receiving treatment at the early stage. Especially, the average number of caries per an infant is “2.8”, and it becomes worse as compared with the former average of “1.0”.

The procurement of this equipment under this project is judged as that it especially contributes to improvement of the quality for dental treatment for children.

Total number of patients is 14,900 in annual, and those who come for the treatment from the local area are about 1,400 (9.4% of the total patients). In case this equipment is procured under the project and used in the travelling clinic, it will contribute to reduce the economic burden on those patients from local area, e.g. transport expenses &c., and also contribute to reduce the number of serious cases due to the dental treatment at early stage. Therefore, procurement of this equipment is judged appropriate.

Indirect ophthalmoscope with halogen lamp (A9-7)

Requested:1 Priority:B^{+} Planned:1

This is equipment used for checking the depth of lesion at eyeground, and for inspection of turbidity of retina or optic media such as cataract, etc. This Center is diagnosing no less than 30 patients per day, and is performing over 10 ophthalmologic operations per year. Further improvement in the rapidity can be expected with introduction of this equipment and, therefore, it is judged appropriate to procure one unit in this project.

Morgue refrigerator (2 Body) (A12-7)

Requested:1 Priority:B^{+} Planned:1

This refrigerator is used for storing dead bodies. One unit of morgue refrigerator (max. capacity for 15 bodies) already exists in this hospital, but it is currently in trouble. This hospital is located in the eastern part of the country, at low altitude, where both temperature and humidity are high during the summer season. Moreover, there are unique customs and religious reason about storage and burial of dead bodies in this region, and the frequency of use of refrigerator is higher compared with other regions. Therefore, one unit will be procured in this project.

Ambulance (A12-24)

Requested:2 Priority:B^{+} Planned:2

At present, this Center has no ambulance and is using jeeps of Russian make with a capacity of 5 seats each for the daily first aid services. In the cabin, there is no space for laying the patient for emergency treatment nor is there any space for loading first aid equipment. On the other hand, this Center covers 3 aimags in the eastern region, and the farthest area to be covered is 350km away from the hospital. Currently, the average monthly distance covered by a single vehicle is approximately 6,100km.

Preparation of ambulances in this project is judged as highly appropriate, considering the frequency of use and the benefits of ambulances.

I.V. Hanger Stand (A13-3)

Requested:30 Priority:B^{-} Planned:0

This is a stand used for holding infusion bottles and bags. Since the stand is very simple in structure, this item may easily be procured in the local market. From the viewpoint of necessity of self-efforts by the Center, appropriateness of procurement of this equipment in this project is judged as low and, therefore, it will be excluded from the list of items to be supplied in this project.

③ Ovorhangai Health Service and Diagnosis Center

Electroencephalograph (A1-12)

Requested:1 Priority:B^{-} Planned:0

This is auxiliary equipment used for diagnosing epilepsy and brain death. The Neurology Department & Psychiatry Department of this Center have 2 doctors and facilities of hospitalization with 10 beds, but there is no doctor or medical technician capable of operating electroencephalograph. The Center has no definite plan for formation of operating personnel in the future, and it is rather difficult to procure special recording paper necessary for this equipment in the local market. For those reasons, it is difficult to supply this item in this project.

Cysto-urethroscope (A1-13)

Requested:1 Priority:B^{+} Planned:1

This equipment is used for observation, diagnosis and treatment of urethra and urinary bladder. This Center is currently referring no less than 70 patients of bladder polyp per year to a national hospital in Ulaanbaatar. If this equipment is supplied in this project, it will make it possible for the patients who have so far been transferred to the national hospital in Ulaanbaatar to receive diagnosis and treatment in their own area, and will thus enable lessening of consumption of physical power of the patients as well as the economic burden on them required for the movement to Ulaanbaatar. For that reason, necessity and appropriateness of procuring this item in this project are rather high.

Ultrasound system (A1-18)

Requested:2 Priority:B^{+} Planned:1

One unit of ultrasound system of Korean make is installed in the consultation room for family planning, but it is currently in trouble and unusable for examination. According to the examination records up to today, this room used to receive 10 patients per day. Functional

recovery of this examination room is judged as urgent, and one unit of this item will be prepared for renewal in this project.

Ultrasound doppler examination system (A1-20)

Requested:1 Priority:B^{-} Planned:0

This is a system used for peripheral hematoncometry, inspection of heart, etc. At present, this Center is practicing inspections of epigastrium mainly, while patients requiring ultrasound examination of circulatory system such as heart, etc. are referred to a national hospital in Ulaanbaatar. Considering the level of technology required for the examination and treatment of patients having diseases of circulatory system as well as the current situation of this Center, we would like to put procurement in this project on the shelf.

Portable ultrasound system (with options) (A1-21)

Requested:1 Priority:B^{+} Planned:1

This equipment is used for checking the progress of pregnancy and for measuring the fetus and diagnosing diseases in gynecology. At present, the Obstetrics and Gynecology Department is diagnosing about 30 patients each day. By procuring this equipment in this project, it will contribute to early discovery and early treatment of gynecological diseases and improve accuracy and speed of diagnosis. For that reason, procurement of one unit will be planned in this project.

Prostatomy instrument set (A2-29)

Requested:1 Priority:B^{+} Planned:1

At present, operations of prostate system are performed at twice or three times a week, but many inhabitants (rich class) in the area covered by this Center are receiving treatment at a national hospital in Ulaanbaatar which has better conditions of facilities and operation equipment, because of shortage of operation equipment and other unfavorable conditions of this Center. On the other hand, many of elderly people

and people of poorer class are receiving operations at this Center. One set of this equipment will be procured in this project, as it is expected that more local patients will be able to receive safer operations at this Center.

First aid surgery instrument set (A2-30)

Requested:1 Priority:B^+ Planned:1

This is a set of operation instruments used for first aid. 10 emergency patients per day are carried to this Center on the average. The operation instruments currently used in the first aid room of surgery are mostly purchased in 1980, and are now rather deteriorated and also short in types of those instruments. For that reason, there are often problems in meeting the requirements in cases of emergency. Procurement of first aid surgery instruments in this project is judged as highly appropriate, as it is expected to improve treatment of emergency patients at this Center.

Auto diluter (A5-10)

Requested:2 Priority:B^+ Planned:1

This apparatus automatically performs dilution and admixture of reagents. It is judged appropriate to procure minimum one auto diluter in this project, because accurate admixture not dependent on human skills and convenience of work can be expected with introduction of this apparatus.

Dental X-ray unit (A6-4)

Requested:1 Priority:B^+ Planned:1

In the area covered by this Center, the greater part of nonage under 17 have decayed teeth, and the number of daily average patients with decayed teeth accepted at the Center is as many as no less than 40 patients. However, this Center currently has no dental X-ray unit and cannot check the teeth and periodontia of the patients. As a result, the main method of treatment practiced here is tooth extraction. By introducing an X-ray

unit through this project, it will become possible to check the teeth and periodontia of the patients and provide treating methods other than tooth extraction. It is therefore judged as necessary to procure one in this project.

Dosimeter and charger (A6-10)

Requested:1 Priority:B^+ Planned:1

This equipment is used for measuring the amount of X-ray exposure. It will be carried by the doctor in the X-ray room, to measure the amount of allowable X-ray exposure per day so as to control the doctor's safety.

One unit will be prepared in this project.

Darkroom lamp (A6-12)

Requested:1 Priority:B^+ Planned:1

This is a lamp used in the darkroom. One piece will be planned in this project as it is an item essential for the darkroom, and also considering high frequency of use and long time of use of this item.

Portable treatment unit (A7-1)

Requested:1 Priority:B^+ Planned:1

This is a compact unit used for treatment at traveling clinic to local areas. This Center is providing the respective areas under coverage with medical services by traveling clinic every year (3 times during last year). The period of service by a single traveling clinic is about 10 days, and the number of patients diagnosed is approximately 300. However, the portable treatment unit carried for the traveling clinic is a product of former Soviet Union purchased in 1977, and is already deteriorated. Moreover, the portable turbine which is indispensable for this unit is in trouble and unfit for use. Only the forceps, etc. attached to the unit are currently used. Improvement of such situation is urgently requested, and it is highly necessary and appropriate to procure one portable treatment unit in this project.

Dental treatment instrument set (A7-3)

Requested:2 Priority:B+ Planned:2

This is a general instrument set used for dental treatment. While this Center is treating an average number of 40 patients per day, the dental unit used here is only one set of old equipment purchased 18 years ago from former Soviet Union. This Center is organizing a traveling clinic to the local area (soum) and provides medical services to the local residents as well as daily medical services at the Center. As the existing unit is carried for a traveling clinic, the time and area of the traveling clinic service are limited within the range of those which do not disturb the daily medical services at the Center. Therefore, it can not completely meet the needs. Procurement of 2 sets in this project, one set for daily medical treatment at the facility and another set for traveling clinic to soum, helps improvement of the services on the dental diagnosis and treatment.

Synoptiscope (A9-4)

Requested:1 Priority:B+ Planned:1

This equipment is used for examination of strabismus in youth, training after strabismus correcting operation and diagnosis of ophthalmoplegia, etc. in general patients. At present, a part of the equipment and devices used for ophthalmologic diagnosis and treatment in this Center are leased from outside, and the Center is paying a fixed amount of fees during the term of lease. Since the equipment is borrowed on lease, there is no guarantee for long term of stable use, and the treatment here is always full of anxiety about the future. This Center is currently treating approximately 20 patients each day, and conducting approximately 10 to 20 ophthalmologic operations annually. There is good reason to plan this item in this project, so as to improve the current situation as described above and secure a long period of stable services.

ENT surgery instrument set (A10-5)

Requested:1 Priority:B^+ Planned:1

This is an operation instrument set for E.N.T. This Center has E.N.T. diagnosing room for pediatrics and E.N.T. diagnosing room for adults, and the number of pediatrics patients treated daily in the diagnosing room is approximately 20, while that of adult patients is about 30. The weekly average number of operations is around 4 times, with an annual number of no less than 200 cases. Considering the number of operations per year, it is necessary to renew the deteriorated forceps, etc. and one set of this equipment will be supplied in this project.

Laryngoscope set (A10-7)

Requested:1 Priority:B^+ Planned:1

This set is used for diagnosis of oropharynx and vocal chords. Equipment of Russian make purchased in 1993 is used in the E.N.T. diagnosing room for pediatrics, but there is much difficulty about its use because of extreme deterioration of the lens and the light source unit. This diagnosing room receives about 20 patients each day, of which around 10 persons have diseases of pharynx. Procurement in this project is highly appropriate because introduction of this equipment is expected to improve the accuracy of diagnosis.

Inductothermal treatment apparatus (A11-3)

Requested:1 Priority:B^+ Planned:1

This apparatus is used for inductothermal treatment of chronic arthritis, lumbago, neuralgia, myosalgia and neuritis. At present, the first physiotherapy room has 2 units of microwave treating equipment of former Soviet Union make installed in 1971, but both of them are now in trouble and unfit for use. The number of patients received in the physiotherapy room is approximately 30 persons each day during the summer season and over 70 persons per day during winter. We believe it is necessary to renew this apparatus in this project, because significant treating

effects especially during the winter season can be expected.

Autoclave (A12-3)

Requested:1 Priority:B+ Planned:1

This equipment is used for sterilization and disinfection of small articles. Currently salt solution and 18 different kinds of medicine are prepared in the pharmaceutical preparation room, but because the sterilizer of Russian make owned by this Center is out of order, the bottles and other instruments used for pharmaceutical preparation are treated by the method of liquid sterilization. Inclusion of this item in the list of planned equipment items in this project is judged as highly appropriate, because it will enable to perform sterilization of high safety in a short time.

Morgue refrigerator (2 Body) (A12-7)

Requested:1 Priority:B- Planned:0

This refrigerator is used for storing dead bodies. The morgue room in this facility does not have function of cold storage. However, the period of storage of dead bodies for judicial and pathological analyses is for 2 to 3 days and short. Moreover, in the areas under coverage, there are no such customs for this Center as to temporarily store the dead body on behalf of the relatives of the dead person. Therefore, procurement of this item in this project will be excluded, from the viewpoint that this item is "equipment with limited benefits" and "equipment with small effects against cost".

Ambulance (A12-24)

Requested:2 Priority:B+ Planned:2

At present, this Center has no ambulance and is using jeeps of Russian make with a capacity of 5 seats each for the daily first aid services instead. The jeep-type vehicles are small and there is neither space in the cabin for laying the patient for emergency treatment nor any space

for loading first aid equipment. This Center is an upper referral hospital for 18 county (soum) hospitals and general hospitals of lower rank in several nearby prefectures, and the average monthly distance covered is approximately 13,000km. The necessity of ambulance is extremely high.

Preparation of ambulances in this project is judged as quite necessary and highly appropriate, considering the frequency of use and the benefits of ambulances.

I.V. hanger stand (A13-3)

Requested:20 Priority:B- Planned:0

This stand is used for holding infusion bottles and bags. Considering that this is a simple stand and can be procured by self-efforts of this Center, procurement of this item in this project will be put on the shelf.

④ **Dornogovi Hospital**

Osteosurgery instrument set (A2-13)

Requested:1 Priority:B+ Planned:1

This is a set of forceps, etc. used for operations of orthopedic surgery. Accidents of falling from horse are frequently occurred in the areas covered by this hospital, and as many as approximately 20 operations related to fracture of bones are conducted monthly here. However, the currently used osteosurgery instruments, purchased in 1992 with an aid from Russia, are not only rather short in types and quantities but also very much deteriorated. Therefore, a qualitative improvement of operations can be expected with procurement of this item in this project.

Bedside monitor (A3-1)

Requested:2 Priority:B+ Planned:2

This is a system for monitoring changes of respiratory ratio, pulsation, body temperature and electrocardiogram, by grasping the state of patients during and after operations. Since this system is not available in this hospital at present, the monitoring of the state of patients during and after operations is made only on the basis of experiences of the doctors and nurses. By procuring the system in this project, it will become possible to easily grasp the state of patients during and after operations, and to take quick actions in case of any sudden change in the patient's condition. Therefore, procurement of this item will be planned in this project.

Ventilator (A3-3)

Requested:1 Priority:B+ Planned:1

Ventilator is used for patients with serious disease of respiratory organs and weak spontaneous respiration as well as for patients under operation and in convalescence after operation. At present, the hospital has a ventilator procured 5 years ago, but it is now very much deteriorated

because of excessive use. Planning of one supplementary unit in this project is judged as helpful for improvement of functions in this field, because it will enable simultaneous use by several patients.

Anaesthesia apparatus with monitor (A3-4)

Requested:1 Priority:B^+ Planned:1

This equipment is used for general anaesthesia. Although this hospital has an anaesthesia apparatus made in former Soviet Union purchased in 1980, it is now rather deteriorated because it is used at the rate of once every 2 days, presenting a problem of equipment safety. For that reason, anaesthesia by intravenous injection and local anaesthesia are practiced in many cases to meet the requirements. However, such practices present a risk of serious side effects in some cases or impose strong physical burden on the patient, and therefore urgent preparation of anaesthesia apparatus is required. We would like to renew one unit in this project to secure the safety of operations.

Anaesthesia ventilator (A3-5)

Requested:1 Priority:B^+ Planned:1

This is a part of functions pertaining to an anaesthesia apparatus, and will be prepared together with the main anaesthesia apparatus in this project.

Mobile X-ray unit (A6-2)

Requested:2 Priority:B^+ Planned:2

No elevator is available in the ward, and stairs are used for up-down movements in the hospital. In the case where a patient requires radiography, members of the hospital or family of the patient carry the patient on a stretcher to the radiographic examination room (2nd floor) and, after the photographing is over, send the patient back again to the sickroom on the 4th floor or 5th floor. Such movement is very painful for seriously injured patients or patients with serious disease, and also

presents risks in some cases. By preparing one unit each of mobile X-ray apparatus (for the respective floors) in this project, it will become possible to lessen the pains of patients.

Infant ventilator (A8-2)

Requested:1 Priority:B^+ Planned:1

This equipment is used to help respiration of newborn babies with difficulty of natural breathing or in a state of asphyxia. In this hospital, recovery of respiration for newborn babies with difficulty of natural breathing or in a state of asphyxia is made with the use of an oxygen concentrator, but this equipment has no functions of removing secretion in the trachea, securing the air channel and urging voluntary respiration, unlike a ventilator for newborn babies. Approximately 500 babies are born in this hospital annually, and the mortality of newborn babies is over 5%. By procuring one unit of this equipment in this project, we may expect to save many of newborn babies who have so far been destined to die with deficiency of respiration.

Oxymeter (A8-8)

Requested:2 Priority:B^+ Planned:1

Oxymeter is placed in an incubator for premature infant for measuring the concentration of oxygen there. An incubator is constructed in a way to be sealed tight for protecting premature baby from general external air. The safety of premature infant can be secured by placing an oxymeter in the incubator and measuring the concentration of oxygen in it. Therefore, procurement of minimum one unit is planned in this project.

Otosurgery instrument set (A10-1)

Requested:1 Priority:B^+ Planned:1

This is an instrument set used for E.N.T. diagnosis. At present, this hospital diagnoses 30 patients a day and provides treatment to about 15 of them. However, lack of diagnosing instruments is putting obstacles

to the diagnosing activities. By preparing one set in this project, it will become possible to not only solve the problem of instruments in this Department but also provide diagnosing services to a greater number of patients.

Sinus surgery instrument set (A10-3)

Requested:1 Priority:B^+ Planned:1

At present, this hospital is conducting operations of paranasal sinus by inviting a doctor from a national hospital in Ulaanbaatar several times a year. However, the invited doctor must carry the operation instruments with him on each occasion, and the time and the frequency of invitation are always affected by the availability or not of the operation instruments. It is highly necessary and appropriate to procure one set in this project, as it is expected to facilitate diagnosis by visiting doctors of the national hospital and eventually enable operation by doctors of the hospital concerned.

ENT surgery instrument set (A10-5)

Requested:1 Priority:B^+ Planned:1

This is an operation instrument set for E.N.T. At present, operations of mainly suppuration, etc. of naris, throat and ears are conducted in this hospital. Operations are performed 4 times a week on the average. The instruments used are those of Russian make purchased at the time of establishment of this hospital. Those instruments are short in type variety due to loss of some of them and very much deteriorated. We will prepare one in this project for renewal, as it is judged necessary to recover the operation functions in the field of E.N.T.

Ultrasound therapy unit (A11-1)

Requested:2 Priority:B^+ Planned:2

This apparatus is used for physical treatment of chronic arthritis, lumbago, neuralgia, myosalgia and neuritis. At present, the second

rehabilitation room has 2 units of this equipment, but it is now very much deteriorated and required early renewal. For that reason, it is judged highly appropriate to procure one unit in this project.

Microwave therapy unit (A11-2)

Requested:1 Priority:B^+ Planned:1

This apparatus is used for physical treatment of chronic arthritis, lumbago, neuralgia, myosalgia and neuritis. This hospital has 5 rehabilitation rooms (No. 1 ~ No. 5), and the number of patients received is no less than 80 even during the summer season when the number of patients is comparatively small. However, the treating equipment related to rehabilitation has not been renewed since it was initially installed in 1992 with an aid from Russia. The currently owned microwave therapy unit is also deteriorated, and early renewal is looked for.

Electric traction (A11-4)

Requested:1 Priority:B^+ Planned:1

This device is used for traction in the treatment of disease of cervical vertebra, hernia of intervertebral disc, and lumbar vertebra. A hand-made traction system was prepared by utilizing the electric table of the X-ray system which went into trouble in 1998, and is used for treating 2 to 3 patients a day. However, since this is a hand-made device, it often gets out of order, and this makes it difficult to deal with a large number of patients. One unit will be procured in this project as it will enable treatment of a greater number of patients.

Autopsy instrument set (A12-6)

Requested:1 Priority:B^+ Planned:1

This is an instrument set used for pathological anatomy and judicial anatomy. The number of cases of anatomy in this hospital is 5 cases/month of judicial anatomy and 5 cases/month of pathological anatomy. However, the instrument set for anatomy currently in use is of former Soviet Union

make purchased 25 years ago, and it is short in type variety of instruments and very much deteriorated. This equipment will therefore be renewed in this project.

Sliding microtome (A12-8)

Requested:1 Priority:B^+ Planned:1

This tool is used for the preparation of samples for pathological examination. At present, one unit is provided in the cytohistologic examination room, but it is an old one purchased at the very start of this hospital. Its function is much lower than it was before because of deterioration, but it is still used though with much difficulty. Renewal of this item in this project is judged as highly appropriate.

Ambulance (A12-24)

Requested:2 Priority:B^+ Planned:1

At present, this hospital has no ambulance and using one-box vehicle of Russian make in town and jeep in rural areas for the daily first aid services. The jeep-type vehicles are small and there is neither space in the cabin for laying the patient for emergency treatment nor any space for loading first aid equipment. This hospital covers 14 soum hospitals of lower rank. The average monthly distance covered by one vehicle is approximately 8,000km. Preparation of one ambulance in this project is judged as quite necessary, considering the frequency of use and the benefits of ambulance.

I.V. hanger stand (A13-3)

Requested:20 Priority:B^- Planned:0

This stand is used for holding infusion bottles and bags. Considering that this is a simple stand and can be procured by self-efforts of this hospital, procurement in this project will be shelved.

⑤ Bayan-Olgii Hospital

Auto diluter (A5-10)

Requested:1 Priority:B^{-} Planned:0

This apparatus automatically performs dilution and admixture of reagents, and can perform a large volume of admixture at a time. However, the volume required in this hospital is not so large as to require introduction of this apparatus, considering the daily volume of admixture, because this is an aimag-level hospital.

Darkroom lamp (A6-12)

Requested:1 Priority:B^{+} Planned:1

One unit of this lamp will be planned in this project as it is believed appropriate to prepare one, considering high frequency of use and length of working time of the darkroom.

Synoptiscope (A9-4)

Requested:1 Priority:B^{+} Planned:1

This equipment is used for the measurement of angle of squint, inspection of cardinal ocular movements, training after strabismus correcting operation and diagnosis of ophthalmoplegia. At present, this equipment is not available in this hospital, but new introduction of this item is expected to improve the rate of complete recovery by enabling training which could not be done in the past, after strabismus correcting operation. Therefore, procurement of this item will be planned in this project.

Ambulance (A12-24)

Requested:2 Priority:B^{+} Planned:1

This hospital has no ambulance and is using jeeps of Russian make for daily first aid services. In the cabin, there is no space for laying the patients for emergency treatment nor is there any space for loading first aid equipment. This hospital covers 12 soum hospitals of lower

rank. The average monthly distance covered by a single vehicle is approximately 6,000km. Preparation of one ambulance in this project is judged as appropriate, considering the benefits and the frequency of use of ambulance.

I.V. hanger stand (A13-3)

Requested:20 Priority:B- Planned:0

This stand is used for holding infusion bottles and bags. This may well be procured by self-efforts of this hospital, therefore, procurement in this project will be put on the shelf.

⑥ Bulgan Hospital

Synoptiscope (A9-4)

Requested:1 Priority:B^+ Planned:1

This equipment is used for examination of strabismus, training after strabismus correcting operation and diagnosis of ophthalmoplegia. At present, this hospital is diagnosing 35 patients a day, but is referring some of the patients to a national hospital in Ulaanbaatar because of shortage of examination and operation equipment. Introduction of the equipment in this project is expected to produce benefits to the region by enabling examination in this hospital.

Ambulance (A12-24)

Requested:2 Priority:B^+ Planned:1

This hospital has no ambulance and is using jeeps of Russian make for daily first aid services. The jeep-type vehicles are small and there is neither space in the cabin for laying the patient for emergency treatment nor any space for loading first aid equipment. This hospital covers 16 soum hospitals of lower rank, and the average monthly distance covered by a single vehicle is approximately 8,500km. Preparation of one ambulance in this project is judged appropriate, considering the benefits and the frequency of use of ambulance.

I.V. hanger stand (A13-3)

Requested:20 Priority:B^- Planned:0

This is a stand for holding infusion bottles and bags. Considering the simple structure of this equipment, this may well be procured by self-efforts of this hospital. Therefore, it will not be supplied in this project.

⑦ Govi-Altai Hospital

Portable ECG (A1-11)

Requested:1 Priority:B^+ Planned:1

This equipment is used for diagnosing irregular pulse, ischemic heart disease and hypertrophy of heart. This hospital is conducting, at a non-regular basis, a traveling clinic to county (soum) hospitals of lower rank and provincial areas. A portable ECG will help early finding of disease and early treatment, as it can be carried at the occasions of traveling clinic and used for diagnosing disease of local patients.

Light source for endoscope (A1-17)

Requested:1 Priority:B^+ Planned:1

This hospital owns one unit of endoscope supplied 5 years ago by the Ministry of Health and Social Welfare, but has difficulties about examination by endoscope because of deterioration of the light source of this equipment. Renewal of the light source for endoscope in this project will enable recovery of examination functions. This renewal is conformable to the principle of priority to "equipment with great effects against cost", and is therefore judged as appropriate for procurement in this project.

Portable ultrasound system (with option) (A1-21)

Requested:1 Priority:B^+ Planned:1

This equipment is used for checking the progress of pregnancy and measuring the fetus as well as for diagnosing diseases in gynecology. By procuring this equipment in this project, it will contribute to early discovery and early treatment of gynecological diseases and improve accuracy and speediness of diagnosis.

Auto diluter (A5-10)

Requested:2 Priority:B^- Planned:0

This apparatus automatically performs dilution and admixture of reagents, and can perform a large volume of admixture at a time. However, the volume required in this hospital is not so large as to require introduction of this apparatus. Considering the daily volume of sampling and the scope of activities as a hospital of aimag-level, no procurement of this item will be made in this project.

X-ray film illuminator (A6-8)

Requested:2 Priority:B^+ Planned:2

This is an apparatus indispensable for reading and observation of images on X-ray films. 2 units of X-ray film illuminator will be supplied in this project, considering the current situation of shortage in this hospital.

Synoptiscope (A9-4)

Requested:1 Priority:B^+ Planned:1

This is used for examination of strabismus, training after strabismus correcting operation and diagnosis of ophthalmoplegia. Procurement of this equipment will enable to provide training after the operation that could not be done in the past and also induce expectation of improvement in the rate of complete recovery by this postoperative training. Therefore, one unit will be procured in this project.

Electric traction (A11-4)

Requested:1 Priority:B^+ Planned:1

This device is used for traction in the treatment of disease of cervical vertebra, hernia of intervertebral disc, and lumbar vertebra. A hand-made traction system is used in this hospital because it has no electric traction system. However, since this hand-made device made by using waste materials, it cannot fully meet the requirements of treatment

for the patients. One electric system will be procured in this project, as it will greatly improve the function of the rehabilitation treatment room.

Ambulance (A12-24)

Requested:2 Priority:B^{+} Planned:1

This hospital has no ambulance and is using jeeps of Russian make for the dairy first aid services. This type of vehicle is small and there is neither space in the cabin for laying the patient for emergency treatment nor any space for loading first aid equipment. This hospital covers 18 soum hospitals of lower rank, and the average monthly distance covered by a single vehicle is approximately 5,500km. Preparation of one ambulance is judged as highly appropriate, considering the frequency and the benefits of use of ambulance.

I.V. Hanger Stand (A13-3)

Requested:20 Priority:B^{-} Planned:0

Since this is a simple stand used for holding infusion bottles and bags, procurement by self-efforts of this hospital is judged as possible. Therefore, this will not be supplied in this project.

2-3 Basic Design

2-3-1 Design Concept

(1) Policy for natural condition

Dust proof and high-temperature resistance is valued to the selection of equipment, as the project site is continental climate.

And it is necessary to promote such a work plan, especially for delivery and installation of the equipment, to keep away those works from to be done in the winter season (around from November to March) when the temperature sometimes go down to about -40℃ at night.

(2) Policy for social background

Although it is gradually being reformed, some project facilities are still conducted according to the standard of former Soviet Union age. The reformation of medical system that Mongolia is advancing shall be considered when the project is designed.

(3) Policy for using a local agent and local procurement of equipment

If the equipment requires consumables, the model of which consumables can be procured in the local market shall be selected. Moreover, it shall be proposed to make a maintenance contract with a local agent of the manufacturer or a partially privatized enterprise, Mongolian Medical Techniques (Mongolian maintenance company of medical equipment), for the precision machines that requires regular maintenance (i.e. X-ray apparatus, ultrasound system, electronic medical treatment equipment, etc.)

(4) Policy for maintenance capability of project facilities

It is difficult to repair some special medical equipment in the hospital side, such as X-ray apparatus. In such a case, the model that the local service system has been established shall be selected. In choice of

equipment, it is taken into consideration that a local agent of the manufacturer is disposed in Mongolia or an accessible region to Mongolia.

(5) Policy for level of the procuring equipment

① It shall be a procurement plan, based on the current activities of the project facilities, to supply the equipment used for disease diagnosis and treatment at regional health service and diagnosis centers (high ranking medical facility in region) and aimag general hospitals (high ranking medical facility in aimag).

② The procuring equipment shall not require any special technician for its operation and is possible to correspond with existing workers and technological level.

(6) Policy for work period

The work period for the project shall be within 1 physical term that is 11 months after the Exchange of Notes is concluded between both governments.

2-3-2 Basic Design

(1) Basic orientation for the scale of project and the scope of work

① The procuring equipment is assumed to be the one by renewal or supplementation of the existing equipment that does not accomplish its original function for superannuating or quantitative shortage, and which admitted emergent needs.

② The procurement plan is assumed to supply equipment providing adequate function as regional health service and diagnosis center (top referral facilities in the region) and aimag general hospital, considering the current medical services extended by each

facility.

③ Equipment to which the operation and maintenance cost can be defrayed in each facility shall be procured.

④ Items of the procuring equipment shall not be overlapped with those of equipment planned procurement by other development assistance agency or by the government itself.

(2) Design concept by category

【Design policy on demand】

① The procuring equipment shall enable the recipient facilities to fulfil the function of regional health service and diagnosis center (as top referral facility in the region) or aimag general hospital (as top referral facility in the aimag), and to offer the proper medical service.

② The procuring equipment shall be used directly for diagnosis, treatment, or prevention of diseases and shall not be used for experimental medicine or research.

③ The procuring equipment shall be principally renewal of existing equipment that does not accomplish its original function for superannuating.

④ Or the equipment shall be which runs quantitatively short and is apparently admitted necessity of supplementation.

【Design policy on technological aspects】

① The procuring equipment shall not require any special training for its operation and is possible to deal with existing workers and technological level.

② The technical level of the procuring equipment, in principle, shall apply correspondingly to the substance of 3rd level medical services that the Ministry of Health and Social Welfare

stipulates.

【Design policy on financial aspects】

① The management cost after introduction of the procuring equipment shall be comparatively cheap so that the recipient facilities can maintain it economically.

② The scale of the project shall be within the scope that the management cost for the procuring equipment can be covered within the limits of the funds of each facility.

③ The scale of the project shall be within the scope of which is operable by the administrative capacity of each facility and where their financial and technological sustainability is secured.

【Design policy on procurement plan】

① Spare parts and consumables shall be attached to the procuring equipment. Considering geographical circumstances of regional health service and diagnosis centers and aimag general hospitals, which are located in the local areas in Mongolia, supply of those parts and consumables for at least one year shall be appropriate.

② A part of the procuring equipment seems difficult to correspond with a Japanese product. In this case, the possibility of the procurement of the third country product (United States, etc.) in a Japanese market is also considerable.

【Design policy on infrastructure aspects】

① The disposition of the uninterruptible power supply (UPS) shall be planned for the equipment that continuously needs the electric power such as ventilator or the operating light.

② To evade the breakdown of equipment by fluctuation of the voltage, the disposition of an automatic voltage regulator (AVR) shall be considered for some electronic medical equipment.

【Design policy on environment and others】

① When X-ray apparatus is procured for some facilities where the radiation leakage defense measures are insufficient, it shall be proposed to prepare following measures to meet the standard by expense of Mongolian side.

- Radiation defense measures in X-ray room
- Installation of access window for the control room

② To avoid the environmental problem in the future, the refrigerator supplied in the clinical laboratory shall be a model that uses the refrigerant of non-fluorocarbon.

【Design policy on operation and maintenance】

① The equipment that can be maintained by capacity of those technicians of the maintenance department in the hospital, Mongolian Medical Techniques (MMT: a partially privatized enterprise, moreover, the only maintenance company of medical equipment in the country) or the local agents of manufacturers in Mongolia and surrounding countries, shall be procured.

② Once the one-year initial guarantee by manufacturer is expired, it is preferable to make new maintenance contract with a local agent of manufacturer or MMT. The budgetary allocation by the project implementing bodies shall be proposed.

③ For the main equipment, operation and maintenance training for the person in charge shall be required at the occasion of delivery and installation. Especially, to the radiological physicians and X-ray technicians, the manufacturer's engineer shall hold training on radiography method and the maintenance.

④ In principle, the operation manual for the procured equipment shall be presented in English or Mongolian language. Especially, Mongolian language manual must be supplied for the equipment that needs detailed instruction for its operation and maintenance.

⑤ For improvement of operation and maintenance methods of the procuring equipment, soft component by means of workshop and seminar will be practiced.

(3) Selection of equipment

According to the design concept and policy above-mentioned, effectiveness on the project target scheduled by Mongolian side, exigency of procurement and financial condition were discussed, and the following Selection Principle was established. Adequacy, necessity, and the quantity of disposed equipment were analyzed according to this principle, and the result was shown at table 2-1.

【Basic Criteria for Selecting the Equipment】

《Criteria for giving high priority》

① Equipment that is to be replaced for existing old and decrepit equipment.

② Equipment that is to be a supplement for the equipment lacking distinctly in its quantity.

③ Equipment that is required for basic hospital treatment and diagnosis.

④ Equipment that is easy to operate and maintain.

⑤ Equipment that may give much benefits and effect to hospital.

⑥ Equipment that is highly cost-effective.

⑦ Equipment that is proven for its medical usefulness/necessity.

Additional criteria for giving high priority after field survey.

⑧ Equipment that can be operated by hospital's current technical capabilities.

⑨ Equipment that can be operated/maintained by hospital staff (including the engineers of a local agent &c., consigned by maintenance contract).

⑩ Equipment that matches with hospital's social position and function (referral system & local needs).

⑪ Equipment that can be expected its usefulness also in collaboration with other donor's assistance.

《Criteria for giving low priority》

① Equipment that requires high operation and maintenance cost.

② Equipment that has limited benefits and effect to hospital.

③ Equipment that is low cost-effective.

④ Equipment that is not for treatment or diagnosis use, but for academic research purposes.

⑤ Equipment that can be substituted with a simple one.

⑥ Equipment that may cause environmental pollution by its medical waste, etc.

⑦ Equipment that is not proven for its medical usefulness/necessity.

⑧ Equipment that is for personal usage by hospital staff (not medical use).

⑨ Equipment that the recipient has more than minimum required quantity (or inefficient/redundant equipment).

Additional Criteria for giving low priority after field survey

⑩ Equipment that is difficult to locally procure its spare parts and consumables.

⑪ Equipment that cannot be operated by hospital's current technical capability.

⑫ Equipment that seems to be difficult of its operation/maintenance by hospital staff (including the engineers of a local agent &c., consigned by maintenance contract).

⑬ Equipment that dose not match with hospital's social position and function (referral system & local needs).

⑭ Equipment that requires large scope of infrastructure work (water, electricity supply, drainage &c.) for its installation.

Selection of equipment was made by above-mentioned procedures and the result was shown as follows.

Comprehensive evaluation: ○ ……Acceptable
× ……Not acceptable

(Note) In the “remarks” column, the equipment evaluated in priority B was re-categorized into the priority B^+ and B^- after the final analysis. It is also stated in the column regarding the equipment to be procured in the ADB project.

Table 2-1 **Hovd Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1-1	Stethoscope	20	A	45	20	Shotage	Suppliment	○	2,3,4,8		20	
A1-2	Sphygmomanometer (desk type)	20	A	35	20	Shotage	Suppliment	○	2,3,4,8		20	
A1-3	Sphygmomanometer (pocket type)	20	A	35	20	Shotage	Suppliment	○	2,3,4,8		20	
A1-4	Obstetric stethoscope	2	A	3	15	Shotage	Suppliment	○	2,3,4,8		2	
A1-5	Distance test chart	1	A	2	10	bad	Renewal	○	1,3,4,8		1	
A1-6	Percussion hammer (Tyler type)	10	A	5	15	bad	Renewal	○	1,3,4,8		10	
A1-7	Diagnostic set	5	A	10	15	bad	Renewal	○	1,3,4,8		5	
A1-8	Spirometer	2	C	1	5	good	Renewal	×		9	0	
A1-9	Infant scale	3	A	2	25	Superannuated	Renewal	○	1,3,4,8		3	
A1-10	ECG	1	A	1	5	bad	Renewal	○	1,3,4,8		1	
A1-11	Portable ECG	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A1-12	Electroencephalograph	1	B	0	-	-	New	×		10,11,13	0	B⁻、delete
A1-13	Cysto-urethroscope, B set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1-14	Gastrointestinal fiberscope	1	C	1	5	good	Renewal	×		9	0	
A1-15	Laparoscope set	1	B	0	-	-	New	×		11,12,13	0	B⁻、delete
A1-16	Endoscopic TV system	1	C	0	-	-	New	×		11,13	0	
A1-17	Light source for endoscopes	1	C	0	-	-	New	×		11,13	0	
A1-18	Ultrasound system	1	C	1	11	No good	Renewal	×		9	0	Planned by ADB
A1-20	Ultrasound doppler examination system	1	B	0	-	-	New	×		11,13	0	B⁻、delete
A1-21	Portable ultrasound system	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1-22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1-24	Bronchofiberscope	1	C	1	5	good	Renewal	×		9	0	
	Surgery department											
A2-1	Operating light	2	C	1	5	No good	Renewal	×		9	0	Planned by ADB
A2-2	Operating light	2	A	2	25	bad	Renewal	○	1,3,4,8		2	1 unit planned by ADB
A2-3	Operating table	1	A	2	25	bad	Renewal	○	1,3,4,8		1	1 unit planned by ADB
A2-4	Suction unit	2	C	1	15	good	Renewal	×		9	0	Planned by ADB
A2-5	Operating microscope	1	C	0	-	-	New	×		9,11,13	0	Planned by ADB
A2-6	Coagulator	1	A	2	30	bad	Renewal	○	1,3,4,8		1	1 unit planned by ADB
A2-7	Instrument tray stand	3	A	2	25	Superannuated	Renewal	○	1,3,4,8		3	
A2-8	Revolving chair	4	A	2	20	Superannuated	Renewal	○	1,3,4,8		4	
A2-9	Instrument cabinet	2	A	3	15	Superannuated	Renewal	○	1,3,4,8		2	
A2-10	Patient cart	2	A	3	15	Superannuated	Renewal	○	1,3,4,8		2	
A2-11	Pulmonary surgery instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-12	Hepato-cholecystotomy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-13	Osteosurgery instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	

Table 2-1 **Hovd Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A2-14	Nephrectomy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-15	Manual dermatome	1	C	0	-	-	New	×		11,13	0	
A2-16	Standard plastic surgery set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-17	Surgical instrument set for infant	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-18	Neurosurgery instrument set	1	B	1	25	Superannuated	Renewal	○	1,3,4,8		1	B^+、1set
A2-19	Gastrectomy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-20	Microvascular surgical instrument set	1	C	0	-	-	New	×		11,13	0	
A2-21	Operating instrument set	1	C	1	20	Superannuated	Renewal	×		9	0	
A2-22	Surgical suture needle set	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
A2-25	Blood vessel suture needle set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-26	Intestinal suture needle set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-27	Needle holder	5	A	1	20	Superannuated	Renewal	○	1,3,4,8		5	
A2-28	Operating knife set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-29	Prostatomy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A2-31	Small operating instrument set	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
	Emergency & reanimation department											
A3-1	Bedside monitor	1	A	0	-	-	New	○	3,4,5,8,9,10		1	1unit planned by ADB
A3-2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3-3	Ventilator	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1unit
A3-4	Anaesthesia apparatus with monitor	1	C	2	10	good	Renewal	×		9	0	Planned by ADB
A3-5	Anaesthesia ventilator	3	C	2	10	good	Renewal	×		9	0	Planned by ADB
A3-6	Suction unit	2	A	1	10	No good	Renewal	○	1,3,4,8		2	
A3-7	Endtracheal set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A3-8	Venotomy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A3-9	Emergency tracheotomy instrument set	1	B	0	-	-	New	×		11,13	0	B^-、delete
A3-10	Emergency aid box	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
	Obstetrics & Gynaecology department											
A4-1	Vacuum extractor	2	A	1	15	No good	Renewal	○	1,3,4,8		2	
A4-2	Gynaecological examining unit	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
A4-3	Aus-suction unit	2	C	1	10	good	Renewal	×		9	0	
A4-4	Artificial abortion instrument set	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
A4-5	Gynaecology stereoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4-6	Fetal actocardiograph	1	C	0	-	-	New	×		9	0	Planned by ADB
A4-7	Cryosurgery system for gynaecology	1	C	0	-	-	New	×		2,3,11,12,13	0	
A4-8	Obstetrics operation instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A4-9	Gynaecology examination instrument set	5	A	1	20	bad	Renewal	○	1,3,4,8		5	

Table 2-1 **Hovd Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A4- 10	Cusco's vaginal speculum	10	A	1	20	Superannuated	Renewal	○	1,3,4,8		10	
A4- 11	Delivery table	2	A	2	20	bad	Renewal	○	1,3,4,8		2	Planned by ADB
A4- 12	Examining table	1	A	1	20	bad	Renewal	○	1,3,4,8		1	Planned by ADB
A4- 15	Gynaecologic operation table	2	A	2	25	bad	Renewal	○	1,3,4,8		2	
	Laboratory											
A5- 1	Laboratory monocular microscope	2	C	2	25	Superannuated	Renewal	×		9	0	
A5- 2	Laboratory binocular microscope	3	A	1	5	good	Suppliment	○	1,3,4,8		3	
A5- 3	Thermostat	2	A	1	20	bad	Renewal	○	1,3,4,8		2	
A5- 4	Blood cell counter	1	C	0	-	-	New	×		1,3,9,10	0	
A5- 5	Differential leukocyte counter	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A5- 6	Hemoglobinmeter	1	B	1	5	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A5- 7	pH meter	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A5- 8	Vacuumtaner	1000	C	-	-	-	Suppliment	×		9	0	Consumable parts
A5- 9	Needles for cacuumtaner	1000	C	-	-	-	Suppliment	×		9	0	Consumable parts
A5- 10	Auto diluter	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A5- 11	Analytical balance	3	A	1	20	Superannuated	Renewal	○	1,3,4,8		3	
A5- 12	Distilling apparatus	2	A	1	20	bad	Renewal	○	1,3,4,8		2	
A5- 14	Urine analyser	1	C	0	-	-	New	×		1,3,9,10	0	
A5- 16	Drying oven	1	A	2	25	bad	Renewal	○	1,3,4,8		1	
A5- 17	Clinical spectrophotometer	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
	Radiology department											
A6- 1	Angiographic X-ray system	1	C	0	-	-	New	×		1,10,11,12,13	0	
A6- 2	Mobile X-ray unit	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A6- 3	Fluorography unit	1	C	2	5	good	Renewal	×		9	0	
A6- 4	Dental X-ray unit	1	A	1	4	No good	Renewal	○	1,3,4,8		1	
A6- 5	Processing tank	1	C	1	30	good	Renewal	×		9	0	Planned by ADB
A6- 6	X-ray film dryer	1	B	1	30	Superannuated	Renewal	○	1,3,4,8		1	B^+、1 unit
A6- 7	X-ray film cassette (4 units of each size)	4	A	1	30	Superannuated	Renewal	○	1,3,4,8		4	
A6- 8	X-ray film illuminator	2	A	2	10	Superannuated	Renewal	○	1,3,4,8		2	
A6- 9	Protective gloves	3	A	1	2	Superannuated	Renewal	○	1,3,4,8		3	
A6- 10	Dosimeter and charger	2	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A6- 11	Mammographic X-ray stand	1	C	0	-	-	New	×		1,10,11,12,13	0	
A6- 12	Darkroom lamp	1	B	1	2	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A6- 13	Protective glasses	3	A	1	2	Superannuated	Renewal	○	1,3,4,8		3	
	Dental department											
A7- 1	Portable treatment unit	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A7- 2	Dental examination instrument set	10	C	1	29	bad	Renewal	×		9	0	Planned by ADB
A7- 3	Dental treatment instrument set	1	A	1	29	Superannuated	Renewal	○	1,3,4,8		1	

Table 2-1 **Hovd Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Paediatrics department											
A8-1	Infant incubator	1	A	1	1	No good	Renewal	○	1,3,4,8		1	1 unit planned by ADB
A8-2	Infant ventilator	1	C	0	-	-	New	×		9	0	Planned by ADB
A8-3	Infant warmer	2	A	1	10	No good	Renewal	○	1,3,4,8		2	
A8-4	Oxygen concentrator	1	C	1	3	good	Renewal	×		9	0	Planned by ADB
A8-5	Infant sphygmomanometer	3	A	2	10	Shotage	Suppliment	○	2,3,4,8		3	
A8-6	Infant rectal thermometer	10	A	3	10	Shotage	Suppliment	○	2,3,4,8		10	
A8-7	Suction unit	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A8-8	Oxymeter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Ophthalmic department											
A9-1	Ophthalmic operation instrument set	3	C	1	20	Superannuated	Renewal	×		9	0	Planned by ADB
A9-2	Cornea transplantation instrument set	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 set
A9-3	Trial lens set	2	A	1	20	Superannuated	Renewal	○	1,3,4,8		2	
A9-4	Synoptiscope	1	B	0	-	-	New	○	1,3,4,8		1	B^+、1 unit
A9-5	Binocular ophthalmoscope	2	C	1	20	Superannuated	Renewal	×		9	0	Planned by ADB
A9-6	Ophthalmic YAG laser system	1	C	0	–	–	New	×		1,3,9,10	0	
A9-7	Indirect ophthalmoscope with halogen lamp	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A9-8	Universal trial frame	1	C	1	20	Superannuated	Renewal	×		9	0	
A9-10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9-11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A13-1	Slit lamp Microscope set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
	ENT department											
A10-1	Otosurgery instrument set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
A10-2	Head mirror	3	C	1	19	Superannuated	Renewal	×		9	0	Planned by ADB
A10-3	Sinus surgery instrument set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
A10-4	Audiometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10-6	Chair-mounted unit	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10-7	Laryngoscope set	1	C	0	-	-	New	×		9	0	Planned by ADB
A10-8	Oto-nasal scope set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10-11	Operating stool	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
	Physiotherapy department											
A11-1	Ultrasound therapy unit	3	A	0	-	-	New	○	3,4,5,8,9,10		3	
A11-2	Microwave therapy unit	1	A	2	30	Superannuated	Renewal	○	1,3,4,8		1	
A11-3	Inductothermal treatment apparatus	1	A	2	30	Superannuated	Renewal	○	1,3,4,8		1	
A11-4	Electric traction	1	A	1	10	No good	Renewal	○	1,3,4,8		1	
A11-5	Restrator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A11-6	Curved back board exerciser	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Others											
A12-1	Medical refrigerator	3	A	0	-	-	New	○	3,4,5,8,9,10		3	

Table 2-1 **Hovd Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A12-2	High pressure steam sterilizer	1	C	1	10	bad	Renewal	×		9	0	Planned by ADB
A12-3	Autoclave	2	C	1	10	good	Renewal	×		9	0	Planned by ADB
A12-4	Drying cabinet	2	A	2	25	bad	Renewal	○	1,3,4,8		2	
A12-5	Instrument table	10	A	7	20	Superannuated	Renewal	○	1,3,4,8		10	
A12-6	Autopsy instrument set	1	A	1	20	Superannuated	Renewal	○	1,3,4,8		1	
A12-7	Morgue refrigerator	1	B	0	-	-	New	×		2,3	0	B^-、delete
A12-8	Sliding microtome	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A12-9	Ultraviolet air sterilizer	3	A	5	15	Superannuated	Renewal	○	1,3,4,8		3	
A12-12	Refrigerated centrifuge	1	A	2	20	bad	Renewal	○	1,3,4,8		1	
A12-14	Instrument cabinet	10	A	6	20	Superannuated	Renewal	○	1,3,4,8		10	
A12-15	Bactericidal lamp	4	A	15	20	Superannuated	Renewal	○	1,3,4,8		4	
A12-16	Patient cart	4	A	2	10	Superannuated	Renewal	○	1,3,4,8		4	
A12-17	Freezer	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A12-18	Buret support	10	C	2	5	good	Renewal	×		2,3,9	0	
A12-23	Examination light	2	A	3	15	Superannuated	Renewal	○	1,3,4,8		2	
A12-24	Ambulance (4 x 4)	2	B	2	10	Superannuated	Renewal	○	1,3,4,8		2	B^+、2 units
A12-25	Height / weight scale (200cm , 150kg)	2	A	3	15	Superannuated	Renewal	○	1,3,4,8		2	
A13-3	I.V. Hanger Stand	20	B	2	5	Shotage	Suppliment	×		2,3,9	0	B^-、delete

Table 2-: **Dornod Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1- 1	Stethoscope	30	A	40	19	shotage	Suppliment	○	2,3,4,8		30	
A1- 2	Sphygmomanometer (desk type)	15	A	20	19	shotage	Suppliment	○	2,3,4,8		15	
A1- 3	Sphygmomanometer (pocket type)	15	A	20	19	shotage	Suppliment	○	2,3,4,8		15	
A1- 4	Obstetric stethoscope	10	A	8	19	shotage	Suppliment	○	2,3,4,8		10	
A1- 5	Distance test chart	3	C	1	12	good	Renewal	×		9	0	
A1- 6	Percussion hammer (Tyler type)	3	A	3	15	Superannuated	Renewal	○	1,3,4,8		3	
A1- 7	Diagnostic set	5	A	3	15	Superannuated	Renewal	○	1,3,4,8		5	
A1- 8	Spirometer	2	C	1	5	good	Renewal	×		9,10,11	0	
A1- 9	Infant scale	3	A	2	19	Superannuated	Renewal	○	1,3,4,8		3	
A1- 10	ECG	1	A	1	12	No good	Renewal	○	1,3,4,8		1	
A1- 11	Portable ECG	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 12	Electroencephalograph	1	B	0	-	-	New	×		10,11,13	0	B-、delete
A1- 13	Cysto-urethroscope, B set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 14	Gastrointestinal fiberscope	1	C	1	5	good	Renewal	×		9	0	
A1- 15	Laparoscope set	1	B	0	-	-	New	×		11,12,13	0	B-、delete
A1- 16	Endoscopic TV system	1	C	0	-	-	New	×		11,13	0	
A1- 17	Light source for endoscopes	1	A	0	-	-	New	○	4,8,9		1	
A1- 18	Ultrasound system	1	A	1	5	good	Suppliment	○	2,3,4,8		1	
A1- 20	Ultrasound doppler examination system	1	B	0	-	-	New	×		11,13	0	B-、delete
A1- 21	Portable ultrasound system	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 24	Bronchofiberscope	1	A	1	5	bad	Renewal	○	1,3,4,8		1	
	Surgery department											
A2- 1	Operating light	2	A	2	25	No good	Renewal	○	1,3,4,8		2	
A2- 2	Operating light	2	A	2	19	No good	Renewal	○	1,3,4,8		2	
A2- 3	Operating table	2	A	2	25	No good	Renewal	○	1,3,4,8		2	
A2- 4	Suction unit	2	A	2	19	No good	Renewal	○	1,3,4,8		2	
A2- 5	Operating microscope	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A2- 6	Coagulator	2	A	2	14	No good	Renewal	○	1,3,4,8		2	
A2- 7	Instrument Tray Stand	3	A	3	15	Superannuated	Renewal	○	1,3,4,8		3	
A2- 8	Revolving chair	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A2- 9	Instrument cabinet	2	A	3	15	Superannuated	Renewal	○	1,3,4,8		2	
A2- 10	Patient cart	2	A	2	19	repair	Renewal	○	1,3,4,8		2	
A2- 11	Pulmonary surgery instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	

Table 2-: **Dornod Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 13	Osteosurgery instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 14	Nephrectomy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 15	Manual dermatome	1	C	0	-	-	New	×		2,11,13	0	
A2- 16	Standard plastic surgery set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 17	Surgical instrument set for infant	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 18	Neurosurgery instrument set	1	B	1	19	Superannuated	Renewal	○	1,3,4,8		1	B^+、 1 set
A2- 19	Gastrectomy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 20	Microvascular surgical instrument set	1	C	0	-	-	New	×		2,11,13	0	
A2- 21	Operating instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 22	Surgical suture needle set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
A2- 25	Blood vessel suture needle set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 26	Intestinal suture needle set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 27	Needle holder	5	A	1	19	Superannuated	Renewal	○	1,3,4,8		5	
A2- 28	Operating knife set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 29	Prostatomy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A2- 31	Small operating instrument set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
	Emergency & reanimation department											
A3- 1	Bedside monitor	3	A	0	-	-	New	○	3,4,5,8,9,10		3	
A3- 2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3- 3	Ventilator	1	A	1	5	Superannuated	Renewal	○	1,3,4,8		1	
A3- 4	Anaesthesia apparatus with monitor	1	A	2	19	bad	Renewal	○	1,3,4,8		1	
A3- 5	Anaesthesia ventilator	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A3- 6	Suction unit	2	A	1	16	Superannuated	Renewal	○	1,3,4,8		2	
A3- 7	Endtracheal set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A3- 8	Venotomy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A3- 9	Emergency tracheotomy instrument set	1	C	0	-	-	New	×		2,11,13	0	
A3- 10	Emergency aid box	2	A	1	16	bad	Renewal	○	1,3,4,8		2	
	Obstetrics & Gynaecology department											
A4- 1	Vacuum extractor	2	A	2	14	Superannuated	Renewal	○	1,3,4,8		2	
A4- 2	Gynaecological examining unit	2	A	2	14	Superannuated	Renewal	○	1,3,4,8		2	
A4- 3	Aus-suction unit	2	C	2	14	Superannuated	Renewal	×		9	0	
A4- 4	Artificial abortion instrument set	2	A	1	15	Superannuated	Renewal	○	1,3,4,8		2	
A4- 5	Gynaecology stereoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 6	Fetal actocardiograph	1	A	0	-	-	New	○	3,4,5,8,9,10		1	

Table 2-: **Dornod Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A4- 7	Cryosurgery system for gynaecology	1	C	0	-	-	New	×		2,3,11,12,13	0	
A4- 8	Obstetrics operation instrument set	1	A	1	15	Superannuated	Renewal	○	1,3,4,8		1	
A4- 9	Gynaecology examination instrument set	5	A	1	15	Superannuated	Renewal	○	1,3,4,8		5	
A4- 10	Cusco's vaginal speculum	10	A	1	15	Superannuated	Renewal	○	1,3,4,8		10	
A4- 11	Delivery table	2	A	2	15	Superannuated	Renewal	○	1,3,4,8		2	
A4- 12	Examining table	2	A	2	19	Superannuated	Renewal	○	1,3,4,8		2	
A4- 13	Ultrasound system (with options)	1	C	0	-	-	New	×		9	0	
A4- 15	Gynaecologic operation table	1	A	1	29	Superannuated	Renewal	○	1,3,4,8		1	
	Laboratory											
A5- 1	Laboratory monocular microscope	2	C	2	35	bad	Renewal	×		3,9	0	
A5- 2	Laboratory binocular microscope	3	A	1	5	good	Suppliment	○	2,3,4,8		3	
A5- 3	Thermostat	2	A	2	29	bad	Renewal	○	1,3,4,8		2	
A5- 4	Blood cell counter	1	C	0	-	-	New	×		1,3,9,10	0	
A5- 5	Differential leukocyte counter	1	A	1	26	bad	Renewal	○	1,2,3,8,9		1	
A5- 6	Hemoglobinmeter	3	A	0	-	-	New	○	3,4,5,8,9,10		1	A、1 unit
A5- 7	pH meter	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A5- 10	Auto diluter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5- 11	Analytical balance	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A5- 12	Distilling apparatus	2	A	2	18	Superannuated	Renewal	○	1,3,4,8		2	
A5- 13	Biochemical analyser	1	C	0	-	-	New	×		1,10,11,12,13	0	
A5- 14	Urine analyser	1	B	0	-	-	New	×		1,2,10,	0	B^-、delete
A5- 15	Bacteriological analysis set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5- 16	Drying oven	1	A	2	29	Superannuated	Renewal	○	1,3,4,8		1	
A5- 17	Clinical spectrophotometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Radiology department											
A6- 1	Angiographic X-ray system	1	C	0	-	-	New	×		1,10,11,12,13	0	
A6- 2	Mobile X-ray unit	2	A	1	17	bad	Renewal	○	1,3,4,8		2	
A6- 3	Fluorography unit	1	C	2	10	good	Renewal	×		9	0	
A6- 4	Dental X-ray unit	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A6- 5	Processing tank	1	A	1	17	Superannuated	Renewal	○	1,3,4,8		1	
A6- 6	X-ray film dryer	1	A	1	17	Superannuated	Renewal	○	1,3,4,8		1	
A6- 7	X-ray film cassette (4 units of each size)	4	A	1	17	Superannuated	Renewal	○	1,3,4,8		4	
A6- 8	X-ray film illuminator	2	A	1	17	Superannuated	Renewal	○	1,3,4,8		2	
A6- 9	Protective gloves	3	A	1	17	Superannuated	Renewal	○	1,3,4,8		3	
A6- 10	Dosimeter and charger	2	B	0	-	-	New	○	4,5,8,9		1	B^+、1 unit

Table 2-: **Dornod Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A6- 11	Mammographic X-ray stand	1	C	0	-	-	New	×		2,3,13	0	
A6- 12	Darkroom lamp	1	A	1	2	Superannuated	Renewal	○	1,3,4,8		1	
A6- 13	Protective glasses	3	A	1	2	Superannuated	Renewal	○	1,3,4,8		3	
	Dental department											
A7- 1	Portable treatment unit	1	B	1	20	No good	Renewal	○	1,3,4,8		1	
A7- 2	Dental examination instrument set	3	A	3	21	No good	Renewal	○	1,3,4,8		3	
A7- 3	Dental treatment instrument set	3	A	3	17	Superannuated	Renewal	○	1,3,4,8		3	
	Paediatrics department											
A8- 1	Infant incubator	2	A	1	2	No good	Renewal	○	1,3,4,8		2	
A8- 2	Infant ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A8- 3	Infant warmer	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A8- 4	Oxygen concentrator	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A8- 5	Infant sphygmomanometer	3	A	4	24	Superannuated	Renewal	○	1,3,4,8		3	
A8- 6	Infant rectal thermometer	20	A	8	24	Superannuated	Renewal	○	1,3,4,8		20	
A8- 7	Suction unit	1	A	1	11	Superannuated	Renewal	○	1,3,4,8		1	
A8- 8	Oxymeter	1	A	0	-	-	New	○	4,5,8,9		1	
	Ophthalmic department											
A9- 1	Ophthalmic operation instrument set	1	A	1	13	Superannuated	Renewal	○	1,3,4,8		1	
A9- 2	Cornea transplantation instrument set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 3	Trial lens set	1	C	1	13	good	Renewal	×		9	0	
A9- 4	Synoptiscope	1	C	0	-	-	New	×		5	0	
A9- 5	Binocular ophthalmoscope	2	A	1	17	Superannuated	Renewal	○	1,3,4,8		2	
A9- 7	Indirect ophthalmoscope with halogen lamp	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、 1 unit
A9- 8	Universal trial frame	1	C	1	12	Superannuated	Renewal	×		9	0	
A9- 9	Cross cylinder	1	C	2	5	good	Renewal	×		9	0	
A9- 10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 12	Echo scan	1	C	0	-	-	New	×		5	0	
A13- 1	Slit lamp Microscope set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
	ENT department											
A10- 1	Otosurgery instrument set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
A10- 2	Head mirror	3	C	2	5	good	Renewal	×		9	0	
A10- 3	Sinus surgery instrument set	2	A	1	19	Superannuated	Renewal	○	1,3,4,8		2	
A10- 4	Audiometer	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10- 5	ENT surgery instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	

Table 2-: **Dornod Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A10- 6	Chair-mounted unit	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10- 7	Laryngoscope set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10- 8	Oto-nasal scope set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A10- 11	Operating stool	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
	Physiotherapy department											
A11- 1	Ultrasound therapy unit	3	A	0	-	-	New	○	3,4,5,8,9		3	
A11- 2	Microwave therapy unit	1	A	6	20	Superannuated	Renewal	○	1,3,4,8		1	
A11- 3	Inductothermal treatment apparatus	1	A	2	20	Superannuated	Renewal	○	1,3,4,8		1	
A11- 4	Electric traction	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A11- 5	Restrator	1	A	0	-	-	New	○	3,4,8,10		1	
A11- 6	Curved back board exerciser	1	A	0	-	-	New	○	3,4,8,10		1	
	Others											
A12- 1	Medical refrigerator	3	A	4	24	Superannuated	Renewal	○	1,3,4,8		3	
A12- 2	High pressure steam sterilizer	1	A	1	18	Superannuated	Renewal	○	1,3,4,8		1	
A12- 3	Autoclave	2	A	2	29	Superannuated	Renewal	○	1,3,4,8		2	
A12- 4	Drying cabinet	2	A	2	22	Superannuated	Renewal	○	1,3,4,8		2	
A12- 5	Instrument table	10	A	5	19	Superannuated	Renewal	○	1,3,4,8		10	
A12- 6	Autopsy instrument set	1	A	1	19	Superannuated	Renewal	○	1,3,4,8		1	
A12- 7	Morgue refrigerator	1	B	1	19	Superannuated	Renewal	○	1,3,4,8		1	B^+、1 unit
A12- 8	Sliding microtome	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A12- 9	Ultraviolet air sterilizer	4	A	1	19	Superannuated	Renewal	○	1,3,4,8		4	
A12- 12	Refrigerated centrifuge	1	A	1	22	bad	Renewal	○	1,3,4,8		1	
A12- 14	Instrument cabinet	10	A	12	15	Superannuated	Renewal	○	1,3,4,8		10	
A12- 15	Bactericidal lamp	2	A	3	19	Superannuated	Renewal	○	1,3,4,8		2	
A12- 16	Patient cart	4	A	2	19	Superannuated	Renewal	○	1,3,4,8		4	
A12- 17	Freezer	2	C	1	10	good	Renewal	×		9	0	
A12- 18	Buret support	10	C	0	-	-	New	×		5	0	
A12- 23	Examination light	2	A	2	19	bad	Renewal	○	1,3,4,8		2	
A12- 24	Ambulance (4 x 4)	2	B	2	15	Superannuated	Renewal	○	1,3,4,6,8,10		2	B^+、2 units
A12- 25	Height / weight scale (200cm , 150kg)	2	C	2	10	good	Renewal	×		9	0	
A13- 3	I.V. Hanger Stand	30	B	4	10	good	Suppliment	×		2,3,9	0	B^-、delete

Table 2-1 **Ovorhangai Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1-1	Stethoscope	20	A	34	15	shotage	Suppliment	○	2,3,4,8		20	
A1-2	Sphygmomanometer (desk type)	10	A	24	15	shotage	Suppliment	○	2,3,4,8		10	
A1-3	Sphygmomanometer (pocket type)	10	A	12	15	shotage	Suppliment	○	2,3,4,8		10	
A1-4	Obstetric stethoscope	2	A	5	15	shotage	Suppliment	○	2,3,4,8		2	
A1-5	Distance test chart	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A1-6	Percussion hammer (Tyler type)	3	A	3	12	bad	Renewal	○	1,3,4,8		3	
A1-7	Diagnostic set	5	A	3	12	bad	Renewal	○	1,3,4,8		5	
A1-8	Spirometer	2	C	1	5	bad	Renewal	×		10,11,12,13	0	
A1-9	Infant scale	1	A	2	12	superannuated	Renewal	○	1,3,4,8		1	
A1-10	ECG	1	C	1	5	good	Renewal	×		9	0	
A1-11	Portable ECG	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A1-12	Electroencephalograph	1	B	0	-	-	New	×		10,12,11,13	0	B^-、delete
A1-13	Cysto-urethroscope, B set	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1set
A1-14	Gastrointestinal fiberscope	1	C	1	5	good	Renewal	×		9	0	
A1-15	Laparoscope set	1	C	0	-	-	New	×		11,12,13	0	
A1-16	Endoscopic TV system	1	C	0	-	-	New	×		11,13	0	
A1-17	Light source for endoscopes	1	C	0	-	-	New	×		11,13	0	
A1-18	Ultrasound system	2	B	1	5	bad	Renewal	○	1,3,4,8		1	B^+、1unit
A1-20	Ultrasound doppler examination system	1	B	0	-	-	New	×		10,12,11,13	0	B^-、delete
A1-21	Portable ultrasound system	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1unit
A1-22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1-24	Bronchofiberscope	1	C	1	5	good	Renewal	×		9	0	
	Surgery department											
A2-1	Operating light	2	C	1	5	good	Renewal	×		9	0	
A2-2	Operating light	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A2-3	Operating table	1	A	1	40	bad	Renewal	○	1,3,4,8		1	
A2-4	Suction unit	2	A	1	20	bad	Renewal	○	1,3,4,8		2	
A2-5	Operating microscope	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A2-6	Coagulator	2	A	1	2	bad	Renewal	○	1,3,4,8		2	
A2-7	Instrument tray stand	3	A	0	-	-	New	○	3,4,5,8,9,10		3	
A2-8	Revolving chair	2	A	1	40	bad	Renewal	○	1,3,4,8		2	
A2-9	Instrument cabinet	2	A	2	16	bad	Renewal	○	1,3,4,8		2	
A2-10	Patient cart	2	A	2	16	bad	Renewal	○	1,3,4,8		2	
A2-11	Pulmonary surgery instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A2-12	Hepato-cholecystotomy instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A2-13	Osteosurgery instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A2-14	Nephrectomy instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A2-15	Manual dermatome	1	C	0	-	-	New	×		11,12,13	0	
A2-16	Standard plastic surgery set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	

Table 2-1 **Ovorhangai Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A2-17	Surgical instrument set for infant	1	C	1	16	bad	Renewal	×		9	0	
A2-18	Neurosurgery instrument set	1	C	0	-	-	New	×		11,12,13	0	
A2-19	Gastrectomy instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A2-20	Microvascular surgical instrument set	1	C	0	-	-	New	×		11,12,13	0	
A2-21	Operating instrument set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A2-22	Surgical suture needle set	2	A	1	19	bad	Renewal	○	1,3,4,8		2	
A2-25	Blood vessel suture needle set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A2-26	Intestinal suture needle set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A2-27	Needle holder	5	A	1	19	bad	Renewal	○	1,3,4,8		5	
A2-28	Operating knife set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A2-29	Prostatomy instrument set	1	B	1	19	bad	Renewal	○	1,3,4,8		1	B^+、1set
A2-30	First aid surgery instrument set	1	B	1	19	bad	Renewal	○	1,3,4,8		1	B^+、1set
A2-31	Small operating instrument set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
	Emergency & reanimation department											
A3-1	Bedside monitor	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3-2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3-3	Ventilator	1	C	1	5	good	Renewal	×		9	0	
A3-4	Anaesthesia apparatus with monitor	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A3-5	Anaesthesia ventilator	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A3-6	Suction unit	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A3-7	Endtracheal set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A3-8	Venotomy instrument set	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A3-9	Emergency tracheotomy instrument set	1	C	0	-	-	New	×		10,12,11,13	0	
A3-10	Emergency aid box	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
	Obstetrics & Gynaecology department											
A4-1	Vacuum extractor	2	A	2	19	bad	Renewal	○	1,3,4,8		2	
A4-2	Gynaecological examining unit	2	A	2	19	bad	Renewal	○	1,3,4,8		2	
A4-3	Aus-suction unit	2	C	2	19	bad	Renewal	×		9	0	
A4-4	Artificial abortion instrument set	2	A	1	19	bad	Renewal	○	1,3,4,8		2	
A4-5	Gynaecology stereoscope set	1	A	0	–	–	New	○	3,4,5,8,9,10		1	
A4-6	Fetal actocardiograph	1	A	0	–	–	New	○	3,4,5,8,9,10		1	
A4-7	Cryosurgery system for gynaecology	1	C	0	–	–	New	×		11,12,13	0	
A4-8	Obstetrics operation instrument set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A4-9	Gynaecology examination instrument set	3	A	1	15	bad	Renewal	○	1,3,4,8		3	
A4-10	Cusco's vaginal speculum	10	A	1	16	bad	Renewal	○	1,3,4,8		10	
A4-11	Delivery table	2	C	4	19	good	Renewal	×		9	0	
A4-12	Examining table	2	C	2	19	good	Renewal	×		9	0	
A4-14	Gynaecologic examining instrument set	2	A	1	16	bad	Renewal	○	1,3,4,8		2	
A4-15	Gynaecologic operation table	1	A	1	46	bad	Renewal	○	1,3,4,8		1	
A4-16	Infant ventilator	1	C	0	–	–	New	×		2,3,9	0	

Table 2-1 **Ovorhangai Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Laboratory											
A5-1	Laboratory monocular microscope	2	C	1	5	good	Renewal	×		9	0	
A5-2	Laboratory binocular microscope	2	A	2	15	bad	Renewal	○	1,3,4,8		2	
A5-3	Thermostat	2	A	1	15	bad	Renewal	○	1,3,4,8		2	
A5-4	Blood cell counter	1	C	0	-	-	New	×		10	0	
A5-5	Differential leukocyte counter	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A5-6	Hemoglobinmeter	3	C	1	10	good	Renewal	×		9	0	
A5-7	pH meter	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A5-10	Auto diluter	2	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A5-11	Analytical balance	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5-12	Distilling apparatus	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A5-14	Urine analyser	1	C	0	-	-	New	×		10	0	
A5-16	Drying oven	1	C	1	4	good	Renewal	×		9	0	
A5-17	Clinical spectrophotometer	1	C	1	1	good	Renewal	×		9	0	
A5-18	Automatic biochemical analyser	1	C	0	-	-	New	×		10,11,12,13	0	
	Radiology department											
A6-1	Angiographic X-ray system	1	C	0	-	-	New	×		10,11,12,13	0	
A6-2	Mobile X-ray unit	2	A	1	9	bad	Renewal	○	1,3,4,8		2	
A6-3	Fluorography unit	1	C	1	5	good	Renewal	×		9	0	
A6-4	Dental X-ray unit	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A6-5	Processing tank	1	C	1	10	good	Renewal	×		9	0	
A6-6	X-ray film dryer	1	C	1	10	good	Renewal	×		9	0	
A6-7	X-ray film cassette (4 units of each size)	4	C	1	10	good	Renewal	×		9	0	
A6-8	X-ray film illuminator	2	A	1	9	bad	Renewal	○	1,3,4,8		2	
A6-9	Protective gloves	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A6-10	Dosimeter and charger	1	B	0	-	-	New	○	4,5,8,9		1	B^+、1 unit
A6-11	Mammographic X-ray stand	1	C	0	-	-	New	×		10,11,12,13	0	
A6-12	Darkroom lamp	1	B	1	9	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A6-13	Protective glasses	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
	Dental department											
A7-1	Portable treatment unit	1	B	1	22	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A7-2	Dental examination instrument set	1	A	1	18	bad	Renewal	○	1,3,4,8		1	
A7-3	Dental treatment instrument set	2	B	1	15	bad	Renewal	○	1,3,4,8		2	B^+、2 sets
	Paediatrics department											
A8-1	Infant incubator	2	A	3	5	bad	Renewal	○	1,3,4,8		2	
A8-2	Infant ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A8-3	Infant warmer	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A8-4	Oxygen concentrator	1	A	1	3	good	Suppliment	○	2,3,4,8		1	
A8-5	Infant sphygmomanometer	3	A	2	9	bad	Renewal	○	1,3,4,8		3	
A8-6	Infant rectal thermometer	10	A	6	9	bad	Renewal	○	1,3,4,8		10	

Table 2-1 **Ovorhangai Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A8-7	Suction unit	1	C	1	6	good	Renewal	×		9	0	
A8-8	Oxymeter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Ophthalmic department											
A9-1	Ophthalmic operation instrument set	1	A	1	49	bad	Renewal	○	1,3,4,8		1	
A9-2	Cornea transplantation instrument set	1	C	0	-	-	New	×		11,12,13	0	
A9-3	Trial lens set	2	A	1	49	bad	Renewal	○	1,3,4,8		2	
A9-4	Synoptiscope	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A9-5	Binocular ophthalmoscope	2	C	0	-	-	New	×		5	0	
A9-7	Indirect ophthalmoscope with halogen lamp	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9-8	Universal trial frame	1	C	1	49	bad	Renewal	×		9	0	
A9-10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9-11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A13-1	Slit lamp Microscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	ENT department											
A10-1	Otosurgery instrument set	2	C	1	5	good	Renewal	×		9	0	
A10-2	Head mirror	3	A	3	5	bad	Renewal	○	1,3,4,8		3	
A10-3	Sinus surgery instrument set	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A10-4	Audiometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10-5	ENT surgery instrument set	1	B	1	10	bad	Renewal	○	1,3,4,8		1	B^+、1 set
A10-6	Chair-mounted unit	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A10-7	Laryngoscope set	1	B	1	6	bad	Renewal	○	1,3,4,8		1	B^+、1 set
A10-8	Oto-nasal scope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10-10	Portable treatment unit	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A10-11	Operating stool	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
	Physiotherapy department											
A11-1	Ultrasound therapy unit	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A11-2	Microwave therapy unit	1	A	2	20	bad	Renewal	○	1,3,4,8		1	
A11-3	Inductothermal treatment apparatus	1	B	1	28	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A11-4	Electric traction	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A11-5	Restrator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A11-6	Curved back board exerciser	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Others											
A12-1	Medical refrigerator	3	A	3	12	bad	Renewal	○	1,3,4,8		3	
A12-2	High pressure steam sterilizer	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A12-3	Autoclave	1	B	1	12	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A12-4	Drying cabinet	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A12-5	Instrument table	5	A	4	12	bad	Renewal	○	1,3,4,8		5	
A12-6	Autopsy instrument set	1	A	1	36	bad	Renewal	○	1,3,4,8		1	
A12-7	Morgue refrigerator	1	B	0	-	-	New	×		2,3	0	B^-、delete
A12-8	Sliding microtome	1	A	1	12	bad	Renewal	○	1,3,4,8		1	

Table 2-1 **Ovorhangai Health Service and Diagnosis Center**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A12-9	Ultraviolet air sterilizer	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A12-12	Refrigerated centrifuge	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A12-14	Instrument cabinet	10	A	5	12	bad	Renewal	○	1,3,4,8		10	
A12-15	Bactericidal lamp	2	C	3	10	good	Renewal	×		9	0	
A12-16	Patient cart	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A12-17	Freezer	2	C	1	5	good	Renewal	×		9	0	
A12-18	Buret support	10	C	1	10	good	Renewal	×		9	0	
A12-23	Examination light	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A12-24	Ambulance (4 x 4)	2	B	2	12	superannuated	Renewal	○	1,3,4,8		2	B^{+}、 2 units
A12-25	Height / weight scale (200cm , 150kg)	2	A	1	16	bad	Renewal	○	1,3,4,8		2	
A13-2	Folding Litter	6	A	1	16	bad	Renewal	○	1,3,4,8		6	
A13-3	I.V. Hanger Stand	20	B	3	10	good	Suppliment	×		2,3,9	0	B^{-}、 delete

Table 2-1 **Dornogovi General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1-1	Stethoscope	15	A	25	7	shotage	Suppliment	○	2,3,4,8		15	
A1-2	Sphygmomanometer (desk type)	15	A	18	7	shotage	Suppliment	○	2,3,4,8		15	
A1-3	Sphygmomanometer (pocket type)	9	A	9	7	shotage	Suppliment	○	2,3,4,8		9	
A1-4	Obstetric stethoscope	5	A	4	7	shotage	Suppliment	○	2,3,4,8		5	
A1-5	Distance test chart	2	C	1	7	good	Renewal	×		9	0	
A1-6	Percussion hammer (Tyler type)	2	A	2	7	bad	Renewal	○	1,3,4,8		2	
A1-7	Diagnostic set	3	A	2	7	bad	Renewal	○	1,3,4,8		3	
A1-9	Infant scale	2	A	3	7	Superannuated	Renewal	○	1,3,4,8		2	
A1-10	ECG	1	C	1	5	good	Renewal	×		9	0	Planned by ADB
A1-11	Portable ECG	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1-14	Gastrointestinal fiberscope	1	C	1	5	good	Renewal	×		9	0	Planned by ADB
A1-17	Light source for endoscopes	1	C	1	5	good	Renewal	×		9	0	Planned by ADB
A1-18	Ultrasound system	1	A	1	5	Repair	Renewal	○	1,3,4,8		1	
A1-21	Portable ultrasound system	1	C	0	-	-	New	×		10,12,11,13	0	
A1-22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Surgery department											
A2-1	Operating light	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A2-2	Operating light	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A2-3	Operating table	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A2-4	Suction unit	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A2-6	Coagulator	1	A	2	7	Superannuated	Renewal	○	1,3,4,8		1	
A2-7	Instrument Tray stand	2	A	4	7	Superannuated	Renewal	○	1,3,4,8		2	
A2-8	Revolving chair	3	A	0	-	-	New	○	3,4,5,8,9,10		3	
A2-9	Instrument cabinet	1	A	1	7	Superannuated	Renewal	○	1,3,4,8		1	
A2-10	Patient cart	1	A	1	7	Superannuated	Renewal	○	1,3,4,8		1	
A2-11	Pulmonary surgery instrument set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-12	Hepato-cholecystotomy instrument set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-13	Osteosurgery instrument set	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B^+、1set
A2-19	Gastrectomy instrument set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-21	Operating instrument set	1	C	1	7	bad	Renewal	×		9	0	
A2-22	Surgical suture needle set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-25	Blood vessel suture needle set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-26	Intestinal suture needle set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-27	Needle holder	3	A	1	7	bad	Renewal	○	1,3,4,8		3	
A2-28	Operating knife set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A2-31	Small operating instrument set	2	A	1	7	bad	Renewal	○	1,3,4,8		2	
	Emergency & reanimation department											
A3-1	Bedside monitor	2	B	0	-	-	New	○	3,4,5,8,9,10		2	B^+、2 units
A3-2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	

Table 2-1 **Dornogovi General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A3- 3	Ventilator	1	B	1	5	shotage	Suppliment	○	2,3,4,8		1	B+、1 unit
A3- 4	Anaesthesia apparatus with monitor	1	B	1	5	bad	Renewal	○	1,3,4,8		1	B+、1 unit
A3- 5	Anaesthesia ventilator	1	B	1	5	bad	Renewal	○	1,3,4,8		1	B+、1 unit
A3- 6	Suction unit	1	C	1	5	good	Renewal	×		9	0	
A3- 7	Endtracheal set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A3- 8	Venotomy instrument set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A3- 10	Emergency aid box	2	A	1	7	bad	Renewal	○	1,3,4,8		2	
	Obstetrics & Gynaecology department											
A4- 1	Vacuum extractor	2	A	2	7	Superannuated	Renewal	○	1,3,4,8		2	
A4- 2	Gynaecological examining unit	1	A	1	7	shotage	Suppliment	○	2,3,4,8		1	
A4- 4	Artificial abortion instrument set	2	A	1	7	shotage	Suppliment	○	2,3,4,8		2	
A4- 5	Gynaecology stereoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 6	Fetal actocardiograph	1	C	0	-	-	New	×		9	0	Planned by ADB
A4- 8	Obstetrics operation instrument set	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A4- 9	Gynaecology examination instrument set	3	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A4- 10	Cusco's vaginal speculum	10	A	1	7	shotage	Suppliment	○	2,3,4,8		10	
A4- 11	Delivery table	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A4- 12	Examining table	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A4- 15	Gynaecologic operation table	1	A	1	7	Superannuated	Renewal	○	1,3,4,8		1	
	Laboratory											
A5- 2	Laboratory binocular microscope	3	A	1	5	bad	Renewal	○	1,3,4,8		3	
A5- 3	Thermostat	2	A	2	7	bad	Renewal	○	1,3,4,8		2	
A5- 5	Differential leukocyte counter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5- 6	Hemoglobinmeter	2	C	0	-	-	New	×		10,12,11,13	0	
A5- 10	Auto diluter	1	C	0	-	-	New	×		10,12,11,13	0	
A5- 11	Analytical balance	1	A	2	7	bad	Renewal	○	1,3,4,8		1	
A5- 16	Drying oven	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A5- 17	Clinical spectrophotometer	1	C	1	19	good	Renewal	×		9	0	
	Radiology department											
A6- 2	Mobile X-ray unit	2	B	0	-	-	New	○	3,4,5,8,9,10		2	B+、2 units
A6- 3	Fluorography unit	1	C	1	5	good	Renewal	×		9	0	
A6- 4	Dental X-ray unit	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A6- 8	X-ray film illuminator	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A6- 9	Protective gloves	2	A	1	7	bad	Renewal	○	1,3,4,8		2	
A6- 12	Darkroom lamp	1	C	1	7	good	Renewal	×		9	0	
A6- 13	Protective glasses	2	A	2	7	bad	Renewal	○	1,3,4,8		2	
	Dental department											
A7- 2	Dental examination instrument set	4	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A7- 3	Dental treatment instrument set	1	A	1	7	Superannuated	Renewal	○	1,3,4,8		1	
	Paediatrics department											

Table 2-1 **Dornogovi General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A8-1	Infant incubator	2	A	1	11	bad	Renewal	○	1,3,4,8		2	
A8-2	Infant ventilator	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B+、1 unit
A8-3	Infant warmer	2	A	2	7	bad	Renewal	○	1,3,4,8		2	
A8-4	Oxygen concentrator	1	C	1	7	good	Renewal	×		9	0	
A8-5	Infant sphygmomanometer	2	A	2	7	bad	Renewal	○	1,3,4,8		2	
A8-6	Infant rectal thermometer	10	A	6	7	bad	Renewal	○	1,3,4,8		10	
A8-7	Suction unit	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A8-8	Oxymeter	2	B	0	-	-	New	○	3,4,5,8,9,10		1	B+、1 unit
	Ophthalmic department											
A9-1	Ophthalmic operation instrument set	1	C	1	7	good	Renewal	×		9	0	
A9-3	Trial lens set	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A9-4	Synoptiscope	1	C	1	7	good	Renewal	×		5	0	
A9-7	Indirect ophthalmoscope with halogen lamp	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9-10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9-11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	ENT department											
A10-1	Otosurgery instrument set	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B+、1 set
A10-2	Head mirror	2	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A10-3	Sinus surgery instrument set	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B+、1 set
A10-4	Audiometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10-5	ENT surgery instrument set	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B+、1 set
A10-6	Chair-mounted unit	1	A	1	7	bad	Renewal	○	1,3,4,8		1	
A10-7	Laryngoscope set	1	C	0	-	-	New	×		9	0	
	Physiotherapy department											
A11-1	Ultrasound therapy unit	2	B	0	-	-	New	○	3,4,5,8,9,10		2	B+、2 units
A11-2	Microwave therapy unit	1	B	6	7	bad	Renewal	○	1,3,4,8		1	B+、1 unit
A11-4	Electric traction	1	B	1	2	bad	Renewal	○	1,3,4,8		1	B+、1 unit
	Others											
A12-1	Medical refrigerator	5	A	7	7	Superannuated	Renewal	○	1,3,4,8		5	
A12-2	High pressure steam sterilizer	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A12-3	Autoclave	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A12-4	Drying cabinet	1	C	1	7	bad	Renewal	×		9	0	Planned by ADB
A12-5	Instrument table	5	A	10	7	Superannuated	Renewal	○	1,3,4,8		5	
A12-6	Autopsy instrument set	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B+、1 set
A12-8	Sliding microtome	1	B	1	7	bad	Renewal	○	1,3,4,8		1	B+、1 unit
A12-9	Ultraviolet air sterilizer	3	A	2	7	Superannuated	Renewal	○	1,3,4,8		3	
A12-12	Refrigerated centrifuge	1	A	1	7	shotage	Suppliment	○	2,3,4,8		1	
A12-14	Instrument cabinet	2	A	6	7	Superannuated	Renewal	○	1,3,4,8		2	
A12-16	Patient cart	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A12-23	Examination light	2	C	4	7	good	Renewal	×		9	0	

Table 2-1 **Dornogovi General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A12- 24	Ambulance (4 x 4)	2	B	1	1	shotage	Suppliment	○	2,3,4,8		1	B^{+}、 1 unit
A12- 25	Height / weight scale (200cm , 150kg)	2	A	2	7	shotage	Suppliment	○	2,3,4,8		2	
A13- 3	I.V. Hanger Stand	20	B	2	7	shotage	Suppliment	×		2,3,9	0	B^{-}、 delete

Table 2-: **Bayan-Olgii General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1- 1	Stethoscope	20	A	10	10	shotage	suppliment	○	2,3,4,8		20	
A1- 2	Sphygmomanometer (desk type)	10	A	7	10	shotage	suppliment	○	2,3,4,8		10	
A1- 3	Sphygmomanometer (pocket type)	10	A	7	10	shotage	suppliment	○	2,3,4,8		10	
A1- 4	Obstetric stethoscope	2	A	1	15	shotage	suppliment	○	2,3,4,8		2	
A1- 5	Distance test chart	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A1- 6	Percussion hammer (Tyler type)	3	A	2	10	bad	Renewal	○	1,3,4,8		3	
A1- 7	Diagnostic set	5	A	2	10	shotage	suppliment	○	2,3,4,8		5	
A1- 9	Infant scale	1	A	2	16	No good	Renewal	○	1,3,4,8		1	
A1- 10	ECG	1	A	1	21	No good	Renewal	○	1,3,4,8		1	
A1- 11	Portable ECG	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A1- 14	Gastrointestinal fiberscope	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A1- 17	Light source for endoscopes	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A1- 18	Ultrasound system	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A1- 21	Portable ultrasound system	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A1- 22	Laryngoscope set	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
	Surgery department											
A2- 1	Operating light	2	C	1	10	good	Renewal	×		9	0	
A2- 2	Operating light	3	A	3	24	No good	Renewal	○	1,3,4,8		3	
A2- 3	Operating table	2	A	2	19	No good	Renewal	○	1,3,4,8		2	
A2- 4	Suction unit	3	A	2	19	No good	Renewal	○	1,3,4,8		3	
A2- 6	Coagulator	1	A	1	13	No good	Renewal	○	1,3,4,8		1	
A2- 7	Instrument Tray Stand	3	A	3	19	No good	Renewal	○	1,3,4,8		3	
A2- 8	Revolving chair	2	A	0	-	-	new	○	3,4,5,8,9,10		2	
A2- 9	Instrument cabinet	3	A	3	15	No good	Renewal	○	1,3,4,8		3	
A2- 10	Patient cart	2	A	2	15	No good	Renewal	○	1,3,4,8		2	
A2- 11	Pulmonary surgery instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 19	Gastrectomy instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 21	Operating instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 22	Surgical suture needle set	2	A	1	25	bad	Renewal	○	1,3,4,8		2	
A2- 25	Blood vessel suture needle set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 26	Intestinal suture needle set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 27	Needle holder	5	A	1	25	bad	Renewal	○	1,3,4,8		5	
A2- 28	Operating knife set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 30	First aid surgery instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A2- 31	Small operating instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
	Emergency & reanimation department											
A3- 1	Bedside monitor	3	A	0	-	-	new	○	3,4,5,8,9,10		3	
A3- 2	Defibrillator	1	A	0	-	-	new	○	3,4,5,8,9,10		1	

Table 2-: **Bayan-Olgii General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A3- 3	Ventilator	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A3- 4	Anaesthesia apparatus with monitor	1	A	1	21	No good	Renewal	○	1,3,4,8		1	
A3- 5	Anaesthesia ventilator	1	A	1	21	No good	Renewal	○	1,3,4,8		1	
A3- 6	Suction unit	1	A	1	15	No good	Renewal	○	1,3,4,8		1	
A3- 7	Endtracheal set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A3- 8	Venotomy instrument set	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A3- 10	Emergency aid box	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
	Obstetrics & Gynaecology department											
A4- 1	Vacuum extractor	2	A	2	7	No good	Renewal	○	1,3,4,8		2	
A4- 2	Gynaecological examining unit	2	A	0	-	-	new	○	3,4,5,8,9,10		2	
A4- 4	Artificial abortion instrument set	2	A	1	14	No good	Renewal	○	1,3,4,8		2	
A4- 5	Gynaecology stereoscope set	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A4- 6	Fetal actocardiograph	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A4- 8	Obstetrics operation instrument set	1	A	1	24	No good	Renewal	○	1,3,4,8		1	
A4- 9	Gynaecology examination instrument set	3	A	1	14	No good	Renewal	○	1,3,4,8		3	
A4- 10	Cusco's vaginal speculum	10	A	1	14	No good	Renewal	○	1,3,4,8		10	
A4- 11	Delivery table	2	A	1	24	No good	Renewal	○	1,3,4,8		2	
A4- 12	Examining table	2	A	2	14	No good	Renewal	○	1,3,4,8		2	
A4- 14	Gynaecologic examining instrument set	2	A	1	14	No good	Renewal	○	1,3,4,8		2	
A4- 15	Gynaecologic operation table	1	A	1	24	No good	Renewal	○	1,3,4,8		1	
	Laboratory											
A5- 2	Laboratory binocular microscope	2	A	3	20	No good	Renewal	○	1,3,4,8		2	
A5- 3	Thermostat	2	A	2	20	No good	Renewal	○	1,3,4,8		2	
A5- 5	Differential leukocyte counter	1	A	1	20	No good	Renewal	○	1,3,4,8		1	
A5- 6	Hemoglobinmeter	3	A	0	-	-	new	○	3,4,5,8,9,10		1	A、1 unit
A5- 10	Auto diluter	1	B	0	-	-	new	×		2,3,13	0	B^-、delete
A5- 11	Analytical balance	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A5- 16	Drying oven	1	A	2	24	bad	Renewal	○	1,3,4,8		1	
A5- 17	Clinical spectrophotometer	1	A	0	-	bad	new	○	3,4,5,8,9,10		1	
	Radiology department											
A6- 2	Mobile X-ray unit	1	A	1	-	bad	Renewal	○	1,3,4,8		1	
A6- 3	Fluorography unit	1	A	1	23	bad	Renewal	○	1,3,4,8		1	
A6- 4	Dental X-ray unit	1	A	1	14	bad	Renewal	○	1,3,4,8		1	
A6- 8	X-ray film illuminator	2	C	2	14	good	Renewal	×		9	0	
A6- 9	Protective gloves	3	A	2	14	bad	Renewal	○	1,3,4,8		3	
A6- 12	Darkroom lamp	1	B	2	14	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A6- 13	Protective glasses	3	A	2	14	bad	Renewal	○	1,3,4,8		3	
	Dental department											
A7- 2	Dental examination instrument set	1	A	3	40	bad	Renewal	○	1,3,4,8		1	
A7- 3	Dental treatment instrument set	2	A	3	20	bad	Renewal	○	1,3,4,8		2	

Table 2-: **Bayan-Olgii General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Paediatrics department											
A8- 1	Infant incubator	1	A	1	4	bad	Renewal	○	1,3,4,8		1	
A8- 2	Infant ventilator	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A8- 3	Infant warmer	2	A	1	3	bad	Renewal	○	1,3,4,8		2	
A8- 4	Oxygen concentrator	1	A	1	4	bad	Renewal	○	1,3,4,8		1	
A8- 5	Infant sphygmomanometer	3	A	2	8	bad	Renewal	○	1,3,4,8		3	
A8- 6	Infant rectal thermometer	10	A	5	8	bad	Renewal	○	1,3,4,8		10	
A8- 7	Suction unit	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A8- 8	Oxymeter	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
	Ophthalmic department											
A9- 1	Ophthalmic operation instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A9- 3	Trial lens set	1	A	1	30	bad	Renewal	○	1,3,4,8		1	
A9- 4	Synoptiscope	1	B	0	-	-	new	○	1,3,4,8		1	B^+、1 unit
A9- 7	Indirect ophthalmoscope with halogen lamp	1	A	0	-	-	new	○	1,3,4,8		1	
A9- 10	Universal ophthalmic measure	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A9- 11	Stereo fundus camera	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A13- 1	Slit lamp Microscope set	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
	ENT department											
A10- 1	Otosurgery instrument set	2	A	2	19	bad	Renewal	○	1,3,4,8		2	
A10- 2	Head mirror	2	A	1	19	bad	Renewal	○	1,3,4,8		2	
A10- 3	Sinus surgery instrument set	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A10- 4	Audiometer	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
A10- 5	ENT surgery instrument set	1	A	2	19	bad	Renewal	○	1,3,4,8		1	
A10- 6	Chair-mounted unit	1	A	1	19	bad	Renewal	○	1,3,4,8		1	
A10- 7	Laryngoscope set	1	A	0	-	-	new	○	3,4,5,8,9,10		1	
	Others											
A12- 1	Medical refrigerator	3	A	4	15	bad	Renewal	○	1,3,4,8		3	
A12- 2	High pressure steam sterilizer	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A12- 3	Autoclave	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A12- 4	Drying cabinet	2	A	2	18	bad	Renewal	○	1,3,4,8		2	
A12- 5	Instrument table	5	A	2	15	bad	Renewal	○	1,3,4,8		5	
A12- 9	Ultraviolet air sterilizer	3	A	3	15	bad	Renewal	○	1,3,4,8		3	
A12- 12	Refrigerated centrifuge	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A12- 14	Instrument cabinet	10	A	3	15	bad	Renewal	○	1,3,4,8		10	
A12- 16	Patient cart	2	A	2	15	bad	Renewal	○	1,3,4,8		2	
A12- 23	Examination light	2	A	2	15	bad	Renewal	○	1,3,4,8		2	
A12- 24	Ambulance (4 x 4)	2	B	2	15	superannuated	Renewal	○	1,3,4,8		1	B^+、1 unit
A12- 25	Height / weight scale (200cm , 150kg)	2	A	2	15	bad	Renewal	○	1,3,4,8		2	
A13- 2	Folding Litter	2	A	1	16	bad	Renewal	○	1,3,4,8		2	
A13- 3	I.V. Hanger Stand	20	B	4	15	shotage	suppliment	×		2,3,9	0	B^-、delete

Table 2-1 **Bulgan General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1- 1	Stethoscope	20	A	40	15	shortage	Suppliment	○	2,3,4,8		20	
A1- 2	Sphygmomanometer (desk type)	10	A	20	15	shortage	Suppliment	○	2,3,4,8		10	
A1- 3	Sphygmomanometer (pocket type)	10	A	10	15	shortage	Suppliment	○	2,3,4,8		10	
A1- 4	Obstetric stethoscope	2	A	1	15	shortage	Suppliment	○	2,3,4,8		2	
A1- 5	Distance test chart	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A1- 6	Percussion hammer (Tyler type)	3	A	1	15	bad	Renewal	○	1,3,4,8		3	
A1- 7	Diagnostic set	5	A	1	15	bad	Renewal	○	1,3,4,8		5	
A1- 9	Infant scale	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A1- 10	ECG	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 11	Portable ECG	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 14	Gastrointestinal fiberscope	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A1- 17	Light source for endoscopes	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A1- 18	Ultrasound system	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A1- 21	Portable ultrasound system	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A1- 22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Surgery department											
A2- 1	Operating light	2	C	1	16	good	Renewal	×		9	0	
A2- 2	Operating light	3	A	1	5	bad	Renewal	○	1,3,4,8		3	
A2- 3	Operating table	2	A	2	15	bad	Renewal	○	1,3,4,8		2	
A2- 4	Suction unit	3	A	1	15	bad	Renewal	○	1,3,4,8		3	
A2- 6	Coagulator	1	A	1	11	bad	Renewal	○	1,3,4,8		1	
A2- 7	Instrument Tray stand	3	A	2	11	bad	Renewal	○	1,3,4,8		3	
A2- 8	Revolving chair	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A2- 9	Instrument cabinet	3	A	3	10	bad	Renewal	○	1,3,4,8		3	
A2- 10	Patient cart	2	A	1	11	bad	Renewal	○	1,3,4,8		2	
A2- 11	Pulmonary surgery instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 19	Gastrectomy instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 21	Operating instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 22	Surgical suture needle set	2	A	1	15	bad	Renewal	○	1,3,4,8		2	
A2- 25	Blood vessel suture needle set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 26	Intestinal suture needle set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 27	Needle holder	5	A	1	15	bad	Renewal	○	1,3,4,8		5	
A2- 28	Operating knife set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 30	First aid surgery instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A2- 31	Small operating instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
	Emergency & reanimation department											
A3- 1	Bedside monitor	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A3- 2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	

Table 2-1 **Bulgan General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A3- 3	Ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3- 4	Anaesthesia apparatus with monitor	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A3- 5	Anaesthesia ventilator	1	A	1	16	bad	Renewal	○	1,3,4,8		1	
A3- 6	Suction unit	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A3- 7	Endtracheal set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A3- 8	Venotomy instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A3- 10	Emergency aid box	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
	Obstetrics & Gynaecology department											
A4- 1	Vacuum extractor	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 2	Gynaecological examining unit	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A4- 4	Artificial abortion instrument set	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 5	Gynaecology stereoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 6	Fetal actocardiograph	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 8	Obstetrics operation instrument set	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A4- 9	Gynaecology examination instrument set	3	A	1	12	bad	Renewal	○	1,3,4,8		3	
A4- 10	Cusco's vaginal speculum	10	A	1	12	bad	Renewal	○	1,3,4,8		10	
A4- 11	Delivery table	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 12	Examining table	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 14	Gynaecologic examining instrument set	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 15	Gynaecologic operation table	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
	Laboratory											
A5- 2	Laboratory binocular microscope	2	A	1	9	bad	Renewal	○	1,3,4,8		2	
A5- 3	Thermostat	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A5- 5	Differential leukocyte counter	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A5- 6	Hemoglobinmeter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5- 10	Auto diluter	2	C	0	-	-	New	×		2,3,13	0	
A5- 11	Analytical balance	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A5- 16	Drying oven	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A5- 17	Clinical spectrophotometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Radiology department											
A6- 2	Mobile X-ray unit	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A6- 3	Fluorography unit	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A6- 4	Dental X-ray unit	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A6- 8	X-ray film illuminator	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A6- 9	Protective gloves	3	A	1	10	bad	Renewal	○	1,3,4,8		3	
A6- 12	Darkroom lamp	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A6- 13	Protective glasses	3	A	1	10	bad	Renewal	○	1,3,4,8		3	
	Dental department											
A7- 2	Dental examination instrument set	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A7- 3	Dental treatment instrument set	2	A	1	15	bad	Renewal	○	1,3,4,8		2	

Table 2-1 **Bulgan General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Paediatrics department											
A8- 1	Infant incubator	2	A	1	17	bad	Renewal	○	1,3,4,8		2	
A8- 2	Infant ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A8- 3	Infant warmer	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A8- 4	Oxygen concentrator	1	A	1	3	good	Suppliment	○	2,3,4,8		1	
A8- 5	Infant sphygmomanometer	3	A	1	10	bad	Renewal	○	1,3,4,8		3	
A8- 6	Infant rectal thermometer	10	A	1	10	bad	Renewal	○	1,3,4,8		10	
A8- 7	Suction unit	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A8- 8	Oxymeter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Ophthalmic department											
A9- 1	Ophthalmic operation instrument set	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A9- 3	Trial lens set	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A9- 4	Synoptiscope	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、 1 unit
A9- 7	Indirect ophthalmoscope with halogen lamp	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A13- 1	Slit lamp Microscope set	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
	ENT department											
A10- 1	Otosurgery instrument set	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A10- 2	Head mirror	2	A	1	10	bad	Renewal	○	1,3,4,8		2	
A10- 4	Audiometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10- 5	ENT surgery instrument set	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A10- 6	Chair-mounted unit	1	A	1	10	bad	Renewal	○	1,3,4,8		1	
A10- 7	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Others											
A12- 1	Medical refrigerator	3	A	1	17	bad	Renewal	○	1,3,4,8		3	
A12- 2	High pressure steam sterilizer	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A12- 3	Autoclave	1	A	1	9	bad	Renewal	○	1,3,4,8		1	
A12- 4	Drying cabinet	2	A	1	15	bad	Renewal	○	1,3,4,8		2	
A12- 5	Instrument table	5	A	1	15	bad	Renewal	○	1,3,4,8		5	
A12- 9	Ultraviolet air sterilizer	3	A	2	15	bad	Renewal	○	1,3,4,8		3	
A12- 12	Refrigerated centrifuge	1	A	1	15	bad	Renewal	○	1,3,4,8		1	
A12- 14	Instrument cabinet	10	A	4	12	bad	Renewal	○	1,3,4,8		10	
A12- 16	Patient cart	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A12- 23	Examination light	2	A	3	10	bad	Renewal	○	1,3,4,8		2	
A12- 24	Ambulance (4 x 4)	2	B	2	10	superannuated	Renewal	○	1,3,4,8		1	B^+、 1 unit
A12- 25	Height / weight scale (200cm , 150kg)	2	A	3	15	bad	Renewal	○	1,3,4,8		2	
A13- 2	Folding Litter	2	A	1	15	bad	Renewal	○	1,3,4,8		2	
A13- 3	I.V. Hanger Stand	20	B	3	15	bad	Renewal	×		2,3,9	0	B^-、 delete

Table 2-1 **Govi-Altai General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Diagnostic rooms											
A1- 1	Stethoscope	20	A	35	20	shotage	Suppliment	○	2,3,4,8		20	
A1- 2	Sphygmomanometer (desk type)	10	A	15	20	shotage	Suppliment	○	2,3,4,8		10	
A1- 3	Sphygmomanometer (pocket type)	10	A	8	20	shotage	Suppliment	○	2,3,4,8		10	
A1- 4	Obstetric stethoscope	2	A	2	15	shotage	Suppliment	○	2,3,4,8		2	
A1- 5	Distance test chart	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A1- 6	Percussion hammer (Tyler type)	3	A	2	20	bad	Renewal	○	1,3,4,8		3	
A1- 7	Diagnostic set	5	A	2	20	bad	Renewal	○	1,3,4,8		5	
A1- 9	Infant scale	1	A	2	25	superannuated	Renewal	○	1,3,4,8		1	
A1- 10	ECG	1	A	1	13	bad	Renewal	○	1,3,4,8		1	
A1- 11	Portable ECG	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A1- 14	Gastrointestinal fiberscope	1	C	1	9	good	Renewal	×		9	0	
A1- 17	Light source for endoscopes	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A1- 18	Ultrasound system	2	A	2	10	bad	Renewal	○	1,3,4,8		2	
A1- 21	Portable ultrasound system	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A1- 22	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Surgery department											
A2- 1	Operating light	2	C	2	20	good	Renewal	×		9	0	
A2- 2	Operating light	2	A	2	20	bad	Renewal	○	1,3,4,8		2	
A2- 3	Operating table	2	A	2	40	bad	Renewal	○	1,3,4,8		2	
A2- 4	Suction unit	2	A	2	13	bad	Renewal	○	1,3,4,8		2	
A2- 6	Coagulator	2	A	1	11	bad	Renewal	○	1,3,4,8		2	
A2- 7	Instrument Tray Stand	3	A	3	20	bad	Renewal	○	1,3,4,8		3	
A2- 8	Revolving chair	2	A	1	16	bad	Renewal	○	1,3,4,8		2	
A2- 9	Instrument cabinet	2	A	4	20	bad	Renewal	○	1,3,4,8		2	
A2- 10	Patient cart	2	A	1	15	bad	Renewal	○	1,3,4,8		2	
A2- 11	Pulmonary surgery instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 19	Gastrectomy instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 21	Operating instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 22	Surgical suture needle set	2	A	1	29	bad	Renewal	○	1,3,4,8		2	
A2- 25	Blood vessel suture needle set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 26	Intestinal suture needle set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 27	Needle holder	5	A	1	29	bad	Renewal	○	1,3,4,8		5	
A2- 28	Operating knife set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 30	First aid surgery instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A2- 31	Small operating instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
	Emergency & reanimation department											
A3- 1	Bedside monitor	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3- 2	Defibrillator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	

Table 2-1 **Govi-Altai General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A3- 3	Ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A3- 4	Anaesthesia apparatus with monitor	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A3- 5	Anaesthesia ventilator	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A3- 6	Suction unit	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A3- 7	Endtracheal set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A3- 8	Venotomy instrument set	1	A	1	29	bad	Renewal	○	1,3,4,8		1	
A3- 10	Emergency aid box	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Obstetrics & Gynaecology department											
A4- 1	Vacuum extractor	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 2	Gynaecological examining unit	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A4- 4	Artificial abortion instrument set	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 5	Gynaecology stereoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 6	Fetal actocardiograph	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A4- 8	Obstetrics operation instrument set	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A4- 9	Gynaecology examination instrument set	3	A	1	12	bad	Renewal	○	1,3,4,8		3	
A4- 10	Cusco's vaginal speculum	10	A	1	12	bad	Renewal	○	1,3,4,8		10	
A4- 11	Delivery table	2	A	2	38	no good	Renewal	○	1,3,4,8		2	
A4- 12	Examining table	2	A	2	38	bad	Renewal	○	1,3,4,8		2	
A4- 14	Gynaecologic examining instrument set	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A4- 15	Gynaecologic operation table	1	A	1	40	no good	Renewal	○	1,3,4,8		1	
	Laboratory											
A5- 2	Laboratory binocular microscope	6	A	1	1	bad	Renewal	○	1,3,4,8		6	
A5- 3	Thermostat	3	A	5	25	bad	Renewal	○	1,3,4,8		3	
A5- 5	Differential leukocyte counter	2	A	1	25	bad	Renewal	○	1,3,4,8		2	
A5- 6	Hemoglobinmeter	3	A	0	-	-	New	○	3,4,5,8,9,10		1	A、1 unit
A5- 10	Auto diluter	2	B	0	-	-	New	×		2,3,13	0	B^-、delete
A5- 11	Analytical balance	2	A	0	-	-	New	○	3,4,5,8,9,10		2	
A5- 16	Drying oven	2	A	3	30	bad	Renewal	○	1,3,4,8		2	
A5- 17	Clinical spectrophotometer	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
	Radiology department											
A6- 2	Mobile X-ray unit	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A6- 3	Fluorography unit	1	A	2	30	bad	Renewal	○	1,3,4,8		1	
A6- 4	Dental X-ray unit	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A6- 8	X-ray film illuminator	2	B	1	20	shotage	Suppliment	○	2,3,4,8		2	B^+、2 units
A6- 9	Protective gloves	3	A	1	10	shotage	Suppliment	○	2,3,4,8		3	
A6- 12	Darkroom lamp	1	A	1	25	shotage	Suppliment	○	2,3,4,8		1	
A6- 13	Protective glasses	3	A	1	10	shotage	Suppliment	○	2,3,4,8		3	
	Dental department											
A7- 2	Dental examination instrument set	1	A	3	26	bad	Renewal	○	1,3,4,8		1	
A7- 3	Dental treatment instrument set	2	A	3	26	bad	Renewal	○	1,3,4,8		2	

Table 2-1 **Govi-Altai General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evaluation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
	Paediatrics department											
A8- 1	Infant incubator	2	C	2	3	good	Renewal	×		9	0	
A8- 2	Infant ventilator	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A8- 3	Infant warmer	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A8- 4	Oxygen concentrator	1	A	1	3	no good	Renewal	○	1,3,4,8		1	
A8- 5	Infant sphygmomanometer	3	A	1	12	bad	Renewal	○	1,3,4,8		3	
A8- 6	Infant rectal thermometer	10	A	1	12	bad	Renewal	○	1,3,4,8		10	
A8- 7	Suction unit	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A8- 8	Oxymeter	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Ophthalmic department											
A9- 1	Ophthalmic operation instrument set	1	A	1	20	bad	Renewal	○	1,3,4,8		1	
A9- 3	Trial lens set	1	A	2	20	no good	Renewal	○	1,3,4,8		1	
A9- 4	Synoptiscope	1	B	0	-	-	New	○	3,4,5,8,9,10		1	B^+、1 unit
A9- 7	Indirect ophthalmoscope with halogen lamp	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 10	Universal ophthalmic measure	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A9- 11	Stereo fundus camera	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A13- 1	Slit lamp Microscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	ENT department											
A10- 1	Otosurgery instrument set	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A10- 2	Head mirror	2	A	1	12	bad	Renewal	○	1,3,4,8		2	
A10- 4	Audiometer	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
A10- 5	ENT surgery instrument set	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A10- 6	Chair-mounted unit	1	A	1	25	bad	Renewal	○	1,3,4,8		1	
A10- 7	Laryngoscope set	1	A	0	-	-	New	○	3,4,5,8,9,10		1	
	Physiotherapy department											
A11- 4	Electric traction	1	B	1	15	no good	Renewal	○	1,3,4,8		1	B^+、1 unit
	Others											
A12- 1	Medical refrigerator	3	A	2	23	bad	Renewal	○	1,3,4,8		3	
A12- 2	High pressure steam sterilizer	1	A	2	23	bad	Renewal	○	1,3,4,8		1	
A12- 3	Autoclave	2	A	1	25	bad	Renewal	○	1,3,4,8		2	
A12- 4	Drying cabinet	2	A	2	20	bad	Renewal	○	1,3,4,8		2	
A12- 5	Instrument table	5	A	1	12	bad	Renewal	○	1,3,4,8		5	
A12- 9	Ultraviolet air sterilizer	2	A	2	10	shotage	Suppliment	○	2,3,4,8		2	
A12- 12	Refrigerated centrifuge	1	A	1	12	bad	Renewal	○	1,3,4,8		1	
A12- 14	Instrument cabinet	10	A	3	15	bad	Renewal	○	1,3,4,8		10	
A12- 16	Patient cart	2	A	1	20	bad	Renewal	○	1,3,4,8		2	
A12- 23	Examination light	2	A	2	12	bad	Renewal	○	1,3,4,8		2	
A12- 24	Ambulance (4 x 4)	2	B	2	15	bad	Renewal	○	1,3,4,8		1	B^+、1 unit
A12- 25	Height / weight scale (200cm , 150kg)	2	A	3	20	bad	Renewal	○	1,3,4,8		2	
A13- 2	Folding Litter	2	A	1	15	bad	Renewal	○	1,3,4,8		2	

Table 2-1 **Govi-Altai General Hospital**

Item No	DESCRIPTION	Quantity Requested	Priority	Existing			Classification	Evalu-ation	High Priolity	Low Priority	Quantity planned	Remarks
				Retain	Age	Condition						
A13- 3	I.V. Hanger Stand	20	B	3	15	bad	Renewal	×		2,3,9	0	B⁻、delete

(4) Distribution plan of equipment

As explained particularly in “2-2-2 Study in contents of the request”, total equipment procured in the project are 748 items and 1,701 pieces. The detail is shown in “Table 2-2 Distribution plan of equipment”.

Project Facilities	Equipment List In Minutes of Discussions	B/D(after analysis) Final Equipment List
Hovd Health Service and Diagnosis Center	156 Items (2,377 pcs.)	112 Items (284 pcs.)
Dornod Health Service and Diagnosis Center	159 Items (399 pcs.)	129 Items (319 pcs.)
Ovorhangai Health Service and Diagnosis Center	160 Items (327 pcs.)	116 Items (238 pcs.)
Dornogovi General Hospital	112 Items (237 pcs.)	77 Items (172 pcs.)
Bayan-Olgii General Hospital	109 Items (255 pcs.)	105 Items (227 pcs.)
Bulgan General Hospital	108 Items (254 pcs.)	105 Items (229 pcs.)
Govi-Altai General Hospital	109 Items (262 pcs.)	104 Items (232 pcs.)
TOTAL	913 Items (4,111 pcs.)	748 Items (1,701 pcs.)

Table 2-2 Distribution plan of equipment

Code	Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital				Total
			Hovd	Dornod	Ovor-hangai	Dorno-govi	Bayan-Olgii	Bulgan	Govi-Altai	
			Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	
		Diagnostic rooms								
001	1- 1	Stethoscope	20	30	20	15	20	20	20	145
002	1- 2	Sphygmomanometer (desk type)	20	15	10	15	10	10	10	90
003	1- 3	Sphygmomanometer (pocket type)	20	15	10	9	10	10	10	84
004	1- 4	Obstetric stethoscope	2	10	2	5	2	2	2	25
005	1- 5	Distance test chart	1	0	1	0	1	1	1	5
006	1- 6	Percussion hammer (Tylor type)	10	3	3	2	3	3	3	27
007	1- 7	Diagnostic set	5	5	5	3	5	5	5	33
008	1- 9	Infant scale	3	3	1	2	1	1	1	12
009	1- 10	ECG	1	1	0	0	1	1	1	5
010	1- 11	Portable ECG	1	1	1	1	1	1	1	7
011	1- 13	Cysto-urethroscope, B set	1	1	1	—	—	—	—	3
012	1- 14	Gastrointestinal fiberscope	0	0	0	0	1	1	0	2
013	1- 17	Light source for endoscopes	0	1	0	0	1	1	1	4
014	1- 18	Ultrasound system	0	1	1	1	1	1	2	7
015	1- 21	Portable ultrasound system	1	1	1	0	1	1	1	6
016	1- 22	Laryngoscope set	1	1	1	1	1	1	1	7
017	1- 24	Bronchofiberscope	0	1	0	—	—	—	—	1
		Surgery department								
018	2- 1	Operating light	0	2	0	0	0	0	0	2
019	2- 2	Operating light	2	2	2	0	3	3	2	14
020	2- 3	Operating table	1	2	1	0	2	2	2	10
021	2- 4	Suction unit	0	2	2	0	3	3	2	12
022	2- 5	Operating microscope	0	1	1	—	—	—	—	2
023	2- 6	Coagulator	1	2	2	1	1	1	2	10
024	2- 7	Instrument tray stand	3	3	3	2	3	3	3	20
025	2- 8	Revolving chair	4	2	2	3	2	2	2	17
026	2- 9	Instrument cabinet	2	2	2	1	3	3	2	15
027	2- 10	Patient cart	2	2	2	1	2	2	2	13
028	2- 11	Pulmonary surgery instrument set	1	1	1	1	1	1	1	7
029	2- 12	Hepato-cholecystotomy instrument set	1	1	1	1	1	1	1	7
030	2- 13	Osteosurgery instrument set	1	1	1	1	—	—	—	4
031	2- 14	Nephrectomy instrument set	1	1	1	—	—	—	—	3
032	2- 16	Standard plastic surgery set	1	1	1	—	—	—	—	3
033	2- 17	Surgical instrument set for infant	1	1	0	—	—	—	—	2
034	2- 18	Neurosurgery instrument set	1	1	0	—	—	—	—	2
035	2- 19	Gastrectomy instrument set	1	1	1	1	1	1	1	7
036	2- 21	Operating instrument set	0	1	1	0	1	1	1	5
037	2- 22	Surgical suture needle set	2	2	2	1	2	2	2	13
038	2- 25	Blood vessel suture needle set	1	1	1	1	1	1	1	7
039	2- 26	Intestinal suture needle set	1	1	1	1	1	1	1	7
040	2- 27	Needle holder	5	5	5	3	5	5	5	33
041	2- 28	Operating knife set	1	1	1	1	1	1	1	7
042	2- 29	Prostatomy instrument set	1	1	1	—	—	—	—	3
043	2- 30	First aid surgery instrument set	—	—	1	—	1	1	1	4
044	2- 31	Small operating instrument set	2	2	1	2	1	1	1	10
		Emergency & reanimation department								
045	3- 1	Bedside monitor	1	3	1	2	3	2	1	13
046	3- 2	Defibrillator	1	1	1	1	1	1	1	7
047	3- 3	Ventilator	1	1	0	1	1	1	1	6
048	3- 4	Anaesthesia apparatus with monitor	0	1	1	1	1	1	1	6
049	3- 5	Anaesthesia ventilator	0	1	1	1	1	1	1	6
050	3- 6	Suction unit	2	2	1	0	1	1	1	8
051	3- 7	Endtracheal set	1	1	1	1	1	1	1	7
052	3- 8	Venotomy instrument set	1	1	1	1	1	1	1	7
053	3- 10	Emergency aid box	2	2	1	2	1	1	1	10
		Obstetrics & Ginecolpgy department								
054	4- 1	Vacuum extractor	2	2	2	2	2	2	2	14
055	4- 2	Gynecological examining unit	2	2	2	1	2	2	2	13
056	4- 4	Artificial abortion instrument set	2	2	2	2	2	2	2	14
057	4- 5	Gynecology stereoscope set	1	1	1	1	1	1	1	7
058	4- 6	Fetal actocardiograph	0	1	1	0	1	1	1	5
059	4- 8	Obstetrics operation instrument set	1	1	1	0	1	1	1	6
060	4- 9	Gynaecology examination instrument set	5	5	3	0	3	3	3	22
061	4- 10	Cusco's vaginal speculum	10	10	10	10	10	10	10	70
062	4- 11	Delivery table	2	2	0	0	2	2	2	10
063	4- 12	Examining table	1	2	0	0	2	2	2	9
064	4- 14	Girl examining instrument set	—	—	2	—	2	2	2	8
065	4- 15	Gynaecologic operation table	2	1	1	1	1	1	1	8

Code	Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital				Total
			Hovd	Dornod	Ovor-hangai	Dorno-govi	Bayan-Olgii	Bulgan	Govi-Altai	
			Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	
		Laboratory								
066	5- 2	Laboratory binocular microscope	3	3	2	3	2	2	6	21
067	5- 3	Thermostat	2	2	2	2	2	2	3	15
068	5- 5	Differential leukocyte counter	1	1	1	1	1	1	2	8
069	5- 6	Hemoglobinmeter	1	1	0	0	1	1	1	5
070	5- 7	pH meter	2	2	2	—	—	—	—	6
071	5- 10	Auto diluter	1	1	1	0	0	0	0	3
072	5- 11	Analytical balance	3	2	1	1	1	1	2	11
073	5- 12	Distilling apparatus	2	2	1	—	—	—	—	5
074	5- 15	Bacteriological analysis set	—	1	—	—	—	—	—	1
075	5- 16	Drying oven	1	1	0	1	1	2	2	8
076	5- 17	Clinical spectrophotometer	1	1	0	0	1	1	1	5
		Radiology department								
077	6- 2	Mobile X-ray unit	2	2	2	2	1	1	1	11
078	6- 3	Fluorography unit	0	0	0	0	1	1	1	3
079	6- 4	Dental X-ray unit	1	1	1	0	1	1	1	6
080	6- 5	Processing tank	0	1	0	—	—	—	—	1
081	6- 6	X-ray film dryer	1	1	0	—	—	—	—	2
082	6- 7	X-ray film cassette (4 units of each size)	4	4	0	—	—	—	—	8
083	6- 8	X-ray film illuminator	2	2	2	0	0	2	2	10
084	6- 9	Protective gloves	3	3	1	2	3	3	3	18
085	6- 10	Dosimeter and charger	1	1	1	—	—	—	—	3
086	6- 12	Darkroom lamp	1	1	1	0	1	1	1	6
087	6- 13	Protective glasses	3	3	1	2	3	3	3	18
		Dental department								
088	7- 1	Portable treatment unit	1	1	1	—	—	—	—	3
089	7- 2	Dental examination instrument set	0	3	1	0	1	1	1	7
090	7- 3	Dental treatment instrument set	1	3	2	1	2	2	2	13
		Pediatrics department								
091	8- 1	Infant incubator	1	2	2	2	1	2	0	10
092	8- 2	Infant ventilator	0	1	1	1	1	1	1	6
093	8- 3	Infant warmer	2	2	1	2	2	2	2	13
094	8- 4	Oxygen concentrator	0	1	1	0	1	1	1	5
095	8- 5	Infant sphygmomanometer	3	3	3	2	3	3	3	20
096	8- 6	Infant rectal thermometer	10	20	10	10	10	10	10	80
097	8- 7	Suction unit	1	1	0	1	1	1	1	6
098	8- 8	Oxymeter	1	1	1	1	1	1	1	7
		Ophthalmic department								
099	9- 1	Ophthalmic operation instrument set	0	1	1	0	1	1	1	5
100	9- 2	Cornea transplantation instrument set	1	1	0	-	—	—	—	2
101	9- 3	Trial lens set	2	0	2	1	1	1	1	8
102	9- 4	Synoptiscope	1	0	1	0	1	1	1	5
103	9- 5	Binocular ophthalmoscope	0	2	0	—	—	—	—	2
104	9- 7	Indirect ophthalmoscope with halogen lamp	1	1	1	1	1	1	1	7
105	9- 10	Universal ophthalmic measure	1	1	1	1	1	1	1	7
106	9- 11	Stereo fundus camera	1	1	1	1	1	1	1	7
107	13- 1	Slit lamp Microscope set	1	1	1	—	1	1	1	6
		ENT department								
108	10- 1	Otosurgery instrument set	2	2	0	1	2	2	2	11
109	10- 2	Head mirror	0	0	3	0	2	2	2	9
110	10- 3	Sinus surgery instrument set	2	2	2	1	1	—	—	8
111	10- 4	Audiometer	1	1	1	1	1	1	1	7
112	10- 5	ENT surgery instrument set	—	1	1	1	1	1	1	6
113	10- 6	Chair-mounted unit	1	1	1	1	1	1	1	7
114	10- 7	Laryngoscope set	0	1	1	0	1	1	1	5
115	10- 8	Oto-nasal scope set	1	1	1	—	—	—	—	3
116	10- 10	Portable treatment unit	—	—	2	—	—	—	—	2
117	10- 11	Operating stool	1	1	2	—	—	—	—	4
		Physiotherapy department								
118	11- 1	Ultrasound therapy unit	3	3	1	2	—	—	—	9
119	11- 2	Microwave therapy unit	1	1	1	1	—	—	—	4
120	11- 3	Inductothermal treatment apparatus	1	1	1	—	—	—	—	3
121	11- 4	Electric traction	1	1	1	1	—	—	1	5
122	11- 5	Restrator	1	1	1	—	—	—	—	3
123	11- 6	Curved back board exerciser	1	1	1	—	—	—	—	3
		Others								
124	12- 1	Medical refrigerator	3	3	3	5	3	3	3	23
125	12- 2	High pressure steam sterilizer	0	1	1	0	1	1	1	5
126	12- 3	Autoclave	0	2	1	0	1	1	2	7
127	12- 4	Drying cabinet	2	2	2	0	2	2	2	12

Code	Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital				Total
			Hovd	Dornod	Ovor-hangai	Dorno-govi	Bayan-Olgii	Bulgan	Govi-Altai	
			Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	
128	12- 5	Instrument table	10	10	5	5	5	5	5	45
129	12- 6	Autopsy instrument set	1	1	1	1	—	—	—	4
130	12- 7	Morgue refrigerator	0	1	0	—	—	—	—	1
131	12- 8	Sliding microtome	1	1	1	1	—	—	—	4
132	12- 9	Ultraviolet air sterilizer	3	4	2	3	3	3	2	20
133	12- 12	Rerigerated centrifuge	1	1	1	1	1	1	1	7
134	12- 14	Instrument cabinet	10	10	10	2	10	10	10	62
135	12- 15	Bactericidal lamp	4	2	0	—	—	—	—	6
136	12- 16	Patient cart	4	4	2	2	2	2	2	18
137	12- 17	Freezer	1	0	0	—	—	—	—	1
138	12- 23	Examination light	2	2	2	0	2	2	2	12
139	12- 24	Ambulance (4 x 4)	2	2	2	1	1	1	1	10
140	12- 25	Height / weight scale (200cm , 150kg)	2	0	2	2	2	2	2	12
141	13- 2	Folding Litter	-	—	6	—	2	2	2	12

(NOTE) The marks of "0" and "-" in the above table show equipment implying the following meaning.

0: the equipment that is settled of its no-procurement after study

-: the equipment that is not requested its procurement from the project facility

(5) Specification of the main equipment for the project

Main equipment procured in the project is 44 items. Their detailed specification and applications are shown in the following “Table 2-3 Specification for main equipment”.

Table 2-3 SPECIFICATION FOR MAIN EQUIPMENT

	ITEM NO.	DESCRIPTION	SPECIFICATION	APPLICATIONS	Q'TY
1	1-14	Gastrointestinal fiberscope	Field of view: 120° Outer diameter: 9.8mm Working length: 1,000mm Suction pump	It is used for internal medicine, mainly for the purpose of Gastropathic diagnosis.	2
2	1-18	Ultrasound system	Method: electronic scanning Display mode: B, M, B/M Monitor: 12 inch / black & white Magnification zoom Probe: convex(3~6.5MHz), linear(5~10MHz) Monochrome printer: built-in	Detecting and observing the echoes, we can interpret the morphology of specific lesion or the characteristics of affected tissue, etc. It enables us to diagnose the patient.	7
3	1-21	Portable ultrasound system	Method: electronic scanning Display mode: B, M, B/M Monitor: 9 inch~ / black & white Probe: convex(3~6.5MHz), for vagina(5~7MHz)	Detecting and observing the echoes, we can interpret the morphology of specific lesion or the characteristics of affected tissue, etc. It enables us to diagnose the patient.	6
4	1-24	Bronchofiberscope	Field of view: 120° Depth of view: 3〜50mm Outer diameter: 6.1mm Angulation range:up 180° down 130° Working length: 550mm	It is used for endoscopic diagnosis and biopsy of bronchial diseases.	1
5	2-1	Operating light (ceiling type)	Number of valve: 8(main), 5(sub) Intensity: main:140,000lux sub: 100,000lux (It is depended by distance.)	This equipment irradiates with heat-less and shadowless light. Proper colour, temperature and illumination are provided in the operating room.	2
6	2-3	Operating table	Type: universal, hydraulic and manual operation Position: 3 positions X-ray photograph: possible Table top: 1,900(L)×500(W)mm Adjustable height: 700〜1,030mm Kidney elevator: 150mm	It is used for placing a patient on the table for operation. Unlike an ordinary bed, the operating table can be tilted and rolled to adjust the position of the patient for ease and safety of the operation.	10
7	2-5	Operating microscope	Zoom ratio: 1:6 Working distance: 170mm Illumination: halogen lamp Intensity of illumination: 200,000lux Up/down stroll of arm: 600mm	It is used for micro-surgery operation to enlarge operation point.	2
8	2-11	Pulmonary surgery instrument set	Operation scissors, knife, forceps clamp, retractor, etc. Total: 44 items	It is used for pulmonary surgery.	7
9	2-12	Hepato-cholecystotomy instrument set	Operation scissors, knife, forceps clamp, retractor, etc. Total: 59 items	It is used for Hepato-cholecystotomy surgery.	7
10	2-13	Osteosurgery instrument set	Retractor, forceps, etc. Total: 39 items	It is used for Osteosurgery.	4
11	2-14	Nephrectomy instrument set	Scissors, forceps, etc. Total: 63 items	It is used for Nephrectomy surgery.	3
12	2-16	Standard plastic surgery set	Scissors, knife, etc. Total: 29 items	It is used for plastic surgery.	3
13	2-18	Neurosurgery instrument set	Open head drill, saw, forceps, etc. Total: 78 items	It is used for Neurosurgery.	2
14	2-19	Gastrectomy instrument set	Scissors, forceps, etc. Total: 68 items	It is used for Gastrectomy operation.	7
15	2-21	Operating instrument set	Scissors, forceps, retractor, etc. Total: 46 items	It is used for general operation.	5
16	2-29	Prostatomy instrument set	Scissors, forceps, etc. Total: 64 items	It is used for Prostatomy surgery.	3

	ITEM NO.	DESCRIPTION	SPECIFICATION	APPLICATIONS	Q'TY
17	3-1	Bedside monitor	Numeric: electrocardiogram, respiration rate, temperature, pulsation, SpO_2, NIBP Display: CRT Recorder: built-in Wire type	Bedside monitor is installed near a specific patient for monitoring cardiogram, heartbeat frequency of respiration, body temperature, blood pressure, etc.	13
18	3-2	Defibrillator	Output : 2〜360J Monitor: 5〜6 inch Buttery charger: built-in Power: DC, AC	It is an emergency device indispensable for resuscitation of patients suffering from cardiac standstill or ventricular defibrillation. It is equipped with a basic cardiographic function.	7
19	3-3	Ventilator	Volume method Built-in compressor Ventilation mode: CMV, IMV, PEEP (Ventilation for adult and child)	It is a device used for treatment of a patient suffering from difficult breathing or used for respiratory control of a patient after an operation. The device can be used for adults and children.	6
20	3-4	Anaesthesia apparatus with monitor	1)Method: 0_2 and N_20 shut-off mechanism 2)Vaporizer: fluramic and isoflurane 3)Co_2 canister 4)Flow meter: 30% shut-off mechanism 5)Oxygen monitor: built-in 6)Scavenging system 7)Monitor: 1)buttery pack 2)ECG-RESP 3)NIBP 4)SpO_2 5)heart rate 6)temperature	It is equipment used for general anaesthesia for operation. It provides all the basic functions required, including manual controls of oxygen and nitrous oxide. It is also equipped with artificial respirator, because anaesthesiologist will find it difficult to secure respiratory function of a patient under the long-hour operation.	6
21	4-5	Gynaecology stereoscope set	Magnification zoom: 7.9〜23.5× Working distance: 250mm Filter: white, green, blue	It enables observing inside the womb and vagina in expanded stereoscopic view.	7
22	4-6	Fetal actocardiograph	1)Monitoring: FHR, labor pains 2)Measuring method: pulse doppler 3)Measuring range: 50〜210bpm	It is used at the labour room and delivery room for monitoring foetus and pregnant women. This equipment is essential for the safety of delivery.	5
23	4-11	Delivery table	1)Hydraulic manual method 2)Height: 650〜900mm adjustable 3)Position: trendelenburg:15° reverse trendelenburg: 9° 4)Finish: melamine resin, SUS-304	It is provided with a table and basic functions necessary for delivery.	10
24	4-15	Gynaecologic operation table	Table: 200(W)×50(L)cm Adjustment height: 80〜110cm (hydraulic) Trendelenburg: 45° Reverse trending: 45°	It enables to place a patient in an appropriate posture on the table for operation.	8
25	5-10	Auto diluter	Syringe size: 1×500μL Plunger operation speed: 2〜20 sec Accuracy: 1.0%	It is used for dilution of the agent in laboratory room.	3
26	5-15	Bacteriological analysis set	It is used for bacteriological test in manually, which are consist of test tubes, beakers, slide plate glasses.	It is used for analizing bacteria.	1
27	5-17	Clinical spectrophotometer	Measured wavelength range: 200〜1,100nm Spectral band weight: 5nm Wavelength indication: 0.1nm Accuracy: ±0.1nm	Routine biochemical inspections in clinical examination rooms are performed efficiently by using an automatic chemical analyzer.	5

	ITEM NO.	DESCRIPTION	SPECIFICATION	APPLICATIONS	Q'TY
28	6-2	Mobile X-ray unit	Inverter type: high voltage unit Vessel current: 0.5〜200mA X-ray tube: 40〜125KHU Max rating: 30kw	It is used in serious cases of those patients who are too infirm to go to the X-ray examination room. Since the whole body is the subject of examination, simple radiography is done for each bodily part.	11
29	6-3	Fluorography unit	Max rating: 500mA-125kva Fluoroscopic table(90° /15° more) Floor loading X-ray unit X-ray tube: 2 tubes Remote controller type Bucky stand CRT X-ray TV	It is a system generally disposed in medical facilities, for general photographing and fluoroscopic photographing of skeleton, head, chest and abdomen.	3
30	7-1	Portable treatment unit	Treatment unit: 1 set Vacuum pack : 1 unit Small compressor: 1 unit Micro motor: 1 set	It is used for dental treatment at traveling clinic to region's patients in referral area of the hospital.	3
31	7-2	Dental examination instrument set (with dental unit)	Dental unit chair: hydraulic type with compressor Hand-piece: air turbine, micro-motor	It is equipment used for basic treatment in dentistry.	7
32	8-1	Infant incubator	Skin temperature setting: 34〜38℃ in 0.1° step Incubator temperature setting: 25〜38℃ in 0.1° step Wall temperature: 20〜42℃ Humidity: 20〜99%	It is used for new-born babies who are low weight, and keeps them in the most suitable condition.	10
33	8-2	Infant ventilator	1) Ventilation mode: CMV,IMV,PEEP 2) Tidal volume: 10〜2,000ml/min 3) I/E ratio: 1:0.5〜1:993 O_2 Blender: 21〜100% 4) Nebulizer	It is a device used for treatment of an infant patient suffering from difficult breathing or for the respiratory control of a patient after operation. The device can be used for new-born babies.	6
34	8-3	Infant warmer	Skin temperature control: servo-control(manual possible) Temperature range: 34〜37.9℃ Alarm: high/low temperature	It is a table for taking care of new-born babies after delivery.	13
35	9-1	Ophthalmic operation instrument set	Operation scissors, knife, forceps clamp, retractor, etc. Total: 27 items	It is an operation instrument set for Ophthalmology.	5
36	9-2	Cornea transplantation instrument set	Operation scissors, knife, forceps clamp, retractor, etc. Total: 27 items	It is an operation instrument set for cornea transplantation.	2
37	9-4	Synoptiscope	Papillary distance: 44〜80mm Horizontal translocation: inside, outside 40° Scale: within 2° Left-right translocation: in-outside:±10° 、up/down:±10°	It is used for measurement of eye's function.	5
38	10-4	Audiometer	Frequency: 125〜8,000Hz Accuracy: ±3% Hearing level scale: 5db with audiometer for children	It is used for measurement of hearing ability.	7
39	10-6	Chair-mounted unit	Electric hydraulic chair: 1 unit Treatment unit: 1 unit	It is used for ENT examination and treatment.	7
40	11-3	Inductothermal treatment apparatus	Wave length: 12.24cm(2,450±50MHz) Power: 0〜200W (50Ω)	It is rehabilitation equipment for making the body warm by microwave.	3
41	11-4	Electric traction	Max traction force: 99kg Traction mode: normal,intermittent,continuous Safety device: remote emergency stop switch & abnormal action detecting circuit Treatment time setting: 99 min Traction continuation time: 99 sec	It is a rehabilitation equipment for traction of cervical and lumber vertebra.	5

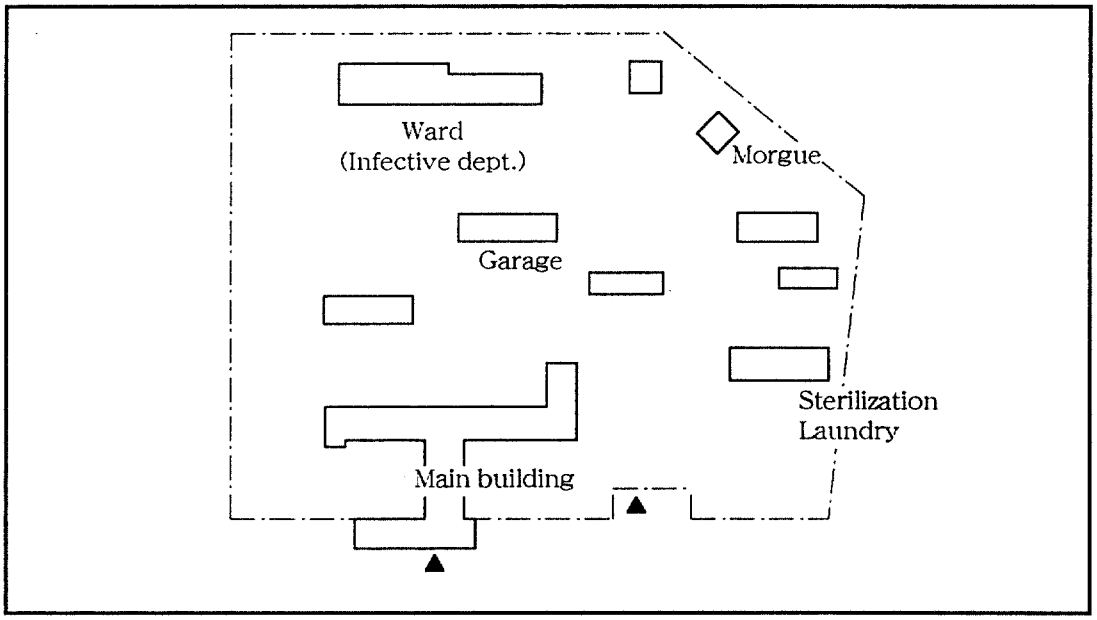
	ITEM NO.	DESCRIPTION	SPECIFICATION	APPLICATIONS	Q'TY
42	12-2	High pressure steam sterilizer	Chamber capacity: 400φ×600mm Type: vertical Electric heater: built-in type Drying system: built-in program Sterilizer temperature: 127℃	It is used for sterilizing the operation instruments.	5
43	12-7	Morgue refrigerator	Capacity: 2 bodies Loading type: horizontal Accessory: room lamp, sterilization lamp, thermometer Temperature control range: 0～10℃	It is used for preservation of dead bodies.	1
44	12-24	Ambulance (4 x 4)	Driving method: 4WD Engine capacity: diesel, more than 3,000cc Body: 2 box type Accessory: stretcher, sub-stretcher, emergency set	It is used for transfer of patients from hospitals of lower rank or to upper referral hospitals. It is also used for traveling clinic in the service area that the hospital covers.	10

(6) Facility Outline and Installation Plan

① Khovd Health Service and Diagnosis Center

Age of the building	:	1975
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	203.7~237.6V
Electricity failure	:	Every day (May.~Oct.) Controled supply (May.~Oct.)
Emergency power supply	:	Portable generator
Water supply	:	City water
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration out of hospital site

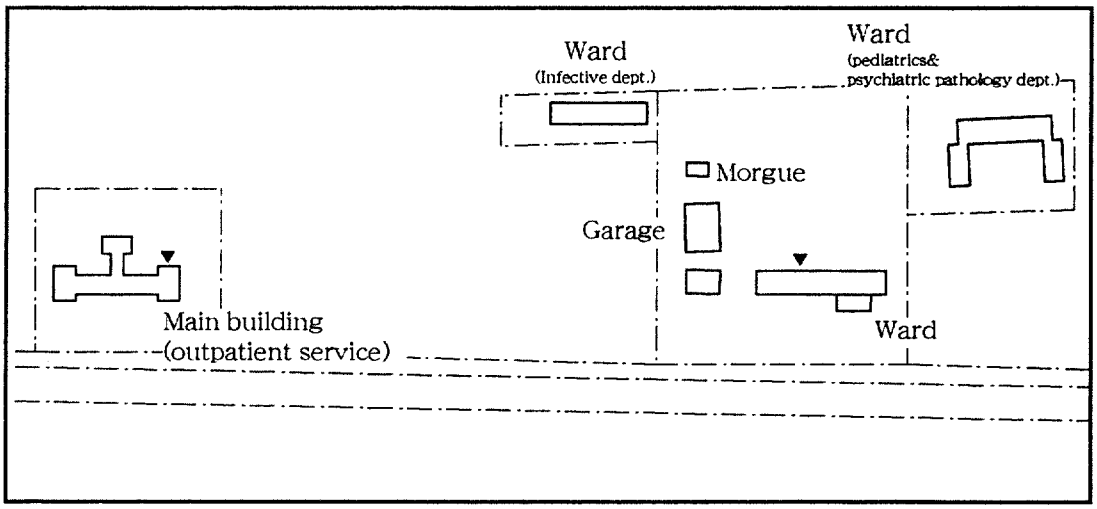
SITE PLAN



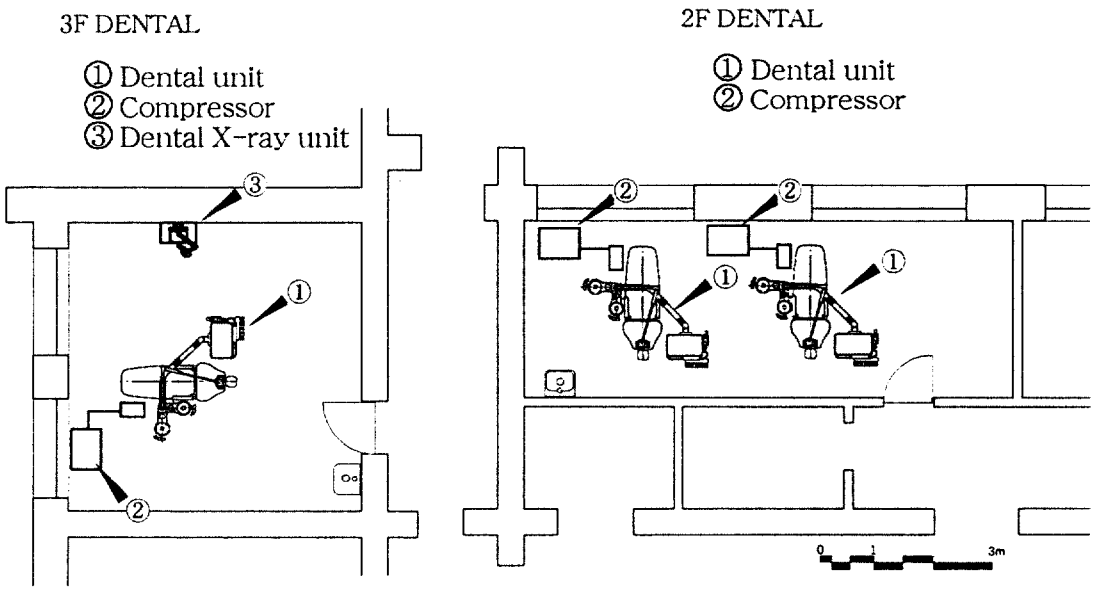
② Dornod Health Service and Diagnosis Center

Age of the building	:	1971
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	208.5~238.4V
Electricity failure	:	5 ~ 6 time/month 1.5hour/time
Emergency power supply	:	Portable generator
Water supply	:	City water
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration in hospital site

SITE PLAN



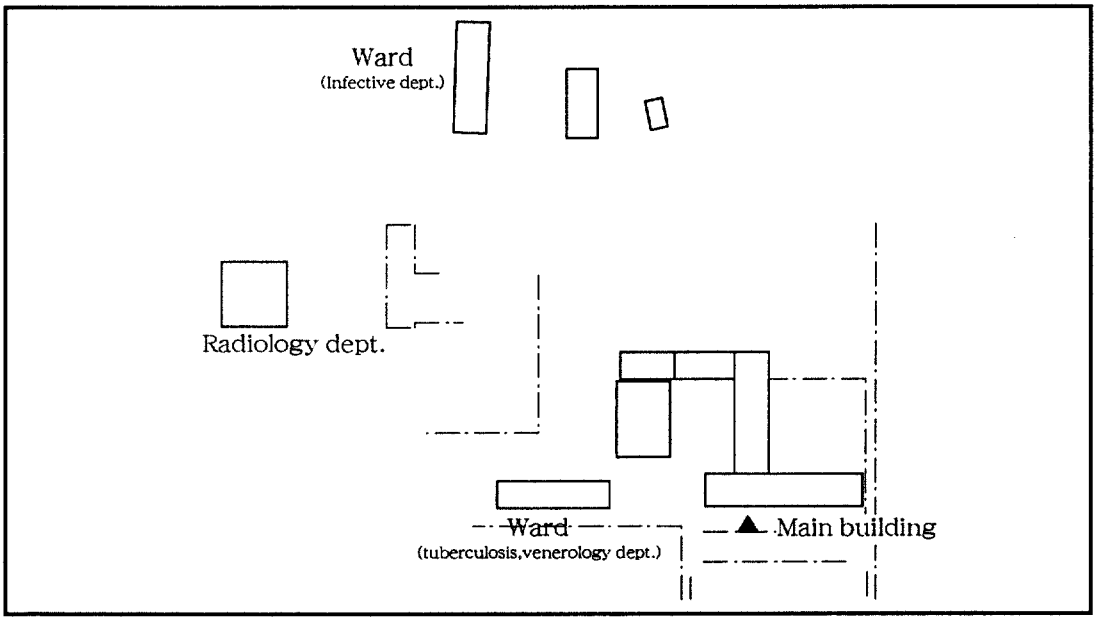
Dental unit Ianstalation Plan



③ Uvurkhangai Health Service and Diagnosis Center

Age of the building	:	1996
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	199.6~235.3V
Electricity failure	:	3 ~ 4 time/month 0.5~ 4 8 hour/time
Emergency power supply	:	Portable generator
Water supply	:	Well
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration in hospital site

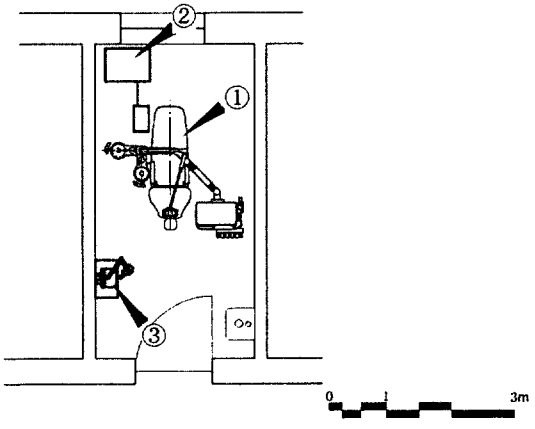
SITE PLAN



Dental unit Ianstalation Plan

DENTAL

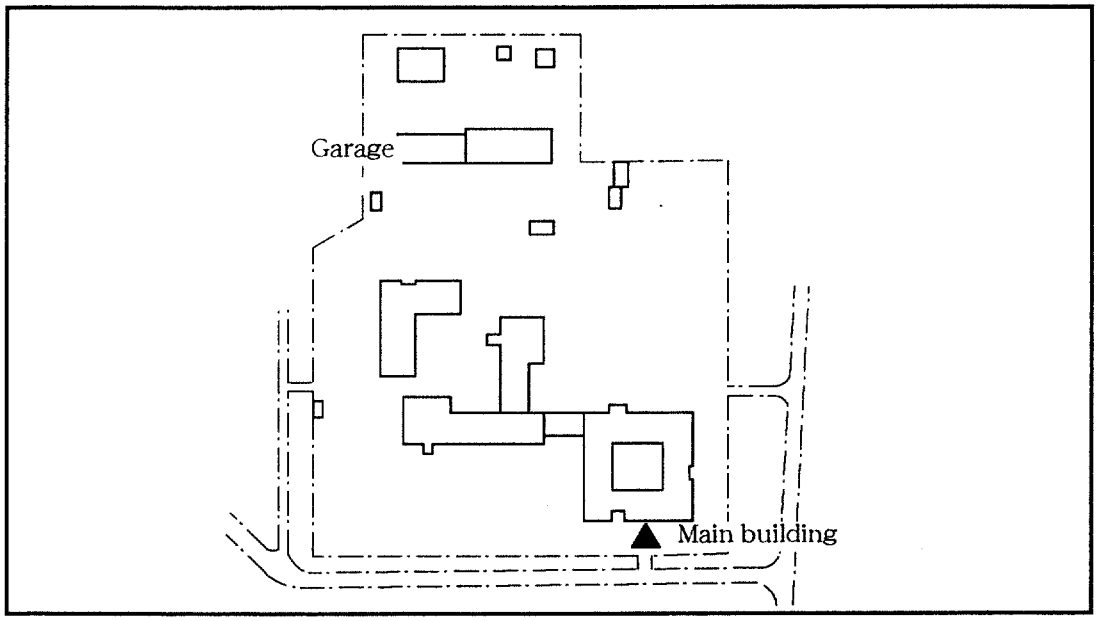
① Dental unit
② Compressor
③ Dental X-ray unit



④ Dornogobi General Hospital

Age of the building	:	1992
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	226.5~233.6V
Electricity failure	:	2time/month 2hour/time
Emergency power supply	:	Portable generator
Water supply	:	City water
Drainage system	:	Treatment of septic tank in hospital site
Medical liquid waste disposal system	:	Treatment of septic tank in hospital site
Medical solid waste disposal system	:	Incineration in hospital site

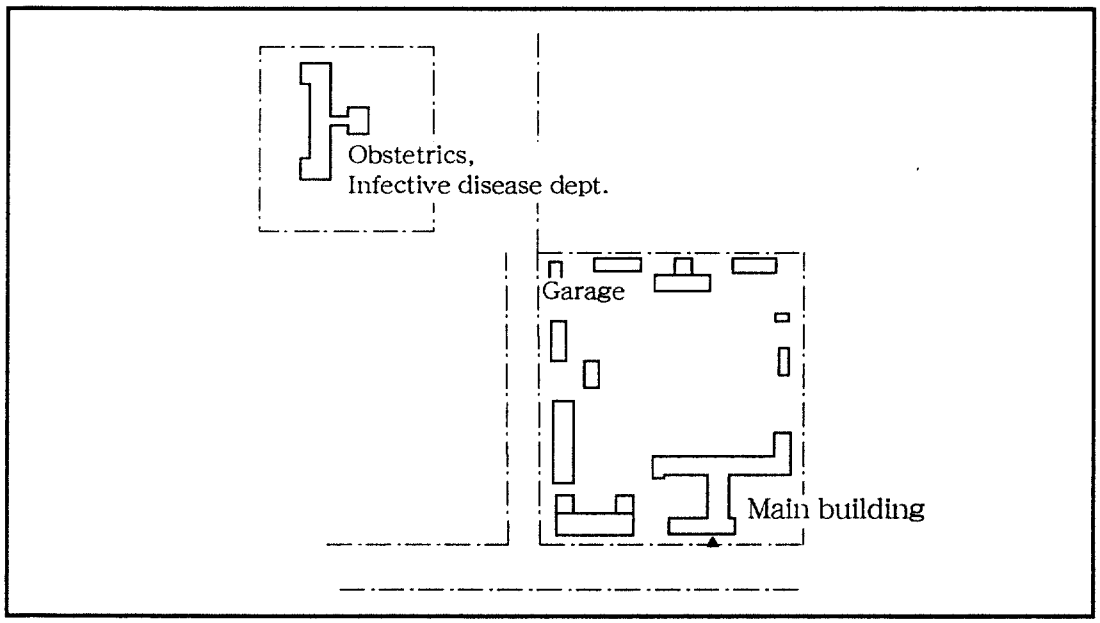
SITE PLAN



⑤ Bayan-Ulgi General Hospital

Age of the building	:	1973
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	219.3~249.6 V
Electricity failure	:	Every day (May.~Oct.)
		Controled supply (May.~Oct.)
Emergency power supply	:	Portable generator
Water supply	:	City water
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration out of hospital site

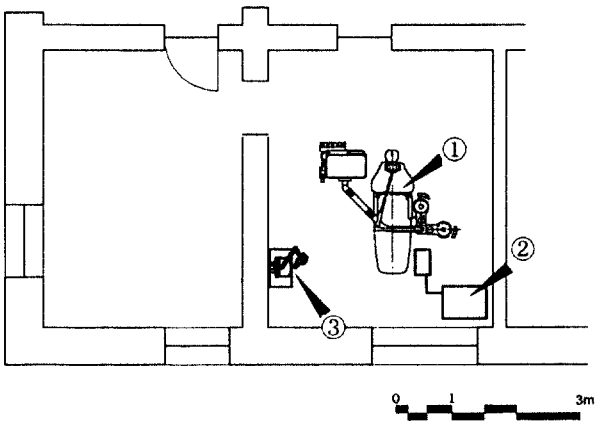
SITE PLAN



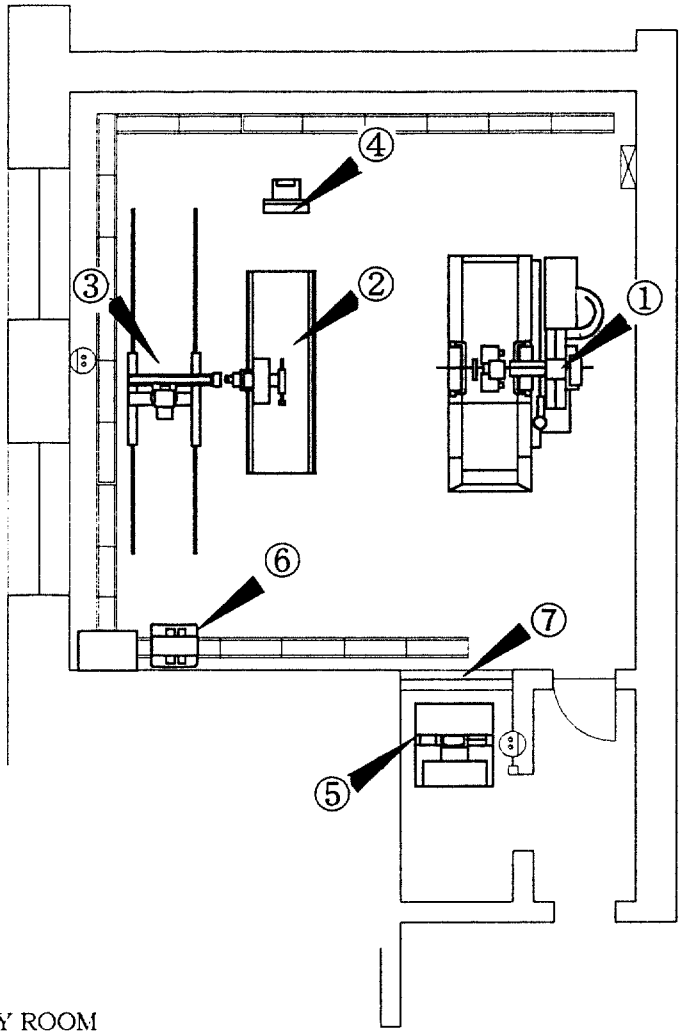
Dental unit Ianstalation Plan

DENTAL

① Dental unit
② Compressor
③ Dental X-ray unit



X-ray unit Ianstalation Plan



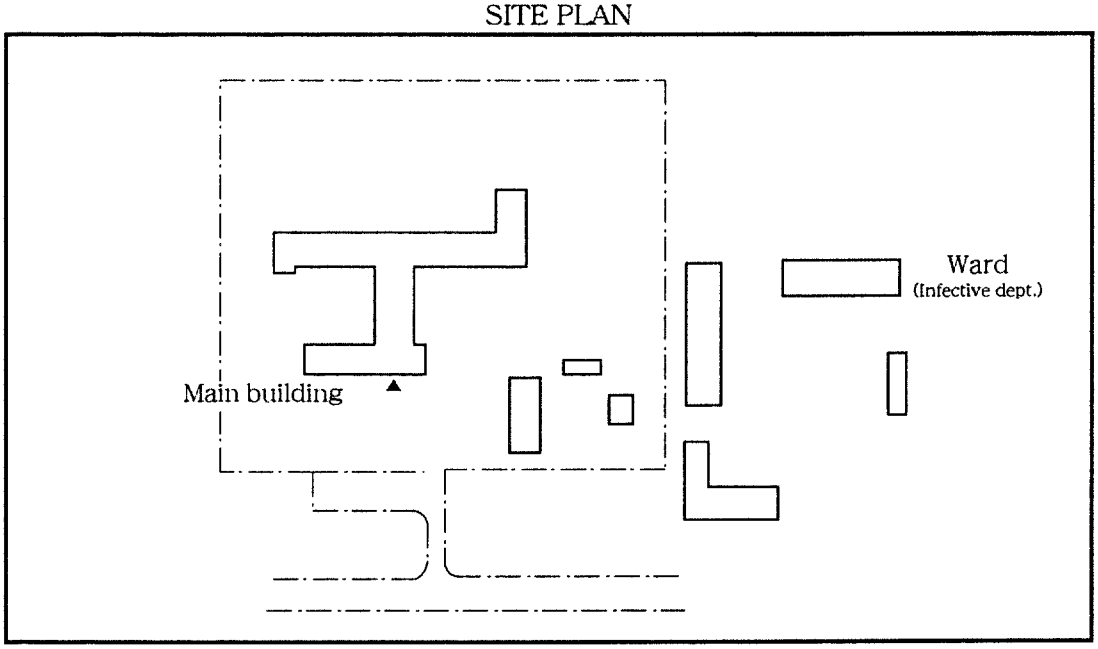
X-RAY ROOM

① Diagnostic Table
② Floating Bucky Table
③ X-ray Tube Support Unit
④ Vertical Bucky Stand
⑤ X-ray Control Console
⑥ X-ray Control Cabinet
⑦ X-ray Protective Lead glass
(2mm Pb)

⑥ Bulgan General Hospital

Age of the building	:	1987
Structure of the building	:	Brick +Concrete
Voltage (Single phase)	:	231.7~237.6V
Electricity failure	:	2~3time/month 3~4 8hour/time
Emergency power supply	:	Portable generator
Water supply	:	City water +Well
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration in hospital site

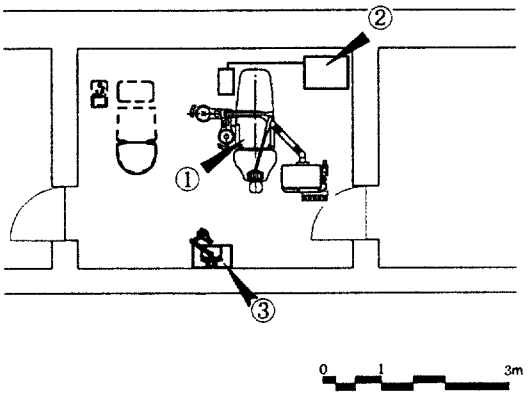
SITE PLAN



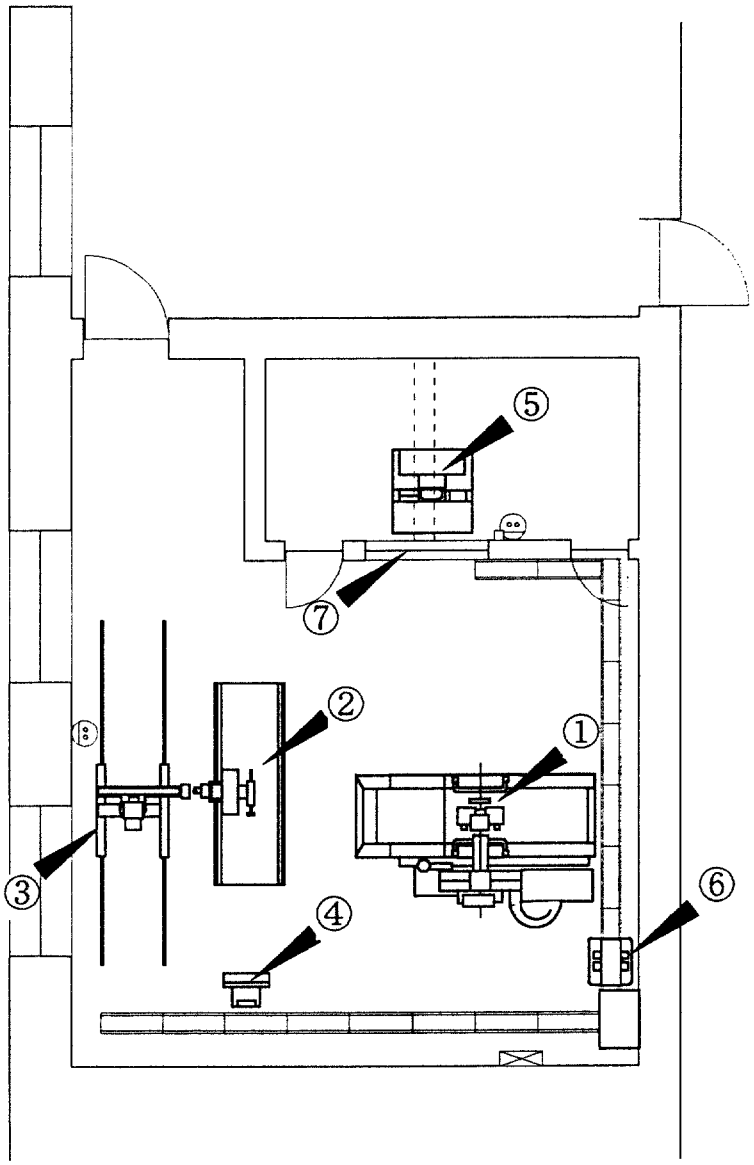
Dental unit Ianstalation Plan

DENTAL

① Dental unit
② Compressor
③ Dental X-ray unit



X-ray unit lanstalation Plan



X-RAY ROOM

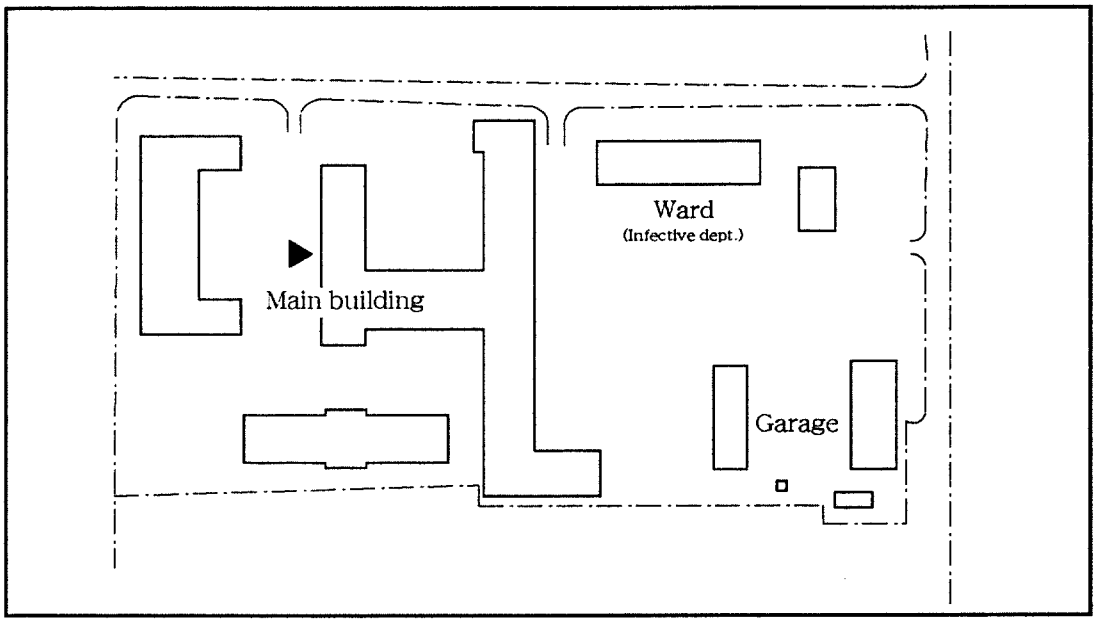
0 1 3m

① Diagnostic Table
② Floating Bucky Table
③ X-ray Tube Support Unit
④ Vertical Bucky Stand
⑤ X-ray Control Console
⑥ X-ray Control Cabinet
⑦ X-ray Protective Lead glass
(2mm Pb)

⑦ Gobi-Altai General Hospital

Age of the building	:	1983
Structure of the building	:	Brick
Voltage (Single phase)	:	220 V (standard voltage)
Electricity failure	:	1~2time/month 3hour/time
Emergency power supply	:	Portable generator
Water supply	:	City water +Well
Drainage system	:	City sewage system
Medical liquid waste disposal system	:	City sewage system
Medical solid waste disposal system	:	Incineration in hospital site

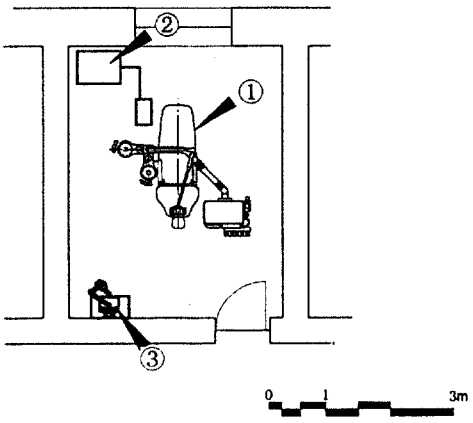
SITE PLAN



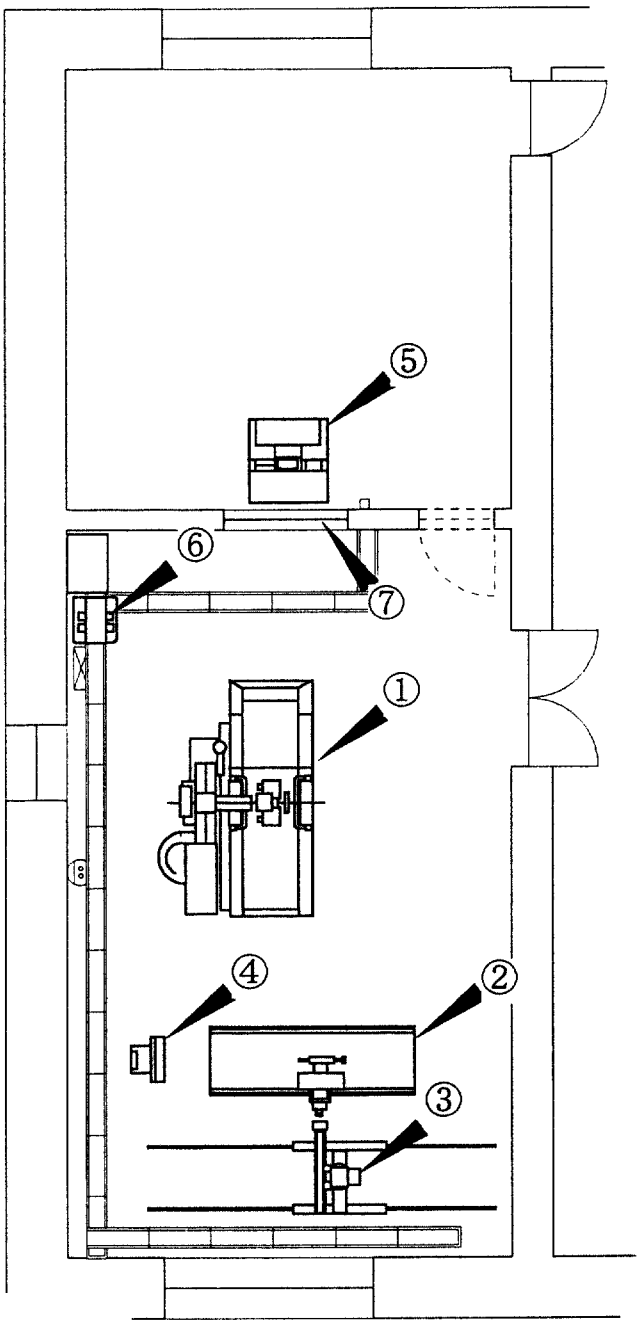
Dental unit Ianstalation Plan

DENTAL

① Dental unit
② Compressor
③ Dental X-ray unit



X-ray unit Ianstalation Plan



① Diagnostic Table
② Floating Bucky Table
③ X-ray Tube Support Unit
④ Vertical Bucky Stand
⑤ X-ray Control Console
⑥ X-ray Control Cabinet
⑦ X-ray Protective Lead glass
(2mm Pb)

CHAPTER 3

IMPLEMENTATION PLAN

CHAPTER 3 IMPLEMENTATION PLAN

3-1 Implementation Plan

3-1-1 Implementation Concept

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

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

(1) The work schedule should be confirmed by both Japanese and Mongolian staff in charge. Both sides should clarify the scope of work and the starting and completion dates of each task to avoid confusion in mutual work plans.

(2) In order to shorten the work period as much as possible, the trading company must investigate the project facilities by two months before delivery of the equipment. The company also must check delivery routes, power supply, water supply and drainage, and prepare a bringing-in schedule.

(3) It is considered to take about one and half months for installation and hand-over, and if those works take longer time than expected and drag along to the coldest season, it may be difficult to do foundation work including ground concrete work. Therefore, two installation

teams will be sent in order to shorten the work period.

(4) As for foundation work for installation of X-ray machines, surgical equipment and dental chair units which should be covered by Mongolian side, accurate estimates for installation work should be submitted to the Mongolian Government immediately after types of equipment are decided, so that the Mongolian side can make a budget plan and any delay of the work due to unfixed budget can be avoided.

(5) An instruction and training seminar will be held for Mongolian technicians, at which the trading company will teach operation and regular maintenance methods for the main equipment.

(6) As for equipment procured in Japan, Japanese engineers, specializing in X-ray machine, electronic medical equipment and general medical equipment, will give instruction in its installation and operation.

3-1-2 Implementation Conditions

Taking into account that the project facilities are the medical facilities in practice, the delivery and installation procedures, such as installation schedule, delivery routes and depository of the equipment, should be duly considered through the consultation with each project facility so that the daily medical activities may not be disturbed. Especially in case of renewal, sufficient consultation should be made to avoid long unavailability of the equipment caused by the removal, and prompt installation will be required for the stable medical activities.

3-1-3 Scope of Works

(1) The scope of responsibility of the Japanese side under the grant aid for this project covers procurement and subsequent installation of the medical equipment for three health service and diagnosis centers and four aimag general hospitals.

The scope is limited to as described below:

1. The equipment that is shown in the aforementioned list of distribution plan of equipment.
2. Marine-transport and land-transport expenses, and inland-transport expenses to the project facilities.
3. Expenses for installation of the equipment (expenses for dispatch of engineers, local workers, tools and measuring meters).
4. Expenses required for carrying out test-run and guidance for operation, inspection and maintenance, relating to all the procured equipment.

(2) The scope of responsibility of Mongolian side

1. During the implementation period of this project, a place should be provided for a temporary office in each project facility.
2. The infrastructures (electricity, water supply, drainage and other incidental facilities) necessary for the project should be provided or improved before installation of the equipment, and the existing equipment should be removed from places where the new equipment will be installed.
3. The equipment purchased under this project, should be unloaded without delay and necessary conveniences for customs clearance and internal transportation of the products should be provided.
4. Payments of customs duties and other fiscal levies should be exempted for the Japanese nationals who reside in Mongolia to implement this project.
5. For the Japanese nationals who are connected with supply of the equipment and services required for the implementation of the project, necessary conveniences for their stay in Mongolia should be provided and sufficient considerations should be taken for their security as well.

6. In accordance with the Banking Arrangements, the Mongolian side should pay the commission for the Banking Arrangements and the issuance of the “authorization to pay” to the authorized foreign exchange bank in Japan.

7. The equipment purchased under the grant aid should be maintained properly and used effectively. For this purpose, necessary budget and personnel should be assured.

3-1-4 Consultant Supervision

(1) Implementation system

This project is implemented by the following five parties:

1) Responsible agency (authorities who assume control of the project)

The responsible agency for this project is the Ministry of Health and Social Welfare.

2) Project implementing body

The implementing bodies are three health service and diagnosis centers and four aimag general hospitals which are the project facilities. The Ministry of Health and Social Welfare superintends general operations for the project, and the directors of each project facility are in charge of actual work of the project.

3) Consultant

Since the project is implemented under the Japanese grant aid program, it is stipulated by its rule that a Japanese consultant gives instructions, advises and coordinates from a fair standpoint at each stage of the project, according to the agreement with the responsible agency of Mongolia. Besides, the consultant performs necessary work for smooth implementation of the project.

The specific tasks are as follows:

* Approval of tender document

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

* Promotion of tender and supply contract

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

* Inspection and approval of work execution drawings

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

* Report on work progress

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

* Cooperation in payment approval procedures

  Audit on bills relating to the remuneration to be paid after shipment, and cooperation in these procedures.

* Consulting work

  Witnessing of various works from the beginning through the completion.

* Implementation of soft component

  Giving instructions on operation and maintenance of the equipment by holding workshop and seminar.

4) Supplier

A Japanese supplier (trading company) who will be selected by tender

implements procurement of the equipment. The supplier, based upon the contract with the Mongolian side, is responsible for manufacturing, supply, bringing-in and installation of the equipment, and gives instructions on equipment operation and maintenance to the Mongolian side before hand-over.

5) JICA

Japan International Cooperation Agency (JICA) leads the consultant and the supplier so that the project can be implemented properly in accordance with the Japan's grant aid system. Moreover, JICA discusses with the responsible agency and the implementing bodies for promoting implementation of the project, if it is necessary.

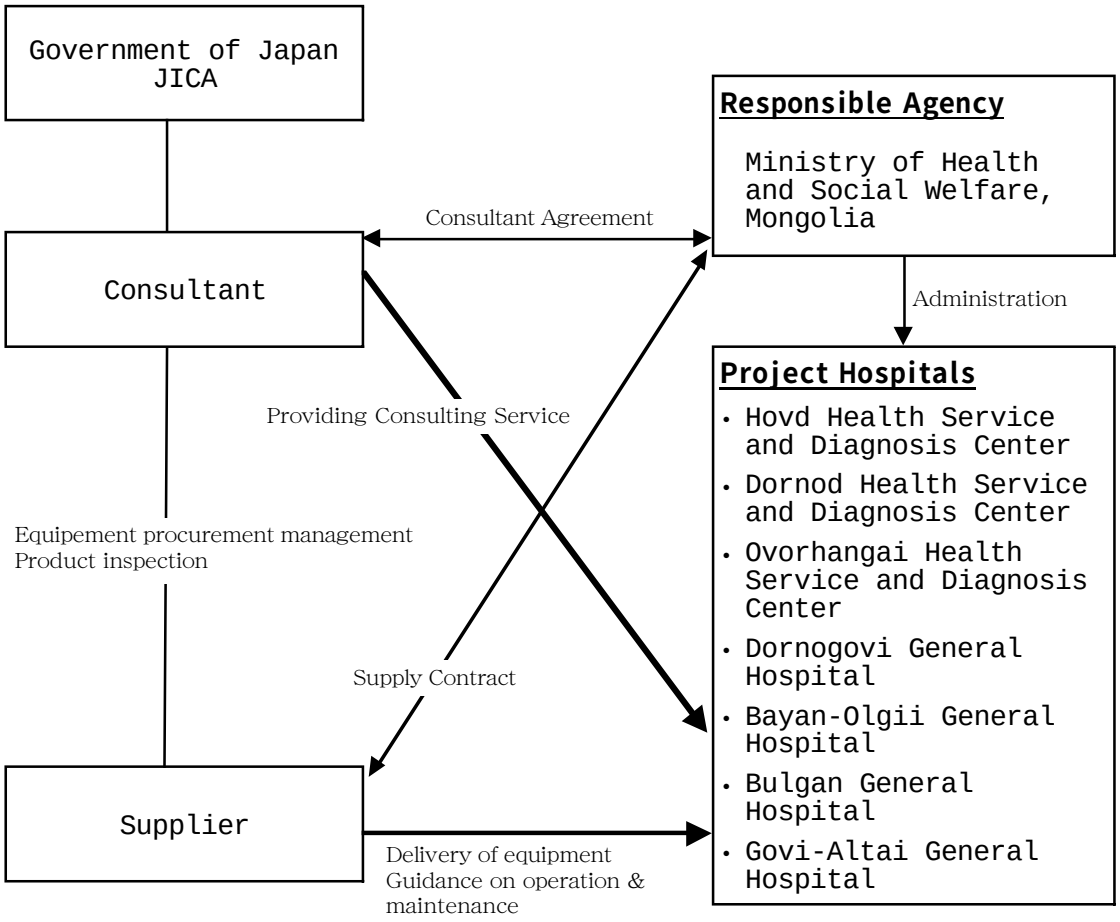


Figure 3-1 Implementation Flow Chart

(2) Implementation design and supervision

The consultant, based on the agreement with the Mongolian side, performs implementation design and supervision for the project. The implementation design is made, in accordance with the basic design study, to determine detailed specifications of the equipment and to prepare the tender documents comprised of such the specifications, tender guidance, draft of supply contract.

The supervision is made to assure that the work of the supplier is implemented in accordance with the contract, and to give instructions, advice and coordination from a fair standpoint to promote the project.

The supervision consists of the following:

1) Stage of implementation design

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

2) Stage of tender

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

3) Stage of work execution

Supervision of work execution (inspection/approval of equipment specifications, supervision of shipment/marine-transport/inland-transport, instruction/supervision of installation, and supervision of work to be covered by the partner country), report on the work execution progress, and issuance of certificates. (Upon confirming that the equipment installation is completed in conformity with the contract conditions, the consultant witnesses hand-over of the equipment and completes its duty after obtaining acknowledgement for receipt of the equipment from the Mongolian side.)

Besides the above-mentioned work, the consultant reports on the progress, payment procedures, completion of delivery &c., to whom concerned in the Government of Japan.

(3) Personnel plan

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

1) Project manager : 1 person
The project manager will supervise the whole consulting operation.

2) Medical equipment planner I : 1 person
This person will analyze the planned equipment.

3) Medical equipment planner II : 1 person
This person will test the planned.

4) Soft component planner : 2 persons
This person will execute soft component on maintenance of the equipment.

3-1-5 Procurement Plan

(1) Procurement of the equipment

The equipment applied to the following conditions will be procured from a third country.

1) It is difficult to procure equipment only by Japanese products.

2) Competing principle in the tender can be expected.

Table 3-1 Equipment to be procured from a third country

Equipment	Origin	Market Country
Oxygen Concentrator	USA	Japan

(2) Transportation of the medical equipment

The equipment procured in Japan will be transported from any sending port in Japan to Tientsin port in China by sea, and from Tientsin to Ulaanbaatar, the capital of Mongolia, by train, and then to each site ahead in truck. In order to protect the equipment from damage and robbery, these will be packed in containers site by site.

3-1-6 Implementation Schedule

(1) Implementing process

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

1. Conclusion of the E/N between both governments.
2. Conclusion of agreement between the responsible agency and an authorized foreign exchange bank in Japan on payment of the grant aid fund from the Japanese side for implementation of this project (Banking Arrangements).
3. Conclusion of the consultant agreement between the responsible agency and the Japanese consultant.
4. Issuance, by the responsible agency, of authorization to pay (A/P) according to the consultant agreement.
5. Verification of the above agreement and assent of payment by the Government of Japan.
6. Implementation design and preparation of tender documents by the consultant.
7. Approval of the tender documents by the responsible agency and preparation of tender by the consultant.
8. Tender and evaluation of tender documents.

9. Conclusion of supply contract (sales contract) relating to equipment procurement between the responsible agency and a Japanese trading company.

10. Verification of the above contract by the Government of Japan.

11. Issuance, by the responsible agency, of authorization to pay (A/P) according to the supply contract.

12. Approval to manufacture of equipment and work execution drawings. (The consultant examines and approves the equipment specifications submitted by the suppliers, gives necessary instructions, and coordinates for smooth implementation of the project by making close contacts with the responsible agency.)

13. Witnessing for equipment inspection. (The consultant witnesses factory inspection before shipment, if necessary, and approves the inspection as the proxy of the responsible agency and the project implementing bodies.)

14. Supervision of work execution. (In accordance with the agreement, the consultant, as the proxy of the responsible agency and the project implementing bodies, scrutinizes and approves the equipment specifications, inspects and approves the equipment, supervises shipment and inland-transport, supervises the installation, and supervises works covered by the partner county.)

15. Superintending of work progress. (The consultant supervises work progress so that the equipment procurement contract can be completed within the period stated in the E/N, and gives necessary directions to the supplier.)

16. Final inspection and test-runs. (The consultant conducts final inspection and test-run to the procured equipment after all works are completed, confirms that the performance is as described in the specifications, and submits a certificate of completion to the responsible agency.)

17. Completion and hand-over.

(2) Period of implementation

After the conclusion of the E/N, the period required for each task on the Japanese side is roughly mentioned in the following table:

Table 3-2 Period of implementation and content of work

Content of Work	Phase I
1. Confirmation of tender document draft	2.0
2. Approval of tender documents	0.5
3. Tendering, conclusion of contract and approval	1.5
4. Manufacture of equipment	3.5
5. Transportation	1.5
6. Installation (including an initial test, adjustment, operation guidance, training, maintenance instruction and confirmationof hand-over, etc.)	2.0
TOTAL	11.0 months

The work progress chart is as follows:

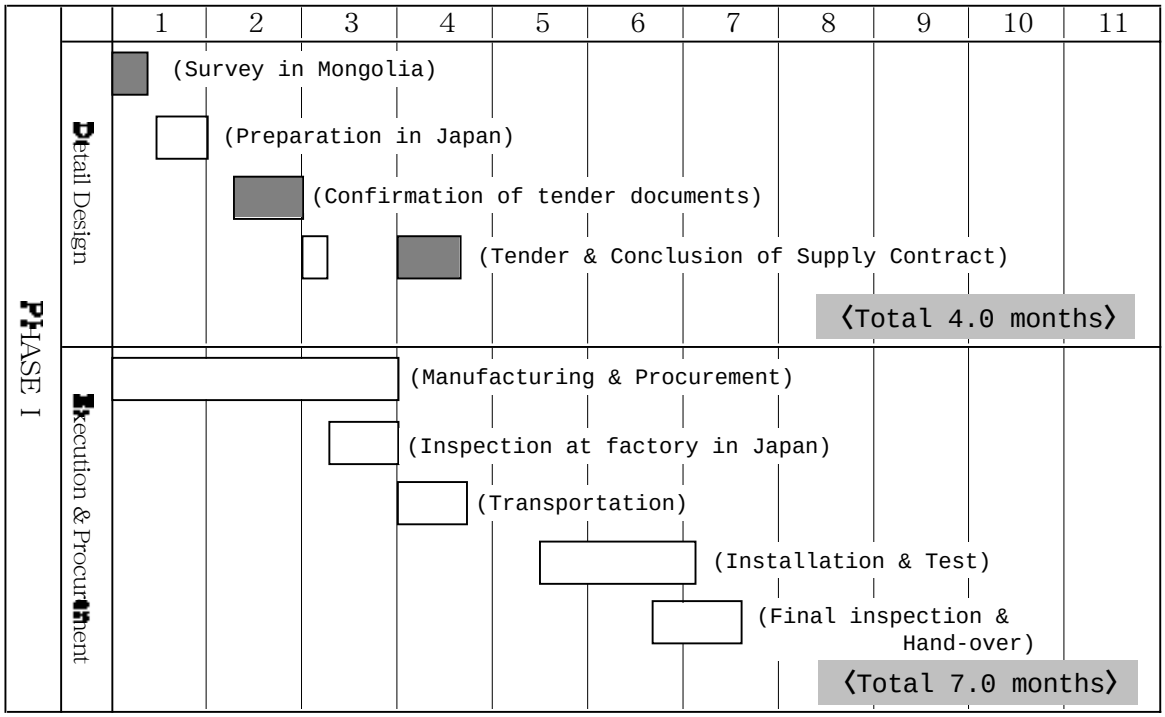


Figure 3-2 Work Execution

3-1-7 Obligations of Recipient Country

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

(a) To execute all tasks stated in (2) of Chapter 3-1-3.

(b) To maintain and use properly and effectively the equipment procured under the grant aid program, and to report its condition to the Government of Japan on a regular basis.

(c) To bear all the expenses other than those covered by the grant aid within the scope of the project.

3-2 Project Cost Estimation

3-2-1 Cost Estimation Borne by Recipient Country

Prior to the installation of the equipment, i.e. X-ray unit, dental chair unit &c., the following works are necessary to be completed, and all those expenses should be covered by Mongolian side.

1) Hovd Health Service and Diagnosis Center

- Nothing

2) Dornod Health Service and Diagnosis Center

- Dental office : To provide facilities (infrastructures) for installation of dental chair unit

3) Ovorhangai Health Service and Diagnosis Center

- Dental office : To provide facilities (infrastructures) for installation of dental chair unit

4) Dornogovi General Hospital

- Nothing

5) Bayan-Olgii General Hospital

- Dental office : To provide facilities (infrastructures) and the pedestal for installation of dental chair unit
- X-ray diagnostic room : Repairing works

6) Bulgan General Hospital

- Dental office : To provide facilities (infrastructures) and the pedestal for installation of dental chair unit
- X-ray diagnostic room : Repairing works

7) Govi-Altai General Hospital

- Dental office : To provide facilities (infrastructures) and the pedestal for installation of dental chair unit
- X-ray diagnostic room : Repairing works

For the implementation of the above works, the expenses are as follows:

FACILITY	AMOUNT (Japanese YEN)
① Hovd Health Service & Diagnosis Center	—
② Dornod Health Service & Diagnosis Center	13,000
③ Ovorhangai Health Service & Diagnosis Center	8,000
④ Dornogovi General Hospital	—
⑤ Bayan-Olgii General Hospital	99,000
⑥ Bulgan General Hospital	90,000
⑦ Govi-Altai General Hospital	105,000
TOTAL	315,000

3-2-2 Maintenance Plan

(1) Maintenance plan

There are some technicians who take charge of the simple repairs and daily maintenance of the medical equipment in each facility. In case a complex repair technique is required, the equipment is sent to repair along the second or third step solution under mentioned.

Method for repairing medical equipment

First step:	technicians in each facility extend relatively simple and easy repairs learnt by experience.
Second step:	Mongolian Medical Techniques (maintenance company of medical equipment) under the control of the Ministry of Health and Social Welfare gives technical supports to each facility.
Third step:	Especially for some foreign products, the cooperation of engineers of the manufacturer or its local agent shall be requested.

Mongolian Medical Techniques (MMT) is the only maintenance company of the medical equipment in the country. The state owns 51% of its stock, and the private sector owns another 49%. The company supports

maintenance of the medical equipment at the medical facilities in the whole country with 25 staff members (15 engineers and 10 clerks/accountants) which include engineers on and above a level of graduates from engineering faculty of university. Mongolian Medical Techniques has a plan to be completely privatized in the near future. The organization chart is shown as follows.

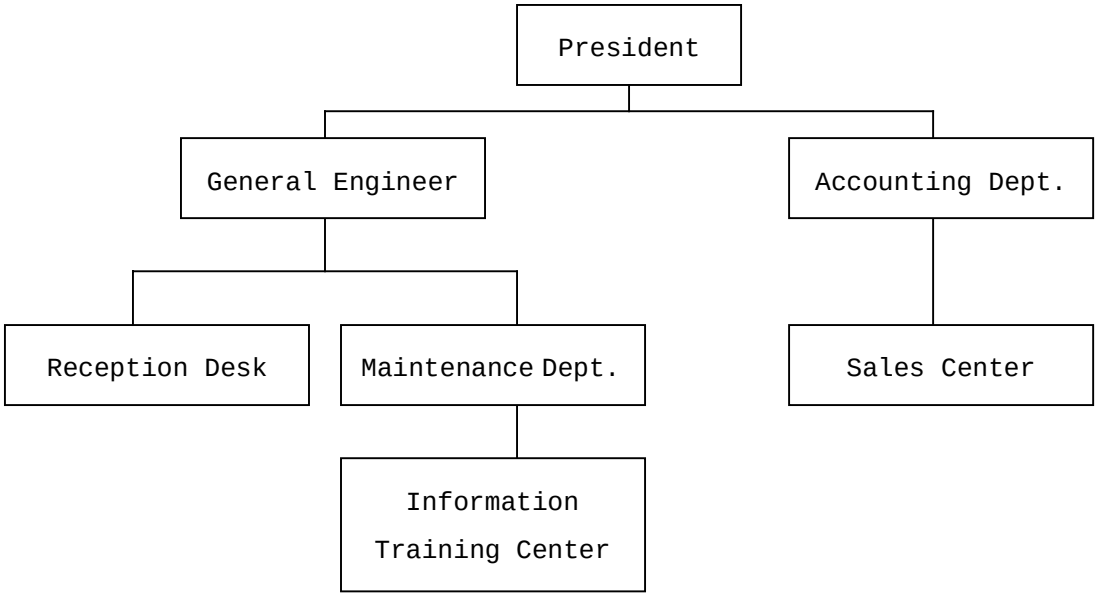


Figure 3-3 Mongolian Medical Techniques Flow Chart

(2) Maintenance Budget

The maintenance expenses necessary for operation of the procured equipment such as expenses for spare parts and consumables are as shown in column (C) of Table 3-3. The cost estimation was made for the equipment supplemented with the existing one and the equipment newly procured.

For acceptance of the equipment procured under this project, Mongolian side has agreed to increase the overall budget of each project facility as the rate in column (A) of the table. The amount of budget to be increased, estimated on the basis of the overall budget of each project

facility in 1998, is shown in the column (B).

The ratio of the maintenance expenses to the increased amount of overall budget, (C)/(B), is between 4% (Hovd Health Service and Diagnosis Center) at least and 26% (Bulgan General Hospital) at highest. Therefore, it is concluded that Mongolian side has enough capacity of standing the maintenance expenses for the equipment to be procured.

Table 3-3 Maintenance Expenses

Facilities	(A) Budget Increase Rate	Currency ('000)	(B) Amount to be Increased	(C) Maintenance Expenses	(C)/(B) Ratio
① Hovd Health Service & Diagnosis Center	17%	JPY	9,699	396	4.0%
		TUG	81,507	3,327	
② Dornod Health Service & Diagnosis Center	19%	JPY	14,024	2,356	16.7%
		TUG	117,851	19,798	
③ Ovorhangai Health Service & Diagnosis Center	19%	JPY	6,068	1,205	19.8%
		TUG	50,995	10,126	
④ Dornogovi General Hospital	15%	JPY	7,714	1,360	17.6%
		TUG	64,823	11,428	
⑤ Bayan-Olgii General Hospital	20%	JPY	12,433	2,551	20.5%
		TUG	104,480	21,437	
⑥ Bulgan General Hospital	17%	JPY	7,504	1,974	26.3%
		TUG	63,057	16,588	
⑦ Govi-Altai General Hospital	17%	JPY	9,241	1,534	16.5%
		TUG	77,659	12,890	

Exchange Rate : US$ 1 = JPY 119
at the time of US$ 1 = TUG 1,000
calculation TUG 1 = JPY 0.119

The data to go upon the above estimation of the maintenance expenses after execution of the project, is shown for each project facility in appendix 5-1 ～ 5-7.

CHAPTER 4

PROJECT EVALUATION AND RECOMMENDATION

CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION

4-1 Project Effect

4-1-1 Verification and Substantiation of Appropriateness

The health and medical system in Mongolia has a lot of regional differences between the metropolitan area centering around Ulaanbaatar and the rural areas. The current situation is that, while many people in the metropolitan area are beneficiary of proper medical services, people in the rural areas cannot receive sufficient health and medical services because of inadequate medical system in provinces although there exist general hospitals of aimag level at the heartland city of the respective areas.

For that reason, high-level treatment is only available in Ulaanbaatar, the capital, even for local inhabitants, and there is no choice but either to directly transfer patients to Ulaanbaatar or to request dispatch of doctor from upper-level facilities in Ulaanbaatar so as to cope with the situation. But practically, such arrangement is extremely difficult because of geographical conditions and economic restrictions in the country.

To improve such situation, the Mongolian government planned a new system to divide the national territory other than Ulaanbaatar area and the southern area into 3 regions (the plan is currently under promotion), and to nominate Hovd General Hospital, Dornod General Hospital and Ovorhangai General Hospital located at the center of the respective areas as Health Service and Diagnosis Center (top referral facility in the region). It aims at modification of regional differences between cities and rural areas in the field of health and medical services, which is a grave concern to this country, by providing medical equipment in this project.

Furthermore, by also promoting improvement of general hospitals in Dornogovi, Bayan-Olgii, Bulgan and Govi-Altai aimags (4 facilities) where the existing medical equipment is much deteriorated and require urgent improvement, the following effects are expectable. It becomes possible to ① improve medical services at tertiary level in the areas, ② reduce the dependence on the above health service and diagnosis centers and upper-level medical facilities in the Ulaanbaatar area, and ③ contribute to the improvement of health and medical services to the local residents including nomads.

This project is essentially intended to renew and supplement the existing equipment in said regional health service and diagnosis centers and aimag general hospitals. Also for the equipment to be newly procured under the project, the equipment that can be operated/maintained by current hospital staff and their capabilities, is mainly selected. Accordingly, there is no particular technical problem about the directions for use and maintenance for the equipment to be procured.

In addition, as for the equipment requiring maintenance services, it has been confirmed that utilization of private corporations is also possible for its maintenance, by procuring the equipment for which service network under direct control of the manufacturers or the local agents is established in the country concerned or in peripheral countries.

Therefore, it is judged highly appropriate to implement this project under a Japan's grant aid, in view of the fact that this cooperation policy is to support an upper plan and that a positive attitude on the Mongolian side for improvement in this field has been confirmed.

4-1-2 Benefits

If this project is implemented, the areas receiving benefit by the project range 13 aimags in total, with a beneficiary population of approximately 1.12 million inhabitants. This number corresponds to a little less than 50% of the total population of the country concerned. This implies the greatness of the influences of this project on the local inhabitants.

As expected concrete effects, the following points may be mentioned:

(1) Direct Effect

① Improvement of diagnostic services

- By renewing or supplementing fluorography unit, it becomes possible to make diagnosis with high-quality images and obtain inspection results of high accuracy.
- By procuring ultrasound system, electrocardiograph and endoscope related equipment, it becomes possible to perform accurate inspection of physiological functions of patients and thus judge the disease conditions with high accuracy according to the inspection results.
- By improving the equipment in the laboratory (binocular microscope, thermostat, hemoglobinmeter, spectrophotometer, etc.), it becomes possible to accurately judge physical conditions and diseases of outpatients and inpatients from the clinical data.

② Improvement of treatment services

- By procuring the equipment in operation room (anesthesia apparatus, operation light, operating table, operation instruments, etc.) as well as the equipment in the emergency observation room (ventilator, bedside monitor, defibrillator, etc.), it becomes possible to perform proper diagnosis and treatment such as safety operation to patients and follow-up monitoring of postoperative patients, etc.

- By disposing a delivery monitoring system, it becomes possible to make proper monitoring of the condition of pregnant mothers and fetuses and provide safer delivery cares.

③ As a central medical facility in the region

- Referral of patients from the lower-rank medical facilities will be made smoothly, so that improvement of referral system at regional level can be expected.
- Referral of patients to the upper-rank hospitals in Ulaanbaatar area will be reduced, so that lessening of the burden imposed on the patients' body, mentality and finance can be expected.

(2) Indirect Effect

① Improving awareness of local inhabitants

By improving central medical facilities in regions, it contributes to growing reliance of local inhabitants on medical services.

② Rectifying regional gaps and decentralization of authority

By providing good medical services at a regional level, good health can be maintained more easily for the local inhabitants. Also, activation of regional economy can be expected by elating the will to work of those local labor.

4-2 Technical Cooperation and Collaboration with Other Donors

4-2-1 Necessity of Technical Cooperation

From the technical viewpoint, the equipment to be procured under this project can be operated and maintained by the hospital's current capability of medical staff, because most of those are for renewal and supplementation of the equipment currently available in the designated facilities.

Even though it is an equipment to be renewed, such as X-ray apparatus, ultrasound system and spectrophotometer, for which operating method is deemed to be different from the existing one, a training course will be provided on its operating method by an engineer of either the manufacturer or its local agent at the time of installation of the equipment. The new operating techniques can be acquired sufficiently well through the training. Accordingly, the necessity of technical cooperation from the Japanese side under this project is judged low.

4-2-2 Soft Component

Improvement of medical services is expected by renewal and/or replacement of the superannuated equipment at the regional medical facilities through implementation of this project. However, improvement of the maintenance techniques for the medical equipment should be also required in order to keep high operation of the equipment in the future. Soft Component will be implemented on focusing both the method of preventive maintenance and the method of maintenance for the equipment procured under this project.

4-2-3 Collaboration with Other Donors

The sector concerned is beneficiary of assistance and cooperation by international organizations such as WHO, UNICEF, UNFPA, UNDP and ADB. Especially for Hovd Health Service and Diagnosis Center and Dornogovi General Hospital which are the designated facilities of this project, it was confirmed that procurement of medical equipment is also planned for these facilities under a project by a fund of ADB. Although overlapping of the procured equipment was feared between this project for which request was submitted to the Japanese government and the ADB project, we could verify contents of the procurement plan through meeting

with members concerned with ADB, and reached the following conclusion:

- While some of planned equipment is overlapped with those in the ADB project, the procurement under this project is still necessary for most of other basic equipment than such duplicate items.
- The greater part of the equipment to be procured under the ADB project is at the minimum required quantity, and further supplementation for some of them is judged necessary.
- By using the equipment supplied within the framework of this project together with those procured under the ADB project, the medical services in the respective facilities are expected for further improvement.

4-3 Recommendation

This project is expected to produce a lot of positive effects and widely contribute to the improvement of health and medical services to the local inhabitants as above described, therefore, the implementation of this project is quite significant. Moreover, improvement of the following items is necessary to promote smooth implementation of this project and continuous and effective utilization of the equipment procured under this project:

1) This project is to support the improvement of diagnosing and treating functions of the designated facilities from the hardware side (improvement of materials and equipment). Therefore, in achieving the targets of the "national health policies" of the Mongolian government, further efforts for improvement are required on the software side (education of medical staff, assignment of operating budgets, etc.) at the respective facilities.
2) The respective facilities are requested to promote enlightening activities &c., in order to help local inhabitants in acquiring better

understanding and knowledge on health and hygiene and to establish medical service system enabling to perform diagnosis and treatment to patients at an early stage.

3) While the Equipment Maintenance Sections of the respective facilities have maintenance technicians of medical equipment capable of handling ordinary troubles, it is required to secure a long-term effective utilization for some equipment such as X-ray diagnosing system and medical electronic instruments, by concluding a maintenance contract with either the manufacturer or its local agent.

4) Selection of the procured equipment was made in consideration of which consumables and spare parts, while many of those are imported from abroad, can be procured in Ulaanbaatar, the capital. However, it is necessary to place an appropriate order at an opportune time, by checking the necessary period from order to delivery, securing the budgetary allocation for purchase of consumables, etc.

5) In order to control the state of utilization of main equipment procured under this project, it is required to conduct monitoring on the frequency of use, circumstances of operation, maintenance records &c., for such equipment as X-ray apparatus, ultrasound system, endoscope, anesthesia apparatus, ventilator, bedside monitor, ambulance, etc. Preparation of operation report for those equipment is also required.

APPENDICES

Member List of Study Team

At the stage of Basic Design Study

1.	Team Leader	Dr. Takashi WAGATSUMA	Japan International Cooperation of Welfare Services
2.	Project Coordinator	Ms. Chiharu MORITA	JICA 2nd Project Management Div. Grant Aid Management Dept.
3.	Project Manager	Mr. Hiroaki NARITSA	BINKO LTD.
4.	Equipment Planner I	Mr. Yoshihiro KANEKO	BINKO LTD.
5.	Equipment Planner II	Mr. Yu ISHIYAMA	BINKO LTD.
6.	Facility Planner	Mr. Mitsuhiro NASU	BINKO LTD.
7.	Cost Surveyor / Procurement Planner	Mr. Takahiro KAJIWARA	BINKO LTD.
8.	Interpreter	Ms. Noriko KATO	BINKO LTD.

At the stage of Report on Draft Basic Design Study

1.	Team Leader	Dr. Takashi WAGATSUMA	Japan International Cooperation of Welfare Services
2.	Project Manager	Mr. Hiroaki NARITSA	BINKO LTD.
3.	Equipment Planner I	Mr. Yoshihiro KANEKO	BINKO LTD.
4.	Equipment Planner II	Mr. Yu ISHIYAMA	BINKO LTD.
5.	Facility Planner	Mr. Mitsuhiro NASU	BINKO LTD.
6.	Interpreter	Ms. Noriko KATO	BINKO LTD.

SURVEY SCHEDULE

Basic Design Study (July 27-September 8, 1999 44days)

```
1 :  Team Leader
2 :  Project Coordinator
A :  Project Manager
B :  Equipment Planner 1
C :  Equipment Planner 2
D :  Facility Planner
E :  Cost Surveyor/Procurement Planner
F :  Interpreter
```

		1	2	A	B	C	D	E	F
1	27.Jul Tue			Tokyo → Beijing					
2	28.Jul Wed			Beijing → Ulaanbaatar					
3	29.Jul Thu			Courtesy Visit to JICA / Japan Embassy / MOHSW					
4	30.Jul Fri			Discussion with MOHSW	Ulaanbaatar ↓ (Air) Dornod	Ulaanbaatar ↓ (Air) Dornod	Discussion with MOHSW	Discussion with MOHSW	Ulaanbaatar ↓ (Air) Dornod
5	31.Jul Sat			Survey on Local Market	Survey in Dornod	Survey in Dornod	Survey on Local Market	Survey on Local Market	Survey in Dornod
6	1.Aug Sun			Team meeting	Team meeting	Team meeting	Team meeting	Team meeting	Team meeting
7	2.Aug Mon			Meeting with MOHSW, Survey on Local Market	Survey in Dornod	Survey in Dornod	Survey on Local Market	Survey on Local Market	Survey in Dornod
8	3.Aug Tue			Primary General Hospital	Survey in Dornod	Survey in Dornod	Primary General Hospital	Primary General Hospital	Survey in Dornod
9	4.Aug Wed			Ulaanbaatar ↓ (Air) Dornod	Survey in Dornod	Survey in Dornod	Ulaanbaatar ↓ (Air) Dornod	Ulaanbaatar ↓ (Air) Dornod	Survey in Dornod
10	5.Aug Thu			Survey in Dornod	Survey in Dornod	Survey in Dornod	Survey in Dornod	Survey in Dornod	Survey in Dornod
11	6.Aug Fri			Dornod ↓ (Air) Ulaanbaatar	Dornod ↓ (Air) Ulaanbaatar	Dornod ↓ (Air) Ulaanbaatar	Dornod ↓ (Air) Ulaanbaatar	Dornod ↓ (Air) Ulaanbaatar	Dornod ↓ (Air) Ulaanbaatar
12	7.Aug Sat			Team meeting	Team meeting	Team meeting	Team meeting	Team meeting	Team meeting
13	8.Aug Sun			Filing of data	Filing of data	Filing of data	Filing of data	Filing of data	Filing of data
14	9.Aug Mon			Meeting with MOHSW, Third General Hospital	Third General Hospital	Third General Hospital	Filing of data	Survey on Local Market	Third General Hospital
15	10.Aug Tue			Ulaanbaatar ↓ (Car) Ovorhangai	Ulaanbaatar ↓ (Car) Ovorhangai	Ulaanbaatar ↓ (Car) Ovorhangai	Ulaanbaatar ↓ (Car) Ovorhangai	Ulaanbaatar ↓ (Car) Ovorhangai	Ulaanbaatar ↓ (Car) Ovorhangai
16	11.Aug Wed			Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai
17	12.Aug Thu			Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai
18	13.Aug Fri			Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai	Survey in Ovorhangai
19	14.Aug Sat			Ovorhangai ↓ (Car) Ulaanbaatar	Ovorhangai ↓ (Car) Ulaanbaatar	Ovorhangai ↓ (Car) Ulaanbaatar	Ovorhangai ↓ (Car) Ulaanbaatar	Ovorhangai ↓ (Car) Ulaanbaatar	Ovorhangai ↓ (Car) Ulaanbaatar
20	15.Aug Sun			Filing of data	Filing of data	Filing of data	Filing of data	Filing of data	Filing of data
21	16.Aug Mon			Ulaanbaatar ↓ (Train) Dornogovi	Ulaanbaatar ↓ (Air) Hovd	Ulaanbaatar ↓ (Train) Dornogovi	Ulaanbaatar ↓ (Air) Hovd	Ulaanbaatar ↓ (Air) Hovd	Ulaanbaatar ↓ (Train) Dornogovi
22	17.Aug Tue			Survey in Dornogovi	Survey in Hovd	Survey in Dornogovi	Survey in Hovd	Survey in Hovd	Survey in Dornogovi
23	18.Aug Wed			Survey in Dornogovi	Survey in Hovd	Survey in Dornogovi	Survey in Hovd	Survey in Hovd	Survey in Dornogovi
24	19.Aug Thu			Survey in Dornogovi	Hovd ↓ (Car) Bayan-Olgii	Survey in Dornogovi	Hovd ↓ (Car) Bayan-Olgii	Hovd ↓ (Car) Bayan-Olgii	Survey in Dornogovi
25	20.Aug Fri			Survey in Dornogovi	Survey in Bayan-Olgii	Survey in Dornogovi	Survey in Bayan-Olgii	Survey in Bayan-Olgii	Survey in Dornogovi
26	21.Aug Sat			Dornogovi ↓ (Train) Ulaanbaatar	Bayan-Olgii ↓ (Air) Ulaanbaatar	Dornogovi ↓ (Train) Ulaanbaatar	Bayan-Olgii ↓ (Air) Ulaanbaatar	Bayan-Olgii ↓ (Air) Ulaanbaatar	Dornogovi ↓ (Train) Ulaanbaatar
27	22.Aug Sun			Filing of data	Filing of data	Filing of data	Filing of data	Filing of data	Filing of data
28	23.Aug Mon	Tokyo ↓ Beijing		Discussion of Specifications	Discussion of Specifications	Discussion of Specifications	Filing of data	Survey of Local Agents	Discussion of Specifications
29	24.Aug Tue	Beijing ↓ Ulaanbaatar Courtesy Visit to JICA/Japa Embassy/MOHSW		Discussion of Specifications	Discussion of Specifications	Discussion of Specifications	Survey of Local Agents	Survey of Local Agents	Discussion of Specifications

SURVEY SCHEDULE

		1	2	A	B	C	D	E	F
30	25.Aug Wed	Report to JICA, Meeting with MOHSW		Report to JICA, Meeting with MOHSW	Report to JICA, Meeting with MOHSW	Report to JICA, Meeting with MOHSW	Ulaanbaatar ↓ Beijing ↓ Tokyo	Report to JICA, Meeting with MOHSW	Report to JICA, Meeting with MOHSW
31	26.Aug Thu	Ulaanbaatar ↓ (Air) Govi-Altai		Ulaanbaatar ↓ (Air) Govi-Altai	Ulaanbaatar ↓ (Car) Bulgan	Ulaanbaatar ↓ (Car) Bulgan		Ulaanbaatar ↓ (Air) Govi-Altai	Ulaanbaatar ↓ (Air) Govi-Altai
32	27.Aug Fri	Survey in Govi-Altai		Survey in Govi-Altai	Survey in Bulgan	Survey in Bulgan		Survey in Govi-Altai	Survey in Govi-Altai
33	28.Aug Sat	Govi-Altai ↓ (Air) Ulaanbaatar		Survey in Govi-Altai	Survey in Bulgan	Survey in Bulgan		Survey in Govi-Altai	Survey in Govi-Altai
34	29.Aug Sun	Filing of data		Filing of data	Bulgan ↓ (Car) Ulaanbaatar	Bulgan ↓ (Car) Ulaanbaatar		Filing of data	Filing of data
35	30.Aug Mon	Primary General Hospital		Survey in Govi-Altai	Filing of data	Filing of data		Survey in Govi-Altai	Survey in Govi-Altai
36	31.Aug Tue	Minutes of Discussions		Govi-Altai ↓ (Air) Ulaanbaatar	Filing of data	Filing of data		Govi-Altai ↓ (Air) Ulaanbaatar	Govi-Altai ↓ (Air) Ulaanbaatar
37	1.Sep Wed	Minutes of Discussions		Minutes of Discussions	Minutes of Discussions	Minutes of Discussions		Ulaanbaatar ↓ Beijing ↓ Tokyo	Minutes of Discussions
38	2.Sep Thu	Minutes of Discussions		Minutes of Discussions	Minutes of Discussions	Minutes of Discussions			Minutes of Discussions
39	3.Sep Fri	Signature to Minutes, Report to JICA/Japan Embass		Sign to Minutes, Report to JICA/Japan Embassy	Sign to Minutes, Report to JICA/Japan Embassy	Sign to Minutes, Report to JICA/Japan Embassy			Sign to Minutes, Report to JICA/Japan Embassy
40	4.Sep Sat	Ulaanbaatar ↓ Kansai ↓ Tokyo		Filing of data	Filing of data	Filing of data			Filing of data
41	5.Sep Sun			Filing of data	Filing of data	Filing of data			Filing of data
42	6.Sep Mon			Discussion of Specifications	Discussion of Specifications	Discussion of Specifications			Discussion of Specifications
43	7.Sep Tue			Discussion with MOHSW, Report to JICA/Japan Embassy	Discussion with MOHSW, Report to JICA/Japan Embassy	Discussion with MOHSW, Report to JICA/Japan Embassy			Discussion with MOHSW, Report to JICA/Japan Embassy
44	8.Sep Wed			Ulaanbaatar ↓ Beijing ↓ Tokyo	Ulaanbaatar ↓ Beijing ↓ Tokyo	Ulaanbaatar ↓ Beijing ↓ Tokyo			Ulaanbaatar ↓ Beijing ↓ Tokyo

SURVEY SCHEDULE

Report on Draft Basic Design Study (October 25 ～ November 19,1999, 26 days)

		Team Leader	Project Manager	Equipment Planner 1	Equipment Planner 2	Facility Planner	Interpreter
1	25.Oct Mon	Tokyo NRT (11:20) → Seoul (13:40) *JD-251*					
2	26.Oct Tue	Seoul (7:40) → Ulaanbaatar (10:30) *OM-6867* PM : Courtesy Visit to JICA & Embassy of Japan					
3	27.Oct Wed	Courtesy Visit to Ministry of Health & Social Welfare					
4	28.Oct Thu	Minutes of Discussions			Ulaanbaatar → Dornogobi *(Train)*		Minutes of Discussion
5	29.Oct Fri	Minutes of Discussions			Report on Draft Basic Design Study of Dornogobi Dpt. PM 8:00 Dornogobi～		Minutes of Discussion
6	30.Oct Sat	TEAM Meeting / Compilation of Data			Arr. AM 7:00 Ulaanbaatar		TEAM Meeting Compilation of Data
7	31.Oct Sun	TEAM Meeting / Compilation of Data					
8	01.Nov Mon	Signature to Minutes Report to JICA/Embassy of Japan					
9	02.Nov Tue	Ulaanbaatar →Seoul →Tokyo	Report on Draft Basic Design Study of Govi-Altai (Meeting with participants of the hospital at MOHSW in Ulaan				
10	03.Nov Wed		Report on Draft Basic Design Study of Govi-Altai (Meeting with participants of the hospital at MOHSW in Ulaan				
11	04.Nov Thu		Ulaanbaatar → Bulgan *(car)*	Ulaanbaatar(8:20) → Hovd(12:25) *Flight 571*		Ulaanbaatar → Bulgan *(car)*	
12	05.Nov Fri		Report on Draft Basic Design Study of Bulga	Report on Draft Basic Design Study of Hovd		Report on Draft Basic Design Study of Bulga	
13	06.Nov Sat		Bulgan → Ulaanbaatar *(car)*	Hovd(13:15) → Ulaanbaatar(16:55) *Flight 572*		Bulgan → Ulaanbaatar *(car)*	
14	07.Nov Sun		Filing of Data				
15	08.Nov Mon		Meeting with MOHSW				
16	09.Nov Tue		Ulaanbaatar(8:05) ↓ *Flight 561* Bayan-Olgii(12:05)	Ulaanbaatar(8:45) ↓ *Flight 333* Dornod(10:15)	Ulaanbaatar(8:05) ↓ *Flight 561* Bayan-Olgii(12:05)	Discussion with ADB	Ulaanbaatar(8:05) ↓ *Flight 561* Bayan-Olgii(12:05)
17	10.Nov Wed		Report on Draft Basic Design Study of Bayan-Olgii	Report on Draft Basic Design Study of Dorno	Report on Draft Basic Design Study of Bayan-Olgii	Discussion with ADB	Report on Draft Basic Design Study of Bayan-Olgii
18	11.Nov Thu		Bayan-Olgii(12:50) ↓ *Flight 562* Ulaanbaatar(16:50)	Report on Draft Basic Design Study of Dorno	Bayan-Olgii(12:50) ↓ *Flight 562* Ulaanbaatar(16:50)	Filing of Data	Bayan-Olgii(12:50) ↓ *Flight 562* Ulaanbaatar(16:50)
19	12.Nov Fri		Meeting with MOHSW	Dornod(11:05) ↓ *Flight 334* Ulaanbaatar(12:35)	Meeting with MOHSW	Ulaanbartar(9:30) ↓ *OM-301* Seoul ↓ *JD-252* Tokyo(17:40)	Meeting with MOHSW
20	13.Nov Sat		Filing of Data				Filing of Data
21	14.Nov Sun		Ulaanbaatar ↓ *(car)* Ovorhangai				Ulaanbaatar ↓ *(car)* Ovorhangai
22	15.Nov Mon		Report on Draft Basic Design Study of Ovorhangai				Report on Draft Basic Design Study of Ovorhangai
23	16.Nov Tue		Ovorhangai ↓ *(car)* Ulaanbaatar				Ovorhangai ↓ *(car)* Ulaanbaatar
24	17.Nov Wed		Report to MOHSW				Report to MOHSW
25	18.Nov Thu		Report to JICA / Embassy of Japan				Report to JICA / Embassy of Japan
26	19.Nov Fri		Ulaanbaatar (9:30) → Seoul (13:40) *OM-301* Seoul (15:35) → Tokyo NRT (17:40) *JD-252*				

The Project
for
Establishment of Regional Health Services and Diagnosis Centers

- List of Party Concerned in Mongolia -

The Embassy of Japan in Mongolia	
Ambassador	Marohito Hanada
Second Secretary	Satoshi Matoba
Third Secretary	Hiroshi Fujimoto
JICA Office in Mongolia	
Director	Kenji Matsumoto
Councillor	Keizo Egawa
Executive Clerk	Myahlai Ganzorig
The Ministry of Health and Social Welfare	
Vice-Minister	A. Zangad
Director Department of Policy Coordination & Implementation	Sh. Enkhbat
Senior Officer Department of Policy Coordination & Implementation	Ch. Chuluunbaatar
Officer for Medical Care Department of Policy Coordination & Implementation	D. Batmunkh
Officer for International Relations Department of Policy Coordination & Implementation	D. Saintuya
Director Department of Strategy Planning	D. Byambaa
Officer Department of Strategy Planning	Orkhon
Officer Department of Strategy Planning	B. Enkhjin
Officer Department of Strategy Planning	Dungu
Other Donors	
Asian Development Bank (ADB) Medical Equipment Consultant	D. Tumurtogoo

Primary General Hospital	
Director	Z. Mendsaikhan
Third General Hospital	
Director	B. Batsereedene
Dornod Health Service and Diagnosis Center	
Director	S. Vandansuren
Director of Medical Affairs	Y. Doljinsuren
Director of Social Welfare	D. Enkhbaatar
Director of General Affairs	Kh. Begzsuren
Accountant General	B. Uranchimeg
Economist	Ts. Munguntsetseg
Information Manager	L. Baatar
Ovorhangai Health Service and Diagnosis Center	
Director	Dulamsuren
Accountant	Ganchimeg
Manager of General Affairs Department	Byambadorj
Hovd Health Service and Diagnosis Center	
Director	Buyankhising
Chief Surgeon	Davaakhuu
Chief Pediatrician	Galsantseden
Chief Gynecologist	Davaabal
Dornogovi General Hospital	
Director	Sh. Dorjpagma
Manager of PHC	P. Bat-Ulzii
Neurologist	Peljee
Doctor of Infection Room	B. Khuukhen
Health Supervisor for Youth	Kh. Khuukhen
ENT Doctor	Dagvasambuu
Ophthalmologist	Munkhtsetseg
Surgeon	Tsagshir
Clinician	Tsevegmed
Clinician	B. Byamba
Clinician	A. Byamba
Pediatrician	Hymgerel

Doctor of ICU	Enkhjargal
Obstetrician	Bor
Neurologist	Davaa
Bayan-Olgii General Hospital	
Director	Raya
Govi-Altai General Hospital	
Director	H. Baast
Bulgan General Hospital	
Director of Medical Assistance	Bayaraa
Manager of General Affairs Department	Delgersaikhan
Doctor	Narantuya
Manager of PHC	Myagmar

MINUTES OF DISCUSSIONS ON THE BASIC DESIGN STUDY ON THE PROJECT FOR ESTABLISHMENT OF REGIONAL HEALTH SERVICES AND DIAGNOSIS CENTERS IN MONGOLIA

In response to a request from the Government of Mongolia , the Government of Japan decided to conduct a Basic Design Study on the Project for Establishment of Regional Health Services and Diagnosis Centers in Mongolia (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Mongolia the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Dr.Takashi Wagatsuma, Medical Adviser, the Japan International Cooperation of Welfare Services , and is scheduled to stay in the country from July 28 to September 8, 1999.

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

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

Ulaanbaatar, September 3, 1999

Takashi Wagatsuma
Leader
Basic Design Study Team
Japan International Cooperation Agency

D. Byambaa
Director-General
Strategic management & planning dept.,
Ministry of Health and Social Welfare

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve and strengthen medical services in regional area through the procurement of medical equipment.

2. Project sites

The sites of the Project are the following seven medical facilities.

Three Regional Health Services and Diagnosis Centers; Khovd HS and DC , Dornod HS and DC, and Uvurkhangai HS and DC.

Four Aimag General Hospitals; Bayan-Ulgi General Hospital, Bulgan General Hospital, Gobi-Altai General Hospital, and Dornogobi General Hospital.

*There will be no further changes in requested project sites.

3. Responsible and Implementing Agency

3-1. The Responsible Agency is Strategic management & planning department, Ministry of Health and Social Welfare.

3-2. The Implementing Agencies are Policy coordination & implmentation department, Ministry of Health and Social Welfare, respective governorate offices, and respective medical facilities.

4. Items requested by the Government of Mongolia

After discussions with the Team, the items described in Annex-1 were finally requested by the Mongolia 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 Mongolia side understands the Japan's Grant Aid Scheme explained by the Team, as described in ANNEX-2.

5-2. The Mongolia side will take the necessary measures, as described in ANNEX-3, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultants will proceed to further studies in Mongolia until September 8, 1999.

6-2. The components of the Project, including items, and quantities of equipment, will be determined after further study and analysis of the information and data collected and also discussions in Japan.

6-3. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in October, 1999.

6-4. In case that the contents of the draft report is accepted in principle by the Government of Mongolia, JICA will complete the final report and send it to the Government of Mongolia by February, 2000.

7.Other relevant issues

The Team strongly requested the Mongolia side to make the counterpart staff in responsible agency, Ministry of Health and Social Welfare, accompany the Draft Report Explanation Team to complete field survey smoothly in all seven project sites.

Japan's Grant Aid Scheme

1. Grant Aid Procedures

1) Japan's Grant Aid Program is executed through 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 Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

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

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

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

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

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out the Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consulting firm(s) used for the Study which is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) What is Grant Aid ?

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

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, 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 the one fiscal year in which the Cabinet approves the Project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

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

However the prime contractors, namely, consulting contracting 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 "Verification"

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

6) Undertakings required of the Government of 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 and to clear, level and reclaim the land prior to commencement of the construction.
b) To provide facilities of the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
c) To secure buildings prior to the procurement in case the installation of the 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 facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the 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 Arrangements (B/A)

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

THE ITEMS

Annex-1

ITEM NO	DESCRIPTION	Khovd		Dornod		Uvurkhangai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
	Diagnostic rooms						
A1- 1	Stethoscope	20	A	30	A	20	A
A1- 2	Sphygmomanometer (desk type)	20	A	15	A	10	A
A1- 3	Sphygmomanometer (pocket type)	20	A	15	A	10	A
A1- 4	Obstetric stethoscope	2	A	10	A	2	A
A1- 5	Distance test chart	1	A	3	C	1	A
A1- 6	Percussion hammer (Tyler type)	10	A	3	A	3	A
A1- 7	Diagnostic set	5	A	5	A	5	A
A1- 8	Spirometer	2	C	2	C	2	C
A1- 9	Infant scale	3	A	3	A	1	A
A1- 10	ECG	1	A	1	A	1	C
A1- 11	Portable ECG	1	A	1	A	1	A
A1- 12	Electroencephalograph	1	B	1	B	1	B
A1- 13	Cysto-urethroscope, B set	1	A	1	A	1	B
A1- 14	Gastrointestinal fiberscope	1	C	1	C	1	C
A1- 15	Laparoscope set	1	B	1	B	1	C
A1- 16	Endoscopic TV system	1	C	1	C	1	C
A1- 17	Light source for endoscopes	1	C	1	A	1	C
A1- 18	Ultrasound system	1	C	1	A	2	B
A1- 20	Ultrasound doppler examination system	1	B	1	B	1	B
A1- 21	Portable ultrasound system	1	A	1	A	1	B
A1- 22	Laryngoscope set	1	A	1	A	1	A
A1- 24	Bronchofiberscope	1	C	1	A	1	C
	Surgery department						
A2- 1	Operating light	2	C	2	A	2	C
A2- 2	Operating light	2	A	2	A	2	A
A2- 3	Operating table	1	A	2	A	1	A
A2- 4	Suction unit	2	C	2	A	2	A
A2- 5	Operating microscope	1	C	1	A	1	A
A2- 6	Coagulator	1	A	2	A	2	A
A2- 7	Stand	3	A	3	A	3	A
A2- 8	Revolving chair	4	A	2	A	2	A
A2- 9	Instrument cabinet	2	A	2	A	2	A
A2- 10	Patient cart	2	A	2	A	2	A
A2- 11	Pulmonary surgery instrument set	1	A	1	A	1	A
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	A	1	A
A2- 13	Osteosurgery instrument set	1	A	1	A	1	A
A2- 14	Nephrectomy instrument set	1	A	1	A	1	A
A2- 15	Manual dermatome	1	C	1	C	1	C
A2- 16	Standard plastic surgery set	1	A	1	A	1	A
A2- 17	Surgical instrument set for infant	1	A	1	A	1	C
A2- 18	Neurosurgery instrument set	1	B	1	B	1	C
A2- 19	Gastrectomy instrument set	1	A	1	A	1	A
A2- 20	Microvascular surgical instrument set	1	C	1	C	1	C
A2- 21	Operating instrument set	1	C	1	A	1	A
A2- 22	Surgical suture needle set	2	A	2	A	2	A
A2- 25	Blood vessel suture needle set	1	A	1	A	1	A
A2- 26	Intestinal suture needle set	1	A	1	A	1	A
A2- 27	Needle holder	5	A	5	A	5	A

ITEM NO	DESCRIPTION	Khovd		Dornod		Uvurkhangai	
		Q`TY	Priority	Q`TY	Priority	Q`TY	Priority
A2- 28	Operating knife set	1	A	1	A	1	A
A2- 29	Prostatomy instrument set	1	A	1	A	1	B
A2- 30	First aid surgery instrument set	–	-	--	--	1	B
A2- 31	Small operating instrument set	2	A	2	A	1	A
	Emergency and reanimation department						
A3- 1	Bedside monitor	1	A	3	A	1	A
A3- 2	Defibrillator	1	A	1	A	1	A
A3- 3	Ventilator	1	B	1	A	1	C
A3- 4	Anaesthesia apparatus with monitor	1	C	1	A	1	A
A3- 5	Anaesthesia ventilator	3	C	1	A	1	A
A3- 6	Suction unit	2	A	2	A	1	A
A3- 7	Endtracheal set	1	A	1	A	1	A
A3- 8	Venotomy instrument set	1	A	1	A	1	A
A3- 9	Emergency tracheotomy instrument set	1	B	1	C	1	C
A3- 10	Emergency aid box	2	A	2	A	1	A
	Obstetrics and Gynaecology department						
A4- 1	Vacuum extractor	2	A	2	A	2	A
A4- 2	Gynaecological examining unit	2	A	2	A	2	A
A4- 3	Aus-suction unit	2	C	2	C	2	C
A4- 4	Artificial abortion instrument set	2	A	2	A	2	A
A4- 5	Gynaecology stereoscope set	1	A	1	A	1	A
A4- 6	Fetal actocardiograph	1	C	1	A	1	A
A4- 7	Cryosurgery system for gynaecology	1	C	1	C	1	C
A4- 8	Obstetrics operation instrument set	1	A	1	A	1	A
A4- 9	Gynaecology examination instrument set	5	A	5	A	3	A
A4- 10	Cusco's vaginal speculum	10	A	10	A	10	A
A4- 11	Delivery table	2	A	2	A	2	C
A4- 12	Examining table	1	A	2	A	2	C
A4- 13	Ultrasound system (with options)	–	–	1	C	–	–
A4- 14	Gynaecologic examining instrument set	–	–	–	–	2	A
A4- 15	Gynaecologic operation table	2	A	1	A	1	A
A4- 16	Infant ventilator	–	–	–	–	1	C
	Laboratory						
A5- 1	Laboratory monocular microscope	2	C	2	C	2	C
A5- 2	Laboratory binocular microscope	3	A	3	A	2	A
A5- 3	Thermostat	2	A	2	A	2	A
A5- 4	Blood cell counter	1	C	1	C	1	C
A5- 5	Differential leukocyte counter	1	A	1	A	1	A
A5- 6	Hemoglobinmeter	1	B	3	A	3	C
A5- 7	pH meter	2	A	2	A	2	A
A5- 8	Vacuumtaner	1000	C	–	–	–	–
A5- 9	Needles for cacuumtaner	1000	C	--	--	--	--
A5- 10	Auto diluter	1	B	1	A	2	B
A5- 11	Analytical balance	3	A	2	A	1	A
A5- 12	Distilling apparatus	2	A	2	A	1	A
A5- 13	Biochemical analyser	--	--	1	C	--	--
A5- 14	Urine analyser	1	C	1	B	1	C
A5- 15	Bacteriological analysis set	--	--	1	A	–	-
A5- 16	Drying oven	1	A	1	A	1	C

ITEM NO	DESCRIPTION	Khovd		Dornod		Uvurkhangai	
		Q`TY	Priority	Q`TY	Priority	Q`TY	Priority
A5- 17	Clinical spectrophotometer	1	A	1	A	1	C
A5- 18	Automatic biochemical analyser	–	–	–	–	1	C
A5- 19	Electrophoresis system	–	–	–	–	–	–
	Radiology department						
A6- 1	Angiographic X-ray system	1	C	1	C	1	C
A6- 2	Mobile X-ray unit	2	A	2	A	2	A
A6- 3	Fluorography unit	1	C	1	C	1	C
A6- 4	Dental X-ray unit	1	A	1	A	1	B
A6- 5	Processing tank	1	C	1	A	1	C
A6- 6	X-ray film dryer	1	B	1	A	1	C
A6- 7	X-ray film cassette (4 units of each size)	4	A	4	A	4	C
A6- 8	X-ray film illuminator	2	A	2	A	2	A
A6- 9	Protective gloves	3	A	3	A	1	A
A6- 10	Dosimeter and charger	2	B	2	B	1	B
A6- 11	Mammographic X-ray stand	1	C	1	C	1	C
A6- 12	Darkroom lamp	1	B	1	A	1	B
A6- 13	Protective glasses	3	A	3	A	1	A
	Dental department						
A7- 1	Portable treatment unit	1	A	1	C	1	B
A7- 2	Dental examination instrument set	10	C	3	A	1	A
A7- 3	Dental treatment instrument set	1	A	3	A	2	B
	Paediatrics department						
A8- 1	Infant incubator	1	A	2	A	2	A
A8- 2	Infant ventilator	1	C	1	A	1	A
A8- 3	Infant warmer	2	A	2	A	1	A
A8- 4	Oxygen concentrator	1	C	1	A	1	A
A8- 5	Infant sphygmomanometer	3	A	3	A	3	A
A8- 6	Infant rectal thermometer	10	A	20	A	10	A
A8- 7	Suction unit	1	A	1	A	1	C
A8- 8	Oxymeter	1	A	1	A	1	A
	Ophthalmic department						
A9- 1	Ophthalmic operation instrument set	3	C	1	A	1	A
A9- 2	Cornea transplantation instrument set	1	B	1	A	1	C
A9- 3	Trial lens set	2	A	1	C	2	A
A9- 4	Synoptiscope	1	B	1	C	1	B
A9- 5	Binocular ophthalmoscope	2	C	2	A	2	C
A9- 6	Ophthalmic YAG laser system	1	C	–	–	–	–
A9- 7	Indirect ophthalmoscope with halogen lamp	1	B	1	B	1	A
A9- 8	Universal trial frame	1	C	1	C	1	C
A9- 9	Cross cylinder	–	–	1	C	–	–
A9- 10	Universal ophthalmic measure	1	A	1	A	1	A
A9- 11	Stereo fundus camera	1	A	1	A	1	A
A9- 12	Echo scan	–	–	1	C	–	–
A9- 13	Ophthalmic operation microscope	–	–	–	–	–	–
	ENT department						
A10- 1	Otosurgery instrument set	2	A	2	A	2	C
A10- 2	Head mirror	3	C	3	C	3	A
A10- 3	Sinus surgery instrument set	2	A	2	A	2	A
A10- 4	Audiometer	1	A	1	A	1	A

ITEM NO	DESCRIPTION	Khovd		Dornod		Uvurkhangai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
A10- 5	ENT surgery instrument set	–	–	1	A	1	B
A10- 6	Chair-mounted unit	1	A	1	A	1	A
A10- 7	Laryngoscope set	1	C	1	A	1	B
A10- 8	Oto-nasal scope set	1	A	1	A	1	A
A10- 10	Portable treatment unit	–	–	–	–	2	A
A10- 11	Operating stool	1	A	1	A	2	A
	Physiotherapy department						
A11- 1	Ultrasound therapy unit	3	A	3	A	1	A
A11- 2	Microwave therapy unit	1	A	1	A	1	A
A11- 3	Inductothermal treatment apparatus	1	A	1	A	1	B
A11- 4	Electric traction	1	A	1	A	1	A
A11- 5	Restrator	1	A	1	A	1	A
A11- 6	Curved back board exerciser	1	A	1	A	1	A
	Others						
A12- 1	Medical refrigerator	3	A	3	A	3	A
A12- 2	High pressure steam sterilizer	1	C	1	A	1	A
A12- 3	Autoclave	2	C	2	A	1	B
A12- 4	Drying cabinet	2	A	2	A	2	A
A12- 5	Instrument table	10	A	10	A	5	A
A12- 6	Autopsy instrument set	1	A	1	A	1	A
A12- 7	Morgue refrigerator	1	B	1	B	1	B
A12- 8	Sliding microtome	1	A	1	A	1	A
A12- 9	Ultraviolet air sterilizer	3	A	4	A	2	A
A12- 12	Refrigerated centrifuge	1	A	1	A	1	A
A12- 14	Instrument cabinet	10	A	10	A	10	A
A12- 15	Bactericidal lamp	4	A	2	A	2	C
A12- 16	Patient cart	4	A	4	A	2	A
A12- 17	Freezer	1	A	2	C	2	C
A12- 18	Buret support	10	C	10	C	10	C
A12- 19	Water boiler	–	–	–	–	–	–
A12- 20	Personal computer	–	–	–	–	–	–
A12- 21	Printer	–	–	–	–	–	–
A12- 22	Copier	–	–	–	–	–	–
A12- 23	Examination light	2	A	2	A	2	A
A12- 24	Ambulance (4 x 4)	2	B	2	B	2	B
A12- 25	Height / weight scale (200cm , 150kg)	2	A	2	C	2	A
	Additional						
A13- 1	Split lamp Microscope set	1	A	1	A	1	A
A13- 2	Folding Litter	–	–	–	–	6	A
A13- 3	I.V. Hanger Stand	20	B	30	B	20	B

ITEM NO	DESCRIPTION	Dornogobi		Bayan-Ulgi		Bulgan		Gobi-Altai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
	Diagnostic rooms								
A1- 1	Stethoscope	15	A	20	A	20	A	20	A
A1- 2	Sphygmomanometer (desk type)	15	A	10	A	10	A	10	A
A1- 3	Sphygmomanometer (pocket type)	9	A	10	A	10	A	10	A
A1- 4	Obstetric stethoscope	5	A	2	A	2	A	2	A
A1- 5	Distance test chart	2	C	1	A	1	A	1	A
A1- 6	Percussion hammer (Tyler type)	2	A	3	A	3	A	3	A
A1- 7	Diagnostic set	3	A	5	A	5	A	5	A
A1- 8	Spirometer	–	–	–	–	–	–	–	–
A1- 9	Infant scale	2	A	1	A	1	A	1	A
A1- 10	ECG	1	C	1	A	1	A	1	A
A1- 11	Portable ECG	1	A	1	A	1	A	1	B
A1- 12	Electroencephalograph	–	–	–	–	–	–	–	–
A1- 13	Cysto-urethroscope, B set	–	–	–	–	–	–	–	–
A1- 14	Gastrointestinal fiberscope	1	C	1	A	1	A	1	C
A1- 15	Laparoscope set	–	–	–	–	–	–	–	–
A1- 16	Endoscopic TV system	–	–	–	–	–	–	–	–
A1- 17	Light source for endoscopes	1	C	1	A	1	A	1	B
A1- 18	Ultrasound system	1	A	1	A	1	A	2	A
A1- 20	Ultrasound doppler examination system	–	–	–	–	–	–	–	–
A1- 21	Portable ultrasound system	1	C	1	A	1	A	1	B
A1- 22	Laryngoscope set	1	A	1	A	1	A	1	A
A1- 24	Bronchofiberscope	–	–	–	–	–	–	–	–
	Surgery department								
A2- 1	Operating light	1	C	2	C	2	C	2	C
A2- 2	Operating light	1	C	3	A	3	A	2	A
A2- 3	Operating table	1	C	2	A	2	A	2	A
A2- 4	Suction unit	1	C	3	A	3	A	2	A
A2- 5	Operating microscope	–	–	–	–	–	–	–	–
A2- 6	Coagulator	1	A	1	A	1	A	2	A
A2- 7	Stand	2	A	3	A	3	A	3	A
A2- 8	Revolving chair	3	A	2	A	2	A	2	A
A2- 9	Instrument cabinet	1	A	3	A	3	A	2	A
A2- 10	Patient cart	1	A	2	A	2	A	2	A
A2- 11	Pulmonary surgery instrument set	1	A	1	A	1	A	1	A
A2- 12	Hepato-cholecystotomy instrument set	1	A	1	A	1	A	1	A
A2- 13	Osteosurgery instrument set	1	B	–	–	–	–	–	–
A2- 14	Nephrectomy instrument set	–	–	–	–	–	–	–	–
A2- 15	Manual dermatome	–	–	–	–	–	–	–	–
A2- 16	Standard plastic surgery set	–	–	–	–	–	–	–	–
A2- 17	Surgical instrument set for infant	–	–	–	–	–	–	–	–
A2- 18	Neurosurgery instrument set	–	–	–	–	–	–	–	–
A2- 19	Gastrectomy instrument set	1	A	1	A	1	A	1	A
A2- 20	Microvascular surgical instrument set	–	–	–	–	–	–	–	–
A2- 21	Operating instrument set	1	C	1	A	1	A	1	A
A2- 22	Surgical suture needle set	1	A	2	A	2	A	2	A
A2- 25	Blood vessel suture needle set	1	A	1	A	1	A	1	A
A2- 26	Intestinal suture needle set	1	A	1	A	1	A	1	A
A2- 27	Needle holder	3	A	5	A	5	A	5	A

ITEM NO	DESCRIPTION	Dornogobi		Bayan-Ulgi		Bulgan		Gobi-Altai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
A2- 28	Operating knife set	1	A	1	A	1	A	1	A
A2- 29	Prostatomy instrument set	-	-	-	-	-	-	-	-
A2- 30	First aid surgery instrument set	-	-	1	A	1	A	1	A
A2- 31	Small operating instrument set	2	A	1	A	1	A	1	A
	Emergency and reanimation department								
A3- 1	Bedside monitor	2	B	3	A	2	A	1	A
A3- 2	Defibrillator	1	A	1	A	1	A	1	A
A3- 3	Ventilator	1	B	1	A	1	A	1	A
A3- 4	Anaesthesia apparatus with monitor	1	B	1	A	1	A	1	A
A3- 5	Anaesthesia ventilator	1	B	1	A	1	A	1	A
A3- 6	Suction unit	1	C	1	A	1	A	1	A
A3- 7	Endtracheal set	1	A	1	A	1	A	1	A
A3- 8	Venotomy instrument set	1	A	1	A	1	A	1	A
A3- 9	Emergency tracheotomy instrument set	-	-	-	-	-	-	-	-
A3- 10	Emergency aid box	2	A	1	A	1	A	1	A
	Obstetrics and Gynaecology department								
A4- 1	Vacuum extractor	2	A	2	A	2	A	2	A
A4- 2	Gynaecological examining unit	1	A	2	A	2	A	2	A
A4- 3	Aus-suction unit	-	-	-	-	-	-	-	-
A4- 4	Artificial abortion instrument set	2	A	2	A	2	A	2	A
A4- 5	Gynaecology stereoscope set	1	A	1	A	1	A	1	A
A4- 6	Fetal actocardiograph	1	C	1	A	1	A	1	A
A4- 7	Cryosurgery system for gynaecology	-	-	-	-	-	-	-	-
A4- 8	Obstetrics operation instrument set	1	C	1	A	1	A	1	A
A4- 9	Gynaecology examination instrument set	3	C	3	A	3	A	3	A
A4- 10	Cusco's vaginal speculum	10	A	10	A	10	A	10	A
A4- 11	Delivery table	1	C	2	A	2	A	2	A
A4- 12	Examining table	1	C	2	A	2	A	2	A
A4- 13	Ultrasound system (with options)	-	-	-	-	-	-	-	-
A4- 14	Gynaecologic examining instrument set	-	-	2	A	2	A	2	A
A4- 15	Gynaecologic operation table	1	A	1	A	1	A	1	A
A4- 16	Infant ventilator	-	-	-	-	-	-	-	-
	Laboratory								
A5- 1	Laboratory monocular microscope	-	-	-	-	-	-	-	-
A5- 2	Laboratory binocular microscope	3	A	2	A	2	A	6	A
A5- 3	Thermostat	2	A	2	A	2	A	3	A
A5- 4	Blood cell counter	-	-	-	-	-	-	-	-
A5- 5	Differential leukocyte counter	1	A	1	A	1	A	2	A
A5- 6	Hemoglobinmeter	2	C	3	A	1	A	3	A
A5- 7	pH meter	-	-	-	-	-	-	-	-
A5- 8	Vacuumtaner	-	-	-	-	-	-	-	-
A5- 9	Needles for cacuumtaner	-	-	-	-	-	-	-	-
A5- 10	Auto diluter	1	C	1	B	2	C	2	B
A5- 11	Analytical balance	1	A	1	A	1	A	2	A
A5- 12	Distilling apparatus	-	-	-	-	-	-	-	-
A5- 13	Biochemical analyser	-	-	-		-	-		-
A5- 14	Urine analyser	-	-	-	-	-	-	-	-
A5- 15	Bacteriological analysis set	-		-	-	-	-	-	-
A5- 16	Drying oven	1	A	1	A	2	A	2	A

ITEM NO	DESCRIPTION	Dornogobi		Bayan-Ulgi		Bulgan		Gobi-Altai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
A5- 17	Clinical spectrophotometer	1	C	1	A	1	A	1	A
A5- 18	Automatic biochemical analyser	–	–	–	–	–	–	–	–
A5- 19	Electrophoresis system	–	–	–	–	–	–	–	–
	Radiology department								
A6- 1	Angiographic X-ray system	–	–	–	–	–	–	–	–
A6- 2	Mobile X-ray unit	2	B	1	A	1	A	1	A
A6- 3	Fluorography unit	1	C	1	A	1	A	1	A
A6- 4	Dental X-ray unit	1	C	1	A	1	A	1	A
A6- 5	Processing tank	–	–	–	–	–	–	–	–
A6- 6	X-ray film dryer	–	–	–	–	–	–	–	–
A6- 7	X-ray film cassette (4 units of each size)	–	–	–	–	–	–	–	–
A6- 8	X-ray film illuminator	1	C	2	C	2	A	2	B
A6- 9	Protective gloves	2	A	3	A	3	A	3	A
A6- 10	Dosimeter and charger	–	–	–	–	–	–	–	–
A6- 11	Mammographic X-ray stand	–	–	–	–	–	–	–	–
A6- 12	Darkroom lamp	1	C	1	B	1	A	1	A
A6- 13	Protective glasses	2	A	3	A	3	A	3	A
	Dental department								
A7- 1	Portable treatment unit	–	–	–	–	–	–	–	–
A7- 2	Dental examination instrument set	4	C	1	A	1	A	1	A
A7- 3	Dental treatment instrument set	1	A	2	A	2	A	2	A
	Paediatrics department								
A8- 1	Infant incubator	2	A	1	A	2	A	2	C
A8- 2	Infant ventilator	1	B	1	A	1	A	1	A
A8- 3	Infant warmer	2	A	2	A	2	A	2	A
A8- 4	Oxygen concentrator	1	C	1	A	1	A	1	A
A8- 5	Infant sphygmomanometer	2	A	3	A	3	A	3	A
A8- 6	Infant rectal thermometer	10	A	10	A	10	A	10	A
A8- 7	Suction unit	1	A	1	A	1	A	1	A
A8- 8	Oxymeter	2	B	1	A	1	A	1	A
	Ophthalmic department								
A9- 1	Ophthalmic operation instrument set	1	C	1	A	1	A	1	A
A9- 2	Cornea transplantation instrument set	1	–	–	–	–	–	–	–
A9- 3	Trial lens set	1	A	1	A	1	A	1	A
A9- 4	Synoptiscope	1	C	1	B	1	B	1	B
A9- 5	Binocular ophthalmoscope	–	–	–	–	–	–	–	–
A9- 6	Ophthalmic YAG laser system	–	–	–	–	–	–	–	–
A9- 7	Indirect ophthalmoscope with halogen lamp	1	A	1	A	1	A	1	A
A9- 8	Universal trial frame	–	–	–	–	–	–	–	–
A9- 9	Cross cylinder	–	–	–	–	–	–	–	–
A9- 10	Universal ophthalmic measure	1	A	1	A	1	A	1	A
A9- 11	Stereo fundus camera	1	A	1	A	1	A	1	A
A9- 12	Echo scan	–	–	–	–	–	–	–	–
A9- 13	Ophthalmic operation microscope	–	–	–	–	–	–	–	–
	ENT department								
A10- 1	Otosurgery instrument set	1	B	2	A	2	A	2	A
A10- 2	Head mirror	2	C	2	A	2	A	2	A
A10- 3	Sinus surgery instrument set	1	B	1	A	–	–	–	–
A10- 4	Audiometer	1	A	1	A	1	A	1	A

ITEM NO	DESCRIPTION	Dornogobi		Bayan-Ulgi		Bulgan		Gobi-Altai	
		Q'TY	Priority	Q'TY	Priority	Q'TY	Priority	Q'TY	Priority
A10- 5	ENT surgery instrument set	1	B	1	A	1	A	1	A
A10- 6	Chair-mounted unit	1	A	1	A	1	A	1	A
A10- 7	Laryngoscope set	1	C	1	A	1	A	1	A
A10- 8	Oto-nasal scope set	–	–	–	–	–	–	–	–
A10- 10	Portable treatment unit	–	–	–	–	–	–	–	–
A10- 11	Operating stool	–	–	–	–	–	–	–	–
	Physiotherapy department								
A11- 1	Ultrasound therapy unit	2	B	–	–	–	–	–	–
A11- 2	Microwave therapy unit	1	B	–	–	–	–	–	–
A11- 3	Inductothermal treatment apparatus	–	–	–	–	–	–	–	–
A11- 4	Electric traction	1	B	–	–	–	–	1	B
A11- 5	Restrator	–	–	–	–	–	–	–	–
A11- 6	Curved back board exerciser	–	–	–	–	–	–	–	–
	Others								
A12- 1	Medical refrigerator	5	A	3	A	3	A	3	A
A12- 2	High pressure steam sterilizer	1	C	1	A	1	A	1	A
A12- 3	Autoclave	1	C	1	A	1	A	2	A
A12- 4	Drying cabinet	1	C	2	A	2	A	2	A
A12- 5	Instrument table	5	A	5	A	5	A	5	A
A12- 6	Autopsy instrument set	1	B	–	–	–	–	–	–
A12- 7	Morgue refrigerator	–	–	–	–	–	–	–	–
A12- 8	Sliding microtome	1	B	–	–	–	–	–	–
A12- 9	Ultraviolet air sterilizer	3	A	3	A	3	A	2	A
A12- 12	Refrigerated centrifuge	1	A	1	A	1	A	1	A
A12- 14	Instrument cabinet	2	A	10	A	10	A	10	A
A12- 15	Bactericidal lamp	–	–	–	–	–	–	–	–
A12- 16	Patient cart	2	A	2	A	2	A	2	A
A12- 17	Freezer	–	–	–	–	–	–	–	–
A12- 18	Buret support	–	–	–	–	–	–	–	–
A12- 19	Water boiler	–	–	–	–	–	–	–	–
A12- 20	Personal computer	–	–	–	–	–	–	–	–
A12- 21	Printer	–	–	–	–	–	–	–	–
A12- 22	Copier	–	–	–	–	–	–	–	–
A12- 23	Examination light	2	C	2	A	2	A	2	A
A12- 24	Ambulance (4 x 4)	2	B	2	B	2	B	2	B
A12- 25	Height / weight scale (200cm , 150kg)	2	A	2	A	2	A	2	A
	Additional								
A13- 1	Split lamp Microscope set	–	–	1	A	1	A	1	A
A13- 2	Folding Litter	–	–	2	A	2	A	2	A
A13- 3	I.V. Hanger Stand	20	B	20	B	20	B	20	B

ANNEX-3

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) Internal transportation from the port of disembarkation to the project site	●	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
5	To maintain and use properly and effectively the 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		●

MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY ON THE PROJECT FOR THE IMPROVEMENT OF REGIONAL HEALTH SERVICES AND DIAGNOSIS CENTERS IN MONGOLIA
(EXPLANATION ON DRAFT REPORT)

In July 1999, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on The Project for the Improvement of Regional Health Services and Diagnosis Centers (hereinafter referred to as "the Project") to Mongolia, and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Mongolia on the components of the draft report, JICA sent to Mongolia the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Dr. Takashi Wagatsuma, from October 26 to November 19, 1999.

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

Ulaanbaatar, November 1, 1999

Takashi Wagatsuma
Leader
Draft Report Explanation Team
Japan International Cooperation Agency

Sh. Enkhbat
Director
Department of Policy and Coordination
Ministry of Health and Social Welfare

D. Boldbaatar
Director
Department of Foreign Trade and Economic Cooperation
Ministry of External Relations

ATTACHMENT

1. Components of the Draft Report

   The Government of Mongolia agreed and accepted in principle the components of the draft report explained by the Team.

2. Items confirmed by the Government of Mongolia

   After discussions with the Team, the items described in Annex-1 were finally confirmed by the Mongolian side.

3. Japan's Grant Aid Scheme

   Mongolian side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Mongolia as confirmed by the Basic Design Study Team in the Minutes of Discussions signed by both parties on 3 September, 1999.

4. Schedule of the Study

   JICA will complete the final report in accordance with the confirmed item and send it to the Government of Mongolia around February, 2000.

5. Other Relevant Issues

   (1) A strong request from Mongolian side to include the following items which are not listed in the Annex-1, will be further discussed and assessed at JICA headquarter as to its appropriateness.

   - Electroencephalograph
   - Ultrasound color doppler system

   (2) Ministry of Health and Social Welfare ensures to allocate necessary budget for operating and maintaining (including the spare parts, the consumable supplies, etc.) the equipment provided to 7 medical facilities under the Grant Aid.

(3) The facilities where new equipment is to be installed should be renovated by Mongolian side for the smooth and effective implementation of the project.

(4) Mongolian side requested technical support in the following field;

－Management methods for smooth operation and maintenance of procured equipment as well as the spare parts and consumables.

Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital			
		Khovd	Dornod	Uvurkhangai	Dornogobi	Bayan-Ulgi	Bulgan	Gobi-Altai
		Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty
	Diagnostic rooms							
1- 1	Stethoscope	20	30	20	15	20	20	20
1- 2	Sphygmomanometer (desk type)	20	15	10	15	10	10	10
1- 3	Sphygmomanometer (pocket type)	20	15	10	9	10	10	10
1- 4	Obstetric stethoscope	2	10	2	5	2	2	2
1- 5	Distance test chart	1	0	1	0	1	1	1
1- 6	Percussion hammer (Tylor type)	10	3	3	2	3	3	3
1- 7	Diagnostic set	5	5	5	3	5	5	5
1- 9	Infant scale	3	3	1	2	1	1	1
1- 10	ECG	1	1	0	0	1	1	1
1- 11	Portable ECG	1	1	1	1	1	1	1
1- 13	Cysto-urethroscope, B set	1	1	1	—	—	—	—
1- 14	Gastrointestinal fiberscope	0	0	0	0	1	1	0
1- 17	Light source for endoscopes	0	1	0	0	1	1	1
1- 18	Ultrasound system	0	1	1	1	1	1	2
1- 21	Portable ultrasound system	1	1	1	0	1	1	1
1- 22	Laryngoscope set	1	1	1	1	1	1	1
1- 24	Bronchofiberscope	0	1	0	—	—	—	—
	Surgery department							
2- 1	Operating light	0	2	0	0	0	0	0
2- 2	Operating light	2	2	2	0	3	3	2
2- 3	Operating table	1	2	1	0	2	2	2
2- 4	Suction unit	0	2	2	0	3	3	2
2- 5	Operating microscope	0	1	1	—	—	—	—
2- 6	Coagulator	1	2	2	1	1	1	2
2- 7	Instrument Tray Stand	3	3	3	2	3	3	3
2- 8	Revolving chair	4	2	2	3	2	2	2
2- 9	Instrument cabinet	2	2	2	1	3	3	2
2- 10	Patient cart	2	2	2	1	2	2	2
2- 11	Pulmonary surgery instrument set	1	1	1	1	1	1	1
2- 12	Hepato-cholecystotomy instrument set	1	1	1	1	1	1	1
2- 13	Osteosurgery instrument set	1	1	1	1	—	—	—
2- 14	Nephrectomy instrument set	1	1	1	—	—	—	—
2- 16	Standard plastic surgery set	1	1	1	—	—	—	—
2- 17	Surgical instrument set for infant	1	1	0	—	—	—	—
2- 18	Neurosurgery instrument set	1	1	0	—	—	—	—
2- 19	Gastrectomy instrument set	1	1	1	1	1	1	1
2- 21	Operating instrument set	0	1	1	0	1	1	1
2- 22	Surgical suture needle set	2	2	2	1	2	2	2
2- 25	Blood vessel suture needle set	1	1	1	1	1	1	1
2- 26	Intestinal suture needle set	1	1	1	1	1	1	1
2- 27	Needle holder	5	5	5	3	5	5	5
2- 28	Operating knife set	1	1	1	1	1	1	1
2- 29	Prostatomy instrument set	1	1	1	—	—	—	—
2- 30	First aid surgery instrument set	—	—	1	—	1	1	1
2- 31	Small operating instrument set	2	2	1	2	1	1	1
	Emergency and reanimation department							
3- 1	Bedside monitor	1	3	1	2	3	2	1
3- 2	Defibrillator	1	1	1	1	1	1	1
3- 3	Ventilator	1	1	0	1	1	1	1
3- 4	Anesthesia apparatus with monitor	0	1	1	1	1	1	1
3- 5	Anesthesia ventilator	0	1	1	1	1	1	1
3- 6	Suction unit	2	2	1	0	1	1	1
3- 7	Endtracheal set	1	1	1	1	1	1	1
3- 8	Venotomy instrument set	1	1	1	1	1	1	1

Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital			
		Khovd	Dornod	Uvurkhangai	Dornogobi	Bayan-Ulgi	Bulgan	Gobi-Altai
		Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty
3- 10	Emergency aid box	2	2	1	2	1	1	1
	Obstetrics and Ginecolpgy dep							
4- 1	Vacuum extractor	2	2	2	2	2	2	2
4- 2	Gynecological examining unit	2	2	2	1	2	2	2
4- 4	Artificial abortion instrument set	2	2	2	2	2	2	2
4- 5	Gynecology stereoscope set	1	1	1	1	1	1	1
4- 6	Fetal actocardiograph	0	1	1	0	1	1	1
4- 8	Obstetrics operation instrument set	1	1	1	0	1	1	1
4- 9	Gynecology examination instrument set	5	5	3	0	3	3	3
4- 10	Cusco's vaginal speculum	10	10	10	10	10	10	10
4- 11	Delivery table	2	2	0	0	2	2	2
4- 12	Examining table	1	2	0	0	2	2	2
4- 14	Girl examining instrument set	–	–	2	–	2	2	2
4- 15	Gynecologic operation table	2	1	1	1	1	1	1
	Laboratory							
5- 2	Laboratory binocular microscope	3	3	2	3	2	2	6
5- 3	Thermostat	2	2	2	2	2	2	3
5- 5	Differential leucocyte counter	1	1	1	1	1	1	2
5- 6	Hemoglobinmeter	1	1	0	0	1	1	1
5- 7	pH meter	2	2	2	–	–	–	–
5- 10	Auto diluter	1	1	1	0	0	0	0
5- 11	Analytical balance	3	2	1	1	1	1	2
5- 12	Distilling apparatus	2	2	1	–	–	–	–
5- 15	Bacteriological analysis set	–	1	–	–	–	–	–
5- 16	Drying oven	1	1	0	1	1	2	2
5- 17	Clinical spectrophotometer	1	1	0	0	1	1	1
	Radiology department							
6- 2	Mobile X-ray unit	2	2	2	2	1	1	1
6- 3	Fluorography unit	0	0	0	0	1	1	1
6- 4	Dental X-ray unit	1	1	1	0	1	1	1
6- 5	Processing tank	0	1	0	–	–	–	–
6- 6	X-ray film dryer	1	1	0	–	–	–	–
6- 7	X-ray film cassette (4 units of each size)	4	4	0	–	–	–	–
6- 8	X-ray film illuminator	2	2	2	0	0	2	2
6- 9	Protective gloves	3	3	1	2	3	3	3
6- 10	Dosemeter and charger	1	1	1	–	–	–	–
6- 12	Darkroom lamp	1	1	1	0	1	1	1
6- 13	Protective glasses	3	3	1	2	3	3	3
	Dental department							
7- 1	Portable treatment unit	1	0	1	–	–	–	–
7- 2	Dental examination instrument set	0	3	1	0	1	1	1
7- 3	Dental treatment instrument set	1	3	2	1	2	2	2
	Pediatrics department							
8- 1	Infant incubator	1	2	2	2	1	2	0
8- 2	Infant ventilator	0	1	1	1	1	1	1
8- 3	Infant warmer	2	2	1	2	2	2	2
8- 4	Oxigen concentrator	0	1	1	0	1	1	1
8- 5	Infant sphygmomanometer	3	3	3	2	3	3	3
8- 6	Infant rectal thermometer	10	20	10	10	10	10	10
8- 7	Suction unit	1	1	0	1	1	1	1
8- 8	Oxymeter	1	1	1	1	1	1	1
	Ophthalmic department							
9- 1	Ophthalmic operation instrument set	0	1	1	0	1	1	1
9- 2	Cornea transplantation instrument set	1	1	0	–	–	–	–
9- 3	Trial lens set	2	0	2	1	1	1	1
9- 4	Synoptiscope	1	0	1	0	1	1	1
9- 5	Binocular ophthalmoscope	0	2	0	–	–	–	

Item No.	DESCRIPTION	Health Service and Diagnosis Center			General Hospital			
		Khovd	Dornod	Uvurkhangai	Dornogobi	Bayan-Ulgi	Bulgan	Gobi-Altai
		Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty	Q'ty
9- 7	Indirect ophthalmoscope with halogen lamp	1	1	1	1	1	1	1
9- 10	Universal ophthalmic measure	1	1	1	1	1	1	1
9- 11	Stereo fundus camera	1	1	1	1	1	1	1
13- 1	Split lamp Microscope set	1	1	1	–	1	1	1
	ENT department							
10- 1	Otosurgery instrument set	2	2	0	1	2	2	2
10- 2	Head mirror	0	0	3	0	2	2	2
10- 3	Sinus surgery instrument set	2	2	2	1	1	–	–
10- 4	Audiometer	1	1	1	1	1	1	1
10- 5	ENT surgery instrument set	–	1	1	1	1	1	1
10- 6	Chair-mounted unit	1	1	1	1	1	1	1
10- 7	Laryngoscope set	0	1	1	0	1	1	1
10- 8	Oto-nasal scope set	1	1	1	–	–	–	–
10- 10	Portable treatment unit	–	–	2	–	–	–	–
10- 11	Operating stool	1	1	2	–	–	–	–
	Physiotherapy department							
11- 1	Ultrasound therapy unit	3	3	1	2	–	–	–
11- 2	Microwave therapy unit	1	1	1	1	–	–	–
11- 3	Inductothermal treatment apparatus	1	1	1	–	–	–	–
11- 4	Electric traction	1	1	1	1	–	–	1
11- 5	Restrator	1	1	1	–	–	–	–
11- 6	Curved back board exerciser	1	1	1	–	–	–	–
	Others							
12- 1	Medical refrigerator	3	3	3	5	3	3	3
12- 2	High pressure steam sterilizer	0	1	1	0	1	1	1
12- 3	Autoclave	0	2	1	0	1	1	2
12- 4	Drying cabinet	2	2	2	0	2	2	2
12- 5	Instrument table	10	10	5	5	5	5	5
12- 6	Autopsy instrument set	1	1	1	1	–	–	–
12- 7	Morgue refrigerator	0	1	0	–	–	–	–
12- 8	Sliding microtome	1	1	1	1	–	–	–
12- 9	Ultraviolet air sterilizer	3	4	2	3	3	3	2
12- 12	Rerigerated centrifuge	1	1	1	1	1	1	1
12- 14	Instrument cabinet	10	10	10	2	10	10	10
12- 15	Bactericidal lamp	4	2	0	–	–	–	–
12- 16	Patient cart	4	4	2	2	2	2	2
12- 17	Freezer	1	0	0	–	–	–	–
12- 23	Examination light	2	2	2	0	2	2	2
12- 24	Ambulance (4 x 4)	2	2	2	1	1	1	1
12- 25	Height / weight scale (200cm , 150kg)	2	0	2	2	2	2	2
13- 2	Folding Litter	-	–	6	–	2	2	2

Appendix 5-1 Hovd Health Service and Diagnosis Center

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
3- 1	Bedside monitor	1	approx.400 persons	155,000
3- 2	Defibrillator	1	approx.400 persons	108,000
9- 11	Stereo fundus camera	1	2,500～3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
TOTAL				396,000

Appendix 5-2 Dornod Health Service and Diagnosis Center

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 11	Portable ECG	1	1,500 persons	152,000
1- 21	Portable ultrasaound system	1	3,000 times	104,000
3- 1	Bedside monitor	3	approx.400 persons	465,000
3- 2	Defibrillator	1	approx.400 persons	108,000
3- 3	Ventilator	1	approx.50 persons	363,000
4- 6	Fetal actocardiograph	1	approx.1,000 times	97,000
5- 6	Hemoglobinmeter	3	approx.5,000 check-up	186,000
5- 17	Clinical spectrophotometer	1	500〜1,000 chech-up	519,000
8- 2	Infant ventilator	1	50〜100 times	229,000
9- 11	Stereo fundus camera	1	2,500〜3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
TOTAL				2,356,000

Appendix 5-3 Ovorhangai Health Service and Diagnosis Center

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 18	Ultrasound system	1	4,000 times	194,000
1- 21	Portable ultrasound system	1	3,000 times	104,000
2- 2	Operating light	2	approx.1,200 times	18,000
3- 1	Bedside monitor	1	approx.400 persons	155,000
3- 2	Defibrillator	1	approx.400 persons	108,000
4- 6	Fetal actocardiograph	1	approx.1,000 times	97,000
6- 4	Dental X-ray unit	1	4,000 times	160,000
8- 2	Infant ventilator	1	50～100 times	229,000
9- 4	Synoptiscope	1	2,500～3,000 times	1,000
9- 11	Stereo fundus camera	1	2,500～3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
13- 1	Split lamp microscope set	1	2,500～3,000 times	6,000
TOTAL				1,205,000

Appendix 5-4 Dornogovi General Hospital

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 11	Portable ECG	1	1,500 persons	152,000
3- 1	Bedside monitor	2	approx.400 persons	310,000
3- 2	Defibrillator	1	approx.400 persons	108,000
3- 3	Ventilator	1	approx.50 persons	363,000
6- 2	Mobile X-ray unit	2	400 times	198,000
8- 2	Infant ventilator	1	50〜100 times	229,000
TOTAL				1,360,000

Appendix 5-5 Bayan-Olgii General Hospital

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 11	Portable ECG	1	1,500 persons	152,000
1- 18	Ultrasound system	1	4,000 times	194,000
1- 21	Portable ultrasound system	1	3,000 times	104,000
3- 1	Bedside monitor	3	approx.400 persons	465,000
3- 2	Defibrillator	1	approx.400 persons	108,000
3- 3	Ventilator	1	approx.50 persons	363,000
4- 6	Fetal actocardiograph	1	approx.1,000 times	97,000
5- 6	Hemoglobinmeter	3	approx.5,000 check-up	186,000
5- 17	Clinical spectrophotometer	1	500～1,000 chech-up	519,000
8- 2	Infant ventilator	1	50～100 times	229,000
9- 4	Synoptiscope	1	2,500～3,000 times	1,000
9- 11	Stereo fundus camera	1	2,500～3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
TOTAL				2,551,000

Appendix 5-6 Bulgan General Hospital

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 11	Portable ECG	1	1,500 persons	152,000
3- 1	Bedside monitor	2	approx.400 persons	310,000
3- 2	Defibrillator	1	approx.400 persons	108,000
3- 3	Ventilator	1	approx.50 persons	363,000
4- 6	Fetal actocardiograph	1	approx.1,000 times	97,000
5- 6	Hemoglobinmeter	1	approx.5,000 check-up	62,000
5- 17	Clinical spectrophotometer	1	500～1,000 chech-up	519,000
8- 2	Infant ventilator	1	50～100 times	229,000
9- 4	Synoptiscope	1	2,500～3,000 times	1,000
9- 11	Stereo fundus camera	1	2,500～3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
TOTAL				1,974,000

Appendix 5-7 Govi-Altai General Hospital

Maintenance Cost to be increased

(Unit:Japanese Yen)

Item No.	Description	Q'ty	Frequency in use	Spare parts & Consumable
1- 11	Portable ECG	1	1,500 persons	152,000
1- 21	Portable ultrasound system	1	3,000 times	104,000
3- 1	Bedside monitor	1	approx.400 persons	155,000
3- 2	Defibrillator	1	approx.400 persons	108,000
3- 3	Ventilator	1	approx.50 persons	363,000
4- 6	Fetal actocardiograph	1	approx.1,000 times	97,000
5- 6	Hemoglobinmeter	3	approx.5,000 check-up	186,000
8- 2	Infant ventilator	1	50〜100 times	229,000
9- 4	Synoptiscope	1	2,500〜3,000 times	1,000
9- 11	Stereo fundus camera	1	2,500〜3,000 times	78,000
10- 4	Audiometer	1	approx.1,200 times	55,000
13- 1	Split lamp microscope set	1	2,500〜3,000 times	6,000
TOTAL				1,534,000