

Chapter 2. Contents of the Project

Chapter 2. Contents of the Project

2-1. Basic Concept of the Project

(1) Higher Objectives and the Project Objectives

Statistics (1998) of the World Health Organization (WHO) shows that each year in the world 80% of the TB patient appear in the 22 countries (high burden countries) and that subsequently to India (1.828 million), China holds the second largest estimated number of patients (1.414 million) with 0.636 million infectious sputum smear positive cases per year. WHO had taken as many measures as possible to expand DOTS strategy especially throughout the 22 high burden countries and declared in 1993 that "TB a global emergency" to advance the worldwide control as "STOP TB Initiatives. Especially in the WHO Regional Office for the Western Pacific, TB control is regarded as the most important program.

On the other hand, the Government of China, recognizing the importance of the TB control from early stage, has tackled the 5 to 10 year medium and long-range plans, while hammering out since the end of 1970's the system, notifications and statute about prevention and control of TB. Especially TB control using DOTS (Directly Observed Treatment, Short course) strategy recommended by WHO has been implemented by the World Bank loan since 1991, achieving high cure rate. Besides the World Bank Project, the Government of China has advanced TB control programs by its own budget but more than 50% of the patients are yet to receive appropriate TB treatment due to economical reasons. As of 1999, according to The National Yearbook of Health, 2000, the number of death (mortality rate 7.88/100,000) by TB in a farming area stands the 1st place of the cause of death by the single illness.

Under such circumstances, in March 2000, "Ministerial Conference on Tuberculosis and Sustainable Development" by WHO sponsorship was held in Amsterdam, in which the representative of China committed the expansion of the coverage to 90% of population by 2005. In "Control and prevention of the serious illness", one of the 14 important items adopted by the new 10th 5-year plan for health project (2001~2005), the Government of China has designated TB as the most important disease of all and drafted "National TB prevention and control plan (2001 -2010)" to expand the coverage up to 90% throughout the country during the first 5 years.

To achieve these goals, the Government of China has fixed the coverage for the poor areas where the World Bank Project was not extended, 30% for the first year, 50% for the second, 70% for the third, 80% for the fourth and 90% for the fifth year. And, as a basic rule for the new Project mentioned above, those who can not afford to pay medical costs for treatment of infectious TB are to be exempted from the payment.

(2) Outline of the Project

The objectives of this Project are to improve the diagnosis of TB and increase the case detection rate in order

to decrease the number of death, illness and transmission in 9 provinces and 2 autonomous regions where appropriate TB control have not yet been provided for the people, and also to expand the population covered by DOTS strategy up to 35% for 2002 in the targeted areas in order to facilitate management of TB cases and treatment.

DOTS-based TB control program includes diagnosis, patient management, training, regular supply of drugs and education of the people. Among them, Japan's Grant Aid aims at procurement of microscope for diagnosis and training and anti-TB drug for 2002.

The both governments anticipate continuous technical assistance from WHO and adjustment with other donors to promote smooth and effective implementation of the Project. At the periodical meeting between the Ministry of Foreign Affairs and WHO Regional Office for the Western Pacific, cooperative implementation for this Project has been confirmed.

2-2. Basic Design of the Requested Japanese Assistance

2-2-1. Design Policy

The basic design of the requested Japan's Grant Aid Project shall be in accordance with TB control recommended by WHO, which has been materialized in the highly evaluated World Bank Project.

(1) Basic Policy

1. Project Sites

Since other donors also covers some of the proposed regions, the Japan's Grant Aid Project shall be implemented from 2002 for the following 9 provinces and 2 autonomous regions.

Since the World Bank and the Demien Foundation plans to supply Sichuan province and the Neimengku autonomous region with anti-TB drugs, the Japan's Grant Aid shall be extended to the area where no duplication is found in these donors.

Table. 2 - 1 Project Sites

Provinces	Population (2002)			Prefectures		Counties		
	Total	Population covered	Coverage	Total	Prefectures covered	Total	Counties covered	Coverage
Sichuan Sheng	7,306,210	2,857,600	39.1%	7	7	46	10	21.7%
Qinghai Sheng	5,211,466	3,635,480	69.8%	8	8	43	23	53.5%
Henan Sheng	97,168,040	50,221,183	51.7%	17	18	158	78	49.4%
Neimenggu Zizhiqu	24,001,510	10,388,096	43.3%	12	9	101	30	29.7%
Jiangxi Sheng	42,191,803	5,812,929	13.8%	11	3	99	11	11.1%
Shanxi Sheng (Shan)	36,402,343	7,375,901	20.3%	10	6	107	18	16.8%
Anhui Sheng	63,749,562	16,291,740	25.6%	16	14	105	24	22.9%
Guizhou Sheng	36,250,371	14,058,210	38.8%	9	9	86	31	36.0%

Yunnan Sheng	40,652,132	12,627,130	31.1%	16	13	129	30	23.3%
Shanxi Sheng (Jin)	33,958,839	12,276,134	36.2%	11	11	119	40	33.6%
Guangxi Zhuangzu Zizhiqu	47,908,527	16,709,654	34.9%	14	11	110	20	18.2%
Total	434,800,803	152,254,058	35.0%	131	109	1,103	315	28.6%

2. Equipment

The Japan's Grant Aid Project aims at procurement of the following equipment necessary for the first year of the Project, "the national TB disease prevention and the control plan (2001 -2010)" which are the new national TB program.

Table. 2-2 Requested Equipment

	Contents of requested equipment
Anti-TB drugs	H (Isoniazid), R (Rifampicin), Z(Pyrazinamide), E (Ethambutol), S (Streptomycin)
	Distilled Water (Sterilized), Syringes and Needles
Microscope	Multi-head Binocular Microscope for Training
	Binocular Microscope for Sputum Smear Examination
Others	Pamphlet for Patient Education, Inscription board for Grant Aid

(2) Basis of Selection for Anti-TB Drugs

Chemotherapy of TB has been established since Streptomycin first manufactured by Waxman was introduced in 1944. To prevent the development of drug resistance, it is necessary to give medication to patients continuously for 6 to 8 months (2 to 3 months for the initial phase and 4 to 6 months for continuation phase) in combination with different kinds of drugs. For that reason, WHO-recommended DOTS strategy prescribes medical staff a "direct observation" of the patients swallowing pills continuously for the necessary period of chemotherapy, which achieved a remarkable success in the World Bank Project conducted since 1991.

At present there are more than 10 kinds of anti-TB drugs. To take advantage of the knowledge and experience of TB control cultivated in the World Bank Project, this Project shall adopt the same anti-TB drugs as prescribed for the World Bank Project and follow the WHO's guideline of anti-TB drugs and its combination, length of treatment and management of patient and the doses. However some of the drugs shall be changed since the minimum unit of TB drugs prescribed by the Pharmaceutical Affairs Law of China was renewed.

Table. 2-3 Anti-TB drugs

Drugs	This Project	WB Project
H (Isoniazid)	600mg	600mg
R (Rifampicin)	600mg	600mg
Z (Pyrazinamide)	2,000mg	2,000mg
E (Ethambutol)	1,250mg	1,200mg
S (Streptomycin)	750mg	750mg

Injection syringe, needle and distilled water for Streptomycin, for which the patients must pay in the ongoing project, shall also be procured for Streptomycin can only be administered by intra-muscular injection. This is necessary because this Project aims at the TB treatment fees free of charge.

(3) Basis of Selection for Microscope

1. Binocular microscope for sputum examination

The easiest and most effective diagnostic method for TB is sputum smear examination using microscope. In this method, a sample of sputum collected from a suspected TB case is examined, after being dyed, by the microscope to see if there is acid fast bacilli. The microscopes procured in the initial phase of the World Bank Project are not strong enough to stand long use and often gets out of order after 5 years of purchase or so. Therefore, in this Project the microscope with comparatively durable specifications shall be selected.

【Specifications】: Microscopes are used for sputum examination in the prefecture and county level, in accordance with the specifications recommended by the WHO, oil-immersion objective lens (x100) applicable, with high convenience of operation.

2. Multi-head binocular microscope for training (for 5 persons)

It is used for training in the province level, where some 30 students are expected in a session. The students include not only laboratory technicians but also the doctors concerned in implementation of the Project.

【Specifications】: Microscope for training for 5 persons designed for observation of the slide by the instructor and students at the same time.

(4) Pamphlet for patient education

Chemotherapy for TB requires proper case management condition for the period of 6 to 8 months. Irregular treatment or interruption can mean not only failure in treatment but development of drug resistance. Therefore, pamphlets for patient education shall be distributed to patients for the purpose of advertising necessity of continuous treatment.

This pamphlet stored in a county 's TB-related facility shall be handed over to the patient along with the anti-TB drugs once the patient is diagnosed as TB and DOTS-based treatment starts in the county level. Thus, the pamphlet will serve to have this Project assisted by Japan widely known to the people of China.

(5) Policy of Procurement and Schedule

Since all the goods can not be produced by January 2002, the starting month of the Project, transportation and allocation of the goods shall be divided into 2 phases.

2-2-2. Basic Plan

(1) Overall Plan

The Japan's Grant Aid Project aims at procurement of microscopes and anti-TB drugs, etc. necessary for the first year of the Project. Supplied equipment and drugs shall be in accordance with the specifications adopted by the ongoing DOTS Project. See Appendices 7 for calculation of anti-TB drugs.

(2) Estimated Number of Patient

As Table 2-4 shows, the size of population covered by the Project that starts from 2002 is estimated 150 million and the number of case 45 thousand, which are obtained by applying the following conditions.

【Conditions to estimate the number of case】

1. Number of sputum smear positive cases : 27.2 per 100,000
2. Ratio of new sputum smear positive to re-treatment positive cases : 4.5 : 5.5
3. Number of new sputum smear negative cases (severely ill) : 20% of the new sputum smear positive cases

Table. 2-4 Estimated Cases by Province

Province	Total Population	Population Covered	Coverage	New Case Positive	Re-treatment Case Positive	New Severe Case Negative (Severely ill)	Expected Case
Sichuan Sheng	7,306,210	2,857,600	39.1%	355	432	74	861
Qinghai Sheng	5,211,466	3,635,480	69.8%	458	555	100	1,113
Henan Sheng	97,168,040	50,221,183	51.7%	6,190	7,549	1,270	15,009
Neimenggu Zizhiqu	24,001,510	10,388,096	43.3%	1,285	1,572	270	3,127
Jiangxi Sheng	42,191,803	5,812,929	13.8%	717	874	149	1,740
Shanxi Sheng (Shan)	36,402,343	7,375,901	20.3%	912	1,113	191	2,216
Anhui Sheng	63,749,562	16,291,740	25.6%	2,007	2,450	411	4,868
Guizhou Sheng	36,250,371	14,058,210	38.8%	1,737	2,119	358	4,214
Yunnan Sheng	40,652,132	12,627,130	31.1%	1,561	1,904	322	3,787
Shanxi Sheng (Jin)	33,958,839	12,276,134	36.2%	1,518	1,858	320	3,696
Guangxi Zhuangzu Zizhiqu	47,908,527	16,709,654	34.9%	2,055	2,510	419	4,984
Total	434,800,803	152,254,058	35.0%	18,795	22,936	3,884	45,615

(3) Anti-TB Drugs

A dose of anti-TB drugs, the same as adopted by the WB Project, shall be packed in a blister pack and monthly dose shall be packed in a box except streptomycin. This method, established as a method of distribution of anti-TB drugs, has the advantage of the error prevention of dose, quality maintenance of drugs, and drug management. Table 2-5 shows dose of anti-TB drugs.

Table. 2-5 Dose of Anti-TB Drugs

Type of Case		New Sputum Smear Positive		Re-treatment Sputum Smear Positive		New Sputum Smear Negative (Severely ill)	
		Initial Phase	Continuation Phase	Initial Phase	Continuation Phase	Initial Phase	Continuation Phase
Combination Symbol		B1	B2	B3	B4	B1	B2
Period (month)		2 ~ 3	4	2 ~ 3	6	2 ~ 3	4
Type of Drug	Dose	1 Blister Pack	1 Blister Pack	1 Blister Pack	1 Blister Pack	1 Blister Pack	1 Blister Pack
H (Isoniazid)	600mg (300mg x 2)						
R (Rifampicin)	600mg (300mg x 2)						
Z (Pyrazinamide)	2,000mg (500mg x 4)						
E (Ethambutol)	1,250mg (250mg x 5)						
S (Streptomycin)	750mg (1 vial)						

Table 2-6 shows a regimen of anti-TB drugs.

Table. 2-6 Regimen of Anti-TB Drugs

Type of Case	Initial Phase	Continuation Phase
New Sputum Smear Positive	2 H ₃ R ₃ Z ₃ E ₃ (B 1)	4 H ₃ R ₃ (B 2)
Re-treatment Sputum Smear Positive	2 H ₃ R ₃ Z ₃ E ₃ S ₃ (B 3)	6 H ₃ R ₃ E ₃ (B 4)
New Sputum Smear Negative	2 H ₃ R ₃ Z ₃ E ₃ (B 1)	4 H ₃ R ₃ (B 2)

An example of regimen is as follows.

Initial Phase 2 H₃R₃Z₃E₃(B 1) 4 H₃R₃(B 2)

Anti-TB drugs H, R, Z, and E given 3 times a week (every other day) for the first 2 months period of initial phase

Then Anti-TB drugs H and R given 3 times a week (every other day) for the next 4 months period of continuation phase

Based on the dose and regimen mentioned above, the quantity of anti-TB drugs are calculated by applying the following conditions.

【 Conditions to estimate the quantity of anti-TB drugs 】

1. New Sputum Smear Positive Case : 20% of the cases are still examined positive after 2 months
2. Re-treatment Sputum Smear Positive Case : 30% of the cases are still examined positive after 2 months
3. New Sputum Smear Negative Case (severely ill) : Same dose and regimen as of New Sputum Smear Positive Case
4. Number of syringe, needle and distilled water are same as the vial of streptomycin

Table 2-7 shows the quantity of anti-TB drugs and other products.

Table. 2-7 Quantity of Anti-TB Drugs and Other Products

Province	New Sputum Smear Positive		Re-treatment Sputum Smear Positive					New Sputum Smear Negative (Severely ill)	
	Initial Phase	Continuation Phase	Initial Phase	Continuation Phase	Strepto mycin	Distilled Water	Syringe	Initial Phase	Continuation Phase
Combination Symbol	B1	B2	B3	B4				B1	B2
Unit	Blister Pack	Blister Pack	Blister Pack	Blister Pack	Vial	Ampoule	Piece	Blister Pack	Blister Pack
Sichuan Sheng	11,760	21,300	15,180	38,880	15,350	15,350	15,600	2,490	4,440
Qinghai Sheng	15,240	27,480	19,560	49,950	19,850	19,850	20,700	3,465	6,000
Henan Sheng	204,750	371,400	264,645	679,410	265,850	265,850	267,500	42,360	76,200
Neimenggu Zizhiqu	42,600	77,100	55,170	141,480	55,650	55,650	56,400	9,060	16,200
Jiangxi Sheng	23,745	43,020	30,660	78,660	30,800	30,800	31,300	4,980	8,940
Shanxi Sheng (Shan)	30,225	54,720	39,045	100,170	39,350	39,350	39,900	6,420	11,460
Anhui Sheng	66,375	120,420	85,860	220,500	86,350	86,350	87,000	13,695	24,660
Guizhou Sheng	57,480	104,220	74,265	190,710	74,800	74,800	75,600	12,015	21,480
Yunnan Sheng	51,660	93,660	66,855	171,360	67,300	67,300	68,200	10,740	19,320
Shanxi Sheng (Jin)	50,340	91,080	65,250	167,220	65,950	65,950	66,800	10,845	19,200
Guangxi Zhuangzu Zizhiqu	67,935	123,300	87,960	225,900	88,400	88,400	88,800	13,920	25,140
Total	622,110	1,127,700	804,450	2,064,240	809,650	809,650	817,800	129,990	233,040

The required quantity of drugs supplied from each province to its counties is calculated based on the minimum unit of the package. See Appendices 6, Equipment List by Province.

(4) Injection Syringe and Needle

The Government of China had originally requested auto-disable syringe (designed to disable itself after single use). However, the ordinary disposable syringe shall be supplied since 1 syringe is used 2 times for 1 injection, 1 for dissolving powdered streptomycin and 1 for injecting the solution. The capacity of syringe shall be 5ml as is the dose of streptomycin.

(5) Microscope

1. Purpose

- Province Level : Group training for medical staff in the TB-related medical facilities at peripheral level
- Prefecture Level : Cross-reading of sputum slides collected from medical facilities at peripheral level, training and examination
- County Level : Sputum smear examination

2. Distribution

- Province Level : 1 Multi-head binocular microscope per province
- Prefecture Level : 2 Binocular microscopes per prefecture for sputum examination

County Level : 1 Binocular microscope per county for sputum examination. 1 additional microscope for a county with over 500,000 population

On the other hand, since there are existing microscopes which can be used, the quantity shall be adjusted on the basis of the existing equipment list prepared by Chinese side. Yet, since the Chinese microscopes are vulnerable to fungus and less durable, they shall not be considered as the object of quantity adjustment.

Table 2-8 shows distribution of microscopes. Outlined numbers in the table 2-8 indicate adjusted quantity. See Appendices 6 for Distribution Plan by county.

Table. 2-8 Distribution Plan of Microscope

Province	Prefecture	County	County with 500,000 population	Microscope		
				Multi-head	Examination	
				Province	Prefecture	County
Sichuan Sheng	7	10	1	1	14	11
Qinghai Sheng	8	23	0	1	16	19
Henan Sheng	18	78	47	1	36	124
Neimenggu Zizhiqu	9	30	5	1	18	35
Jiangxi Sheng	3	11	3	1	6	12
Shanxi Sheng (Shan)	6	18	5	1	12	21
Anhui Sheng	14	24	16	1	28	40
Guizhou Sheng	9	31	8	1	18	38
Yunnan Sheng	13	30	6	1	26	32
Shanxi Sheng (Jin)	11	40	4	1	22	41
Guangxi Zhuangzu Zizhiqu	11	20	15	1	22	35
Total	109	315	110	11	218	408

(6) Pamphlet for Patient Education, Others

50,000 copies of pamphlet shall be handed over to each patient. And 435 pieces of inscription board of Japan's Grant Aid shall be delivered to each Project site.

For the purpose of having the Japan's Grant Aid Project widely known to the people of China, the words/phrases indicating the Japan's Grant Aid shall be printed on the following products.

- Blister pack of anti-TB drugs and small and large box for the blister pack
- Wrapping of syringe and needle
- Pamphlet for patient education

(7) Equipment Plan

Table 2-9 shows the equipment and products supplied by the Japan's Grant Aid Project.

Table. 2-9 Equipment List

Products	Contents / Main Specifications	Quantity	Country of Origin
Multi-head binocular microscope	Multi-head binocular microscope for training of 5 persons Magnification : x40 ~ 1,000, Oil immersion object lens x100 (Plan), Illumination 100W with Koehler illuminator	11	Japan
Microscope for sputum smear examination	Binocular microscope for prefecture and county level Magnification : x40 ~ 1,000, Oil immersion object lens x100, Illumination 20 ~ 30W, with mirror unit, fungus proof	626	Japan
Anti-TB drugs (Blister pack)	Treatment for the initial phase of new and Re-treatment Sputum Smear Positive cases • Combination B1 : (H, R, Z, E) • Contents : For 1 month (15 Blister packs/box)	50,140	China
	Treatment for the continuation phase of new sputum smear positive and negative cases • Combination B2 : (H, R) • Contents : For 1 month (15 Blister packs/box)	90,716	China
	Treatment for the initial phase of Re-treatment Sputum Smear Positive cases • Combination B3 : (H, R, Z, E) • Contents : For 1 month (15 Blister packs/box)	53,630	China
	Treatment for the continuation phase of Re-treatment Sputum Smear Positive cases • Combination B4 : (H, R) • Contents : For 1 month (15 Blister packs/box)	137,616	China
Anti-TB drugs (Streptomycin)	Treatment for the initial phase of Re-treatment Sputum Smear Positive cases 750mg powder of Streptomycin dissolved into 5ml, Contents : 50 pieces/box	16,193	China
Injection syringe and needle	Injection of streptomycin 5ml, disposable, Contents : 100 pieces/box	8,170	China
Distilled water (sterilized)	For dissolution of streptomycin powder • Contents : 50 pieces/box	16,193	China
Pamphlet	A4, printed on both sides, color, Includes 25 items of illustration	50,000	China
Inscription board	Sheet copper with information of Japan's Grant Aid inscribed Approx. 65x45cm	435	China

2-2-3. Implementation Plan

2-2-3-1. Implementation Policy

The Japan's Grant Aid Project is implemented after the Exchange of Notes (E/N) is signed by the both governments, within the framework of Japan's Grant Aid. Then a Japanese consulting firm starts to work out a detailed design. After preparation of a Tender Document by the consultant, a Japanese company, responsible for procurement of goods and services, is selected through tendering.

(1) Implementing Organization of Recipient Country

Implementing Organizations of Chinese side are as follows.

Responsible Organization : Ministry of Foreign Trade & Economic Cooperation
Implementing Organizations : Ministry of Health at the central level responsible for implementation while Anti-TB institutes at each Provincial Health Bureau responsible for reception of supplied goods and services

(2) Consultant

After the Exchange of Notes (E/N) is signed by the both governments, in accordance with the framework of Japan's Grant Aid, a consultant service contract is concluded between the Ministry of Health and the Japanese consultant. The contract becomes effective after verification by the Government of Japan. The consultant, based on the contract, starts to carry out the following services.

1. Tender Preparation Stage : Preparation of tender documents, final confirmation on specifications and other technical data
2. Tendering Stage : Selection of supplier and assistance in a supply contract
3. Procurement Stage : Supervision over procurement, distribution, installation and Training

(3) Supplier

A supplier is selected through tendering and concludes a supply contract with the Chinese side, which becomes effective after verification of the Government of Japan. Based on the contract the supplier procures the goods and services. The supplier is also responsible for assembling and instructing the operation of microscopes. The supplier shall establish a means of onerous supply of spare parts and technical cooperation even after the handing over of the goods and services.

(4) JICA

Grant Aide Management Department of JICA guides and gives instruction to the consultant and supplier so that the Japan's Grant Aid Project may be carried out appropriately according to the system of Japan's Grant Aid. And as necessity arises, JICA holds discussions with the Chinese side to expedite the implementation of the Japan's Grant Aid Project.

2-2-3-2. Implementation Conditions

The goods and services of the Japan's Grant Aid Project are used from January 2002. Procurement of the goods shall be divided into 2 phases because the pharmaceutical affairs law in China prescribes 2 years period of validity for anti-TB drugs. Since there are 435 sites covered by the Project, the supplier shall keep close cooperation with the Chinese side for smooth enforcement of delivery and handing over.

2-2-3-3 Scope of Work

Table 2-10 shows scope of work by the both Japanese and Chinese sides.

Table. 2-10 Scope of Work

Work	Japanese side	Chinese side
Procurement	All goods	
Transportation	To each Anti-TB institute of Provincial Health Bureau located in each provincial capital	To each Project site
Installation	Assembly and instruction for operation of multi-head microscope, instruction on the installation method of examination microscope at the capital city of the each province and autonomous region	Assembly and installation of examination microscope

2-2-3-4 Consultant Supervision

On-the-spot supervision is conducted over procurement and installation of goods and services in the following stages of the Japan's Grant Aid.

(1) Transportation stage

The consultant conducts on-the-spot supervision at the point where the microscopes shipped from Japan and anti-TB drugs manufactured in China are gathered in Beijing to be sorted out according to its destination.

(2) Installation and handing over stage

The consultant conducts on-the-spot supervision during the receiving, installation and training of the supplied goods and services at every site of 9 provinces and 2 autonomous regions then gets receipt from the Chinese side to complete the services.

2-2-3-5 Quality Control Plan

(1) Anti-TB Drugs

All the anti-TB drugs and distilled water supplied shall be manufactured under the Pharmaceutical Affairs Law of China and obtain GMP (Good Manufacturing Practice)-certification from Certification Committee for Drugs and have 2-year period of validity after production. The injection syringe and needle shall be

GB15810-certified product, China's standard of quality control.

(2) Microscope

The supplied microscopes shall be the fungus proof type since the temperature and humidity are high in some Project areas. Spare parts and consumables for the microscope shall be available in China. The manufactures shall be ISO9002 and ISO14001 quality assured firm.

2-2-3-6 Procurement Plan

(1) Procurement of Goods and Services

Table 2-11 shows country of origin for the supplied goods.

Table. 2-11 Country of Origin

	Country			Remark
	China	Japan	Other	
Multi-head Microscope				
Examination Microscope				
Anti-TB Drugs (Blister pack)				Shall be procured in China for the price is lower, they must conform to the China's standard and attach instructions in Chinese.
Anti-TB Drugs (Streptomycin)				Same as above
Injection Syringe				Same as above
Solution				Same as above
Pamphlet				Shall be procured in China for the price is lower and they must be written in Chinese.
Inscription Board				Shall be procured in China for the price is lower and they must be written in Chinese.

(2) Selection of Supplier and Supply Contract

A supplier shall be selected through tendering opened to Japanese nationals or Japanese firms incorporated and registered under the law of Japan. Model of the equipment shall be stated on the contract on the basis of lump sum price. The tender price shall include production, procurement, transportation, assembling, installation and operational instruction of goods.

(3) Transportation

Microscopes shall be shipped from Japan to Tianjin Port and then transported to Beijing by train or vehicle. Anti-TB drugs shall be consigned by the manufacture to a designated warehouse in Beijing and then sorted out with microscopes to be finally transported to each warehouse of Provincial Health Bureau or Anti-TB institutes located at the capital of each province.

Since the Project in which the goods and services of the Japan's Grant Aid Project are used starts from January 2002, transportation and allocation of the goods shall be divided into 2 phases.

Table. 2-12 Procurement Plan

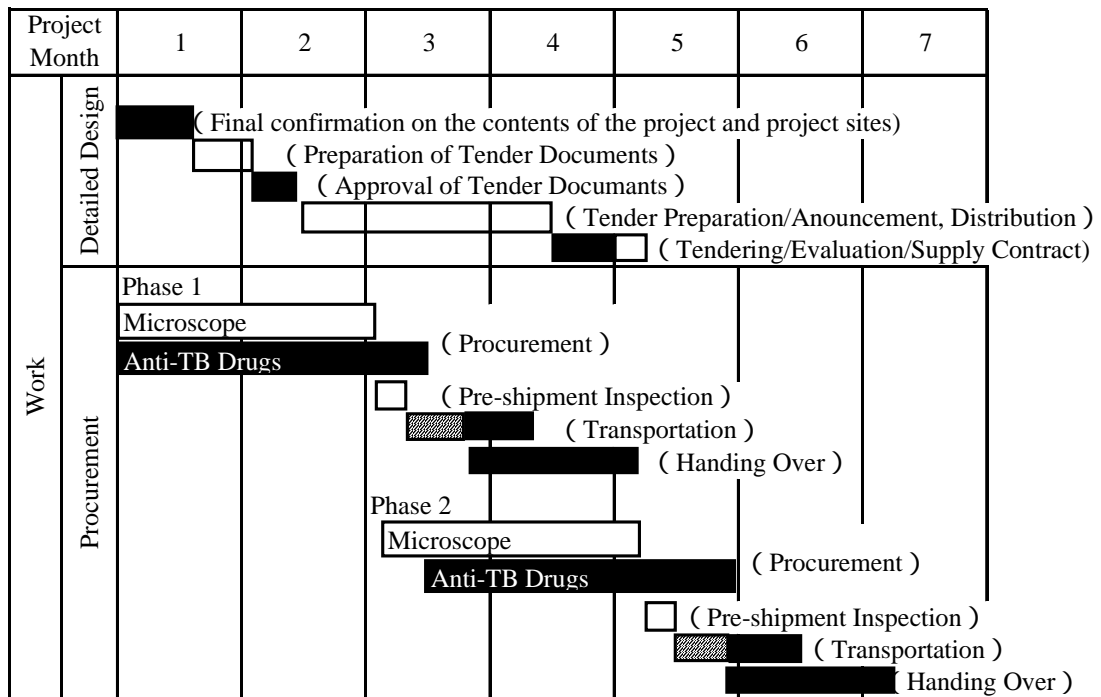
	Phase 1		Phase 2		Total	
	Quantity	Place	Quantity	Place	Quantity	
Anti-TB Drugs including syringe/needle and distilled water	For 4 months	Anti-TB institute of each Provincial Health Bureaus	For 8 months	Anti-TB institute of each Provincial Health Bureaus	For 12 months	
Multi-head Microscope	11					11
Examination Microscope	238		388			626
Pamphlet	50,000					50,000
Inscription Board	435					435

See Appendices 6 for detailed distribution plan by province.

2-2-3-7 Implementation Schedule

As shown in Table 2-13, the Japan's Grant Aid Project requires 11 months for implementation including detailed design.

Table. 2-13 Work Schedule



- In China
- Marine Transportation
- In Japan

2-3. Obligations of Recipient Country

Should the Japan's Grant Aid be extended, Chinese side shall have the following obligations.

1. To provide necessary reference material and information required for the implementation of the Japan's Grant Aid Project
2. To arrange the "Banking arrangement (B/A)" with an authorized foreign exchange bank in Japan and to pay commission related to the "Authorization to Pay (A/P)"
3. To ensure prompt discharge, custom clearance and exemption of tariff on the goods procured under the Grant Aid
4. To pay the Value Added Tax (VAT) on the goods and services procured in China
5. To transport the goods from each province to its peripheral medical facilities
6. To bear all the costs of the DOTS-based TB control other than those covered by the Japan's Grant Aid.
7. To exempt Japanese nationals and third countries staffs from customs duties, internal taxes and other fiscal levies which may be imposed in China with respect to the supply of the goods and services under the verified contract
8. To accord Japanese national and third countries staffs whose services may be required in connection with the supply of the goods and services under the verified contracts such facilities as may be necessary for their entry into China and stay therein for the performance of their work
9. To issue all the required permits and licenses necessary for implementation of the Japan's Grant Aid Project in conformance to the law of China
10. To allocate the appropriate budgets and provide appropriate man power to ensure the current and effective use of the goods procured to carry out the Japan's Grant Aid Project and ensure that they are well maintained
11. To prepare the facilities necessary for installation and maintenance of the procured goods

2-4. Project Operation Plan

2-4-1 Operation Plan for DOTS-Based TB Control

As shown in the Table 2-14, DOTS-Based TB Control requires the following work after implementation of the Japan's Grant Aid Project.

Table. 2-14 Contents of Work for DOTS-Based TB Control

	Purpose	Activities	Chinese side
1	Improve the diagnosis technique	Training	
		Monitoring	
2	Expand and improve the network of sputum examination	Training	
		Installation of equipment (other than those supplied from Japan)	
3	Improve the activities of quality control at laboratory network	Training	
		Monitoring	
		Installation of equipment (other than those supplied from Japan)	
4	Refine the patient management system	Training	
		Patient management fee	
		Health education	
5	Improve the stable supply system of drugs	Procurement of drugs	
		Distribution plan of drugs	
		Distribution of drugs (to each province capital)	
		Distribution of drugs (to each country)	
		Storage	
		Inventory management	
		Monitoring (opening phase)	
		Monitoring (implementing phase)	
6	Assure the quality of recording and reporting system	Training	
		Monitoring	
7	Maintain and improve the quality of the activities of TB control	Periodical conference	
8	Refine the knowledge of the activities of TB control	Seminar	
9	Promote the TB control Project	Operational research	
10	Obtain the epidemiological information of TB	Surveillance research	
11	Educate the patients	Education of patients	
12	Expand DOTS-covered areas gradually and assure the quality	Training	
		Monitoring	
		Drafting the expansion plan for the next year	

The Ministry of Health has already experienced these activities during the World Bank Project since 1991 and MOH Project so it is possible to employ these experiences such as patient identification, diagnosis, recording, reporting, patient management method in implementation of the Project. They can also use the existing facilities

and man power. As 56% of the counties targeted for Japan’s Grant Aid Project (175 out of 315) have been covered by the MOH Project, they are better prepared for execution of the Project. For the other counties that have not been covered by the MOH Project, there will arise no technical and personnel problems for doctors or laboratory technicians of Health Bureau or Anti-TB Institute will be in charge of implementation of the Project. However, as the number of staff increases and the cover area expand, it becomes necessary to standardize the level of diagnosis and management technique. That is the reason why the training and monitoring for the staff involved in the Japan’s Grant Aid Project are so important.

2-4-2. Operation and Maintenance Plan

Each one of the laboratory technicians who uses the microscope is responsible for daily maintenance of the microscope, the only equipment supplied for the Japan’s Grant Aid Project that requires constant maintenance. But in case of a serious trouble that requires an overhaul, they shall be sent and repaired at the distributor of the manufacture in China.

On the other hand, no serious problem will arise in storage of anti-TB drugs since the same drugs have been used for both the World Bank Project and MOH Project.

2-4-3. Operation and Maintenance Costs

(1) Operation cost

The budget necessary for implementation of the Project is allocated from the Ministry of Health and local governments. No subsidy from the central government is planned for this Project. 40 million yuan budget was planned by the MOH based on the new 10-year plan “National TB prevention and control plan (2001 -2010)” and approved by the National People's Congress in March. Table 2-15 shows the breakdown of the budget. “Drug” listed in the Table is intended for procurement of drugs for the areas not covered by the Japan’s Grant Aid Project.

Table. 2-15 MOH budget for TB control program (fiscal 2001)

	Yuan	JPY	%
Drugs	26,800,000	355,904,000	67.0%
Training	2,680,000	35,590,400	6.7%
Health education	3,840,000	50,995,200	9.6%
Supervision on implementation	3,640,000	48,339,200	9.1%
Management	3,040,000	40,371,200	7.6%
Total	40,000,000	531,200,000	100%

1 Yuan = JPY13.28

The provinces and autonomous regions targeted for the Project have expressed their intention to undertake this Japan’s Grant Aid Project and allocate their budget at the conference held in Chongqing in December

2000 in which the Ministry of Health and Provincial Health Bureau met together. Each local government (province, prefecture and county) shall approve the budget for the Project by June 2001. At the same time, the MOH shall sign on a written consent with the provincial government including agreement on burden of costs, allocation of budget, provision of facilities, man power and training, etc. and request them to submit an action plan. The prefecture and county governments shall also submit the written consent and action plan to the provincial government.

Calculated on the MOH's plan, the costs of the Project shared by the local governments are shown in Table 2-16 and Table 2-17.

**Table. 2-16 Burden of Cost Shared by the Local Government
of 9 Provinces and 2 Autonomous Regions**

	Yuan	JPY
Treatment	8,537,640	113,380,000
DOTS Supervision	6,725,475	89,314,000
Health Education	3,760,000	49,933,000
Training	6,136,400	81,491,000
Facility	12,883,738	171,096,000
Total	38,043,253	505,214,000

1 Yuan = JPY13.28

Table. 2-17 Breakdown of Costs by Province (Yuan)

Province	Population Covered	Diagnosis and Treatment	DOTS Supervision	Health Education	Training	Facility	Total
Sichuan Sheng	2,857,600	160,188	158,175	205,000	248,400	520,009	1,291,772
Qinghai Sheng	3,635,480	203,892	283,045	285,000	441,600	909,996	2,123,533
Henan Sheng	50,221,183	2,816,076	2,008,945	710,000	1,380,000	3,024,986	9,940,007
Neimenggu Zizhiqu	10,388,096	582,540	525,950	335,000	552,000	1,168,220	3,163,710
Jiangxi Sheng	5,812,929	325,902	247,840	150,000	202,400	773,630	1,699,772
Shanxi Sheng (Shan)	7,375,901	413,628	345,395	230,000	340,400	668,568	1,997,991
Anhui Sheng	16,291,740	913,530	640,410	380,000	542,800	1,021,500	3,498,240
Guizhou Sheng	14,058,210	788,322	634,515	340,000	570,400	1,210,000	3,543,237
Yunnan Sheng	12,627,130	708,126	604,750	395,000	680,800	1,106,540	3,495,216
Shanxi Sheng (Jin)	12,276,134	688,440	656,600	415,000	736,000	1,670,003	4,166,043
Guangxi Zhuangzu Zizhiqu	16,709,654	936,996	619,850	315,000	441,600	810,286	3,123,732
Total	152,254,058	8,537,640	6,725,475	3,760,000	6,136,400	12,883,738	38,043,253

*Note: Diagnosis and Treatment includes reporting and registering fees and management cost. Facility includes radiology equipment and computers.

Table 2-18 shows the proportion of the costs of TB control in the total health budget for the 2 provinces where the Japan's Grant Aid Project is extended.

Table. 2-18 Proportion of TB Control Costs

	Ebian County, Sicuan Province (Population:150,291)		Mojiang County, Yunnan Province (Population:387,025)	
Health Budget	Yuan 3,590,000 (1998)	JPY47,675,200	Yuan 7,920,000 (1997)	JPY105,177,600
TB control cost, total	83,643	1,110,800	103,513	1,374,700
Treatment	8,520	113,100	21,576	286,500
DOTS supervision	4,875	64,800	11,383	151,200
Health education	5,000	66,400	5,000	66,400
Training	27,600	366,500	27,906	370,600
Facility	37,648	500,000	37,648	500,000
Proportion of TB control cost	2.3%		1.3%	

1 Yuan = JPY13.28

It can be said that the costs of TB control, as estimated at 1.3 to 2.3% of the total health budget, is bearable to each local government. Still, a leadership of the central government shall be needed in securing the costs.

(2) Maintenance Costs

It can be said that the costs of spare parts of microscope, estimated at TPY1,400/set, approx. JPY900,000/637 sets (approx. Yuan68,000) including halogen lump are bearable to each local government. The costs are included in the operation costs already mentioned.