2-5 Project Cost Estimation

2-5-1 Project Cost

The total amount of the project cost needed for implementing the Grant Aid Project is approximately 920 million Japanese Yen. According to the conditions of the cost estimate shown below in section (3), the previously mentioned details of expenses based on the respective shares borne by Japan and Mongolia are calculated as shown below. However, this cost estimate is provisional and would be further examined by the Government of Japan for approval of the Grant.

(1) Cost estimation borne by the Japanese side

Toyal JPY 917mil.

Table 2-16 Cost Estimation Borne by the Japanese Side

Darkhan-Uul 3 sites 38 classrooms (Total floor area: approx. 5,668 m²)

	• -
tem	Cost (million JPY)
Building	522
Furniture	11
ipment	6
n, Supervision	31

Sub Total JPY 570 mil.

Orkhon 3sites 19classrooms (Total floor area: approx. 3

	Item				
Facilities	Building		321		
	Furniture		. 5		
	quipment		3		
Detail De:	sign, Supervision		18		

Sub Total JPY 347 mil.

(2) Cost estimation borne by the Mongolian side

Table 2-17 Cost Estimation Borne by the Mongolian Side

Items	Cost (1,000 Tg)
Removal of Existing Obstacles	885
Extension of Infrastructure to the Construction Site	14,050
Construction of Gate and Fence	13,915
Charges Related to B/A etc.	3,728
Total	32,128
(Total in Japanese Yen)	(approx. JPY 3 mil,)

(3) Condition of Cost Estimate

- 1) Period of cost estimate: February, 2005
- 2) Currency Exchange Rate: 1.00 US\$ = 107.03 Japanese Yen = 1,207Tg
- 3) Period of Execution: from March, 2006 to March, 2007
- 4) Others: This Project shall be carried out under the system of the Grant Aid of the Japanese Government.

2-5-2 Operation and Maintenance Cost

2-5-2-1 Operation Cost

The estimated increase of management expenses (electricity, water, sewage, heating, and personnel) brought on by the implementation of the Project should be borne by the provincial government of Darkhan-Uul and Orkhon

(1) Electricity

The meter rate system is (56 Tg/kw) in Mongolia, and electric fees at each school are calculated based on the estimate of electricity used. Since the duration of sunshine is long, little light is needed during the summer time (even in the second shift classes). It is assumed that electricity is used for lighting for 6 months (120 days) in winter each year and that it is used in total for 9 months each year excluding summer vacation.

(2) Water

Each Project school may use either city water or water gotten from water supply wagons or wells. Based upon the standards of the two Provinces, it is estimated that the quantity of water used per day is 0.02 m^3 per person. Suppose that the facility is used for 180 days (20 days x 9 months) during one year. For a school that has no access to city water, it will use water supplied by water supply wagons or by wells. The Mongolian side has not yet determined which water source will be used at each school. Hence, as a matter of convenience, it is assumed that a school will utilize water supplied by water supply wagons. Unit costs for water are as follows:

a. City water

 500 Tg/m^3

b. Water supplied by wagons

 $2,000 \, \mathrm{Tg/m^3}$

(3) Sewage Disposal Expense

The sewage treatment method used at each target school of the Project is either discharged into the public sewerage system or picked up by vacuum wagons. Based upon the standards of the two Provinces, the amount of sewage discharge per day is 0.02 m³ per person. The expense of sewage disposal is estimated based upon the following rates, assuming that the facility is used for 180 days during a year.

a. Discharge into the public sewerage system

160 Tg/m³

b. Dipping up by vacuum wagons

 $2,000 Tg/m^3$

(4) Heating Expense

The power source of heating has two types; a central type from the City Heating Bureau or a regional heating system and a coal boiler installed at each school. In the central system, the rate is 250 Tg per month per 1m³ of a building floor. On the other hand, for the coal boiler owned by the school, the expense of heating is estimated by multiplying the cost of coals (18,000 Tg/ton) by the average amount of monthly coal consumption. The period during which time a heating system is used is assumed to be 7 months from October to April.

(5) Labor Cost

51 teachers are estimated to be added after the completion of the Project. The cost is calculated based on the average teacher's salary, 900,000 Tg per person per year. The salary of the boiler engineers who will be employed by Darkhan No.11 school is 560,000 Tg per person per year. (80,000 Tg per person per month x 7 months)

2-5-2-2 Maintenance Cost

For the maintenance of the facilities and equipment provided in the Project, the estimated increase of maintenance expenses should be borne by the provincial government of Darkhan-Uul and Orkhon.

(1) Maintenance of facilities

The following items as maintenance expenses for facilities should be secured.

① Maintenance for deterioration

Stains on walls (Cleaning of outside bricks, repainting of inside walls)

- Faded colors and/or cracks on inside walls and ceilings (Repainting of inside walls and ceilings)
- Wear and tear or exfoliation on the finishing material on the vinyl sheet floor (Recovering of the floor material)
- Fading color of a blackboard (Repainting)
- Damages on the lighting system caused by getting old (To change bulbs)
- Leakage of water due to old waterproof material (To replace the waterproof material)

2 Maintenance for broken portions of a building

- Door
- Window glass
- Toilet booth
- Bulletin board
- Damages on the plug
- Water faucet
- Stool for students

In Mongolia the maintenance expenses to repair deteriorated parts of a building under ① are funded in the budget as expenditures for small repairs, whereas the maintenance expenses for broken portions on a building under ② is funded as expenditures for large repairs. Besides the above, there may be troubles with equipment such as damages to a building caused by freezinGerectric systems, water supply and drainage, or the heating and ventilating system. In this Project, however, very careful consideration is paid at the time of designing so that trouble does not happen. Hence, it is considered that no large scale repair work will be required for the time being. Based upon the unit prices established by each Province for large scale and small-scale repair work, the annual repair expense is estimated.

(2) Maintenance Expenses for Supplies

As stated earlier, "the School Management Committee" is responsible for maintenance, the Province does not fund the maintenance expenses for supplies.

2-5-2-3 Total Operation and Maintenance Cost

The increase in annual maintenance and maintenance expenses for both Provinces is shown in Table 2-18. The rate of an increase in expenses in the education budgets, which is brought by this Project, is estimated as an amount equivalent to about 2.63 % in Darkhan-Uul Province and 1.71 % in Orkhon Province. The education budget of Mongolia approximately doubled during the period of 5 years from 1997 to 2001 at a growth rate of 6-20% each year. The amount of expenditures incurred by the implementation of this Project is small in comparison to the growth rate of the entire education expenses. It is, therefore, inferred that the increase is an amount that can be sufficiently funded by both Provinces.

Table 2-18 Increase in Annual Maintenance and Management Costs Incurred

By This Project (1,000Tg)

	Darkha Prov		Orkhon l	Province
Category	Annual Cost Increase (1,000 Tg)	Budgetary ratio over 2001	Annual Cost Increase (1,000 Tg)	Budgetary ratio over 2001
Facility maintenance expenses	3, 382	0. 12%	1,886	0.08%
Power rates	6, 048	0, 22%	4, 480	0.19%
Water rates	6, 920	0.25%	1, 282	0.05%
Sewage disposal expenses	6, 136	0. 22%	410	0, 02%
Heating expenses	22, 622	0.82%	14, 148	0.61%
Labor cost	29, 020	1.03%	18, 000	0.76%
Total	74, 128	2. 63%	40, 206	1.71%

Chapter 3 Project Evaluation and Recommendations



Chapter 3 Project Evaluation and Recommendations

3-1 Effects of the Project

(1) Direct Effect

By implementing the Project, at the Project schools, the classroom shift will become two or less with the number of students per classroom less than 36 (total 72) which is the standard of Mongolia. As a result of it, the educational environment will improve by alleviating the congested situation. At six Project schools, the number of the students per classroom will decrease from 133 in 2004 to 65 in 2007 which is the target year of the Project. In those schools, if the Project will not be implemented, the number of the students per classroom would increase to 202 in 2007.

Table 3-1 Comparison of the Number of Students per Classroom

			2004				2007	
School		Enrollment	No. of existing clrms	No. of students per clrm	Projevted Enrollment	No. of clrms After Project	No. of students per clrm (w/o Project)	No. of students per clrm (after Project)
Uni	No.4	885	0		1,436	21	_	68
Darkhan-Uul	No.11	412	4	103	678	13	170	52
Darl	Od·No.3	120	0	_	439	8	_	55
п	No.2	720	9	80	899	13	100	69
Orkhon	No.6	634	6	106	739	12	123	62
	No.7	812	8	102	1,259	17	157	74
Total/ 3,583 Average		27	133	5,450	84	202	65	

^{*} No. 11 in Darkhan has small classrooms with capacity of 20 students, but included in the calculation

(2) Indirect Effects

5 Project schools, except Orkhon No. 6 school at the city center, are located in Ger areas. Because Ger areas grow rapidly to accommodate inflow from rural areas to urban areas, infrastructure development, including public facilities, has been quite insufficient. Thus, without available facilities for community activities for residents, community meetings have to be held outside. It is expected that the Project schools

will be used not only for school-related activities by the parents and PTA (Parents and Teachers Association) members, but also as public facilities by area residents. It is also expected that the Project facilities will be utilized for other non-formal education programs in the area.

3-2 Recommendations

(1) Correspondence to Further Increase of the Enrollment

In both Darkhan Uul and Orkhon Provinces, lowering the age for the primary education to 7 has been already done. However, another possibility exists where the starting school age of 6 could begin in both Provinces earlier than in other Provinces of the country. If this is the case, the situation of classroom shortages may get worse. Therefore, it is suggested that MOSTEC and the administrations in both Darkhan Uul and Orkhon Provinces take the appropriate budget actions to construct the necessary number of classrooms, before shortages get too serious.

One major reason for the overcrowding of schools in city areas is, as mentioned above, the insufficient capacity of schools outside the urban areas to keep a high enrollment, so many students go to the urban area schools. Many students, however, especially those of the junior secondary level (grade 5-8), tend to prefer to go to so-called "popular schools" which are regarded as the more advantageous and "best schools" for advancing to a higher education. The selecting of those schools instead of schools in their own residential area greatly contributes to the overcrowding of the city area schools. Such a tendency may make the alleviation of classroom congestion impossible to achieve.

Appendices

- 1. List of Team Member
- 2. Study Schedule
- 3. List of Concerned Parties in the Recipient Country
- 4. Minutes of Discussions
- 5. Cost Estimate for the works borne by Mongolian Side
- 6. Reference

1. Member List of the Study Team

Implementation Review Study Team (30 Jan. 2005~8 Feb. 2005)

1. Leader	Yoshio KANZAKI	Resident Representative , JICA Mongolia Office
2. Chief Consultant / Architectural Design	Hisafumi MICHIKAWA	Mohri Architect & Associates INC.
Quantity Survey / Procurement Planning	Masao FUJIMOTO	Mohri Architect & Associates INC.
4. Interpreter	Akira KAMIMURA	Mohri Architect & Associates INC.

2. Study Schedule

			•	Activities					
_	Date		JICA	Consultant					
1	1/30	Sun		Tokyo⊸	Ulaanbaatar				
2	1/31	Mon	Court	esty Call to EOJ, JICA, N	MOSTEC				
3	2/1	Tue		Discussion of the Draft Minutes w/ MOSTEC	Survey on Cost Estimate				
4	2/2	Wed		Move to Darkhan, Courtesy Call to Provincial (Site Survey (D-11)					
5	2/3	Thu		Site Survey(D~4, D~od), Infrastructure Survey, Move to Orkhon					
6	2/4	Fri		Courtesy Call to Provincial Office, Site Survey (O-2, 6, & 7), Infrastructure Survey Visit the sites of the 1st stage					
7	2/5	Sat		Move to	Ulaanbaatar				
8	2/6	Sun		Survey on	Cost Estimate				
9	2/7	Man	Signing the Minutes, Report to JICA & EOJ Survey on Cost Estimate						
y	2/7	Mon		Ulanbaatar→Seoul					
10	2/8	Tue		Seou	l→Tokyo				

3. List of Parties Concerned in the Recipient Country

Ministry of Science, Technology, Education & Culture

Mr. Luvsandashiin DASHDORJ

Advisor to the Minister

Mr. Gombodorj BATTUR

Director of CCU, Construction Client Unit

Ms. Nyamjav OTGONJARGAL

Officer in Charge of International Projects

Ministry of Finance

Mr. O. ERDEMBILEG

Director General, Department of Economic

Cooperation, Policy and Coordination

Government Implementing Agency for Construction, Urban Development and Public Utilities

Mr. B. LKHAGVASUREN

Deputy Director

Darkhan-Uul Aimag

Mr. D. KHAYANKHYARVAA

Governor

Mr. D. BATSUKH

Vice Governor

Mr. D. AMGALAN

Director, Education and Culture Department

Mr. M. ERDENEBILEG

Deputy Director, Education and Culture

Department

Ms. Zadi TSENGELSAIKHAN

Head of Administration

Mr. J. NURZED

Inspector / Engineer

Orkhon Aimag

Mr. Gaadan SHARKHUU

Governor

Ms. Ts. ARIUNAA

Director, Education and Culture Department

Mr. D. BAT ERDENE

Inspector

Ms. G. ODGEREL

Engineer

Embassy of Japan

Mr. Takenori SHIMIZU

Councilor

Mr. Hiroshi SATO

First Secretary

Mr. Toshiya YAMAGUCHI

Second Secretary

JICA Mongolia Office

Mr. Yoshio KANZAKI

Resident Representative

Akira Shimizu

Senior Assistant Resident Representative

Ms. Ts. ENKHTULKHUUR

Program Officer of Training Program

4. Minutes of Discussions

MINUTES OF DISCUSSIONS ON THE IMPLEMENTATION REVIEW STUDY ON THE PROJECT FOR IMPROVEMENT OF PRIMARY EDUCATION FACILITIES (PHASE II) IN MONGOLIA

In August 2003, based on the results of the Basic Design Study, the notes on the grant aid for the Project for Improvement of Primary Education Facilities (Phase II) (hereinafter referred to as "the Project") were exchanged between the Government of Mongolia and the Government of Japan. However, because tendering for the Project was not successfully conducted, the Project could not enter into the construction stage.

In response to a request from the Government of Mongolia for the realization of the Project, the Government of Japan decided to conduct a Implementation Review Study on the Project for the cabinet approval and entrusted the study to the Japan International Cooperation Agency (hereinafter

referred to as "JICA").

JICA sent to Mongolia the Implementation Review Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Yoshio KANZAKI, Mongolia Office, JICA, and is scheduled to stay in the country from January 30, 2005 to February 7, 2005.

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 Implementation Review Study Report.

/ Ulaanbaatar, February 7, 2005

Mr. Yoshio KANZAKI

Leader

Implementation Review Study Team Japan International Cooperation Agency

Mr. G. SHARKHUU

Governor

Provincial Government of Orkhon

Mongolia

Mr. Luvsandashiin DASHDORI

Adviser to the Minister

Ministry of Science, Technology,

Education and Culture

Mongolia

Mr. D. KHAYANKHYARVA

Governor

Provincial Government of Darkhan Uul

Mongolia

Mr. O'ERDEMBILEG

Director General

Department of Economic Cooperation,

Policy and Coordination

Ministry of Finance

Mongolia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the educational environment by constructing / expanding school buildings.

2. Project Sites

The Project sites are the Province of Darkhan Uul and the Province of Orkhon.

3. Responsible and Implementing Organization

- 3-1. The responsible organization is the Ministry of Science, Technology, Education and Culture (hereinafter referred to as "MOSTEC).
- 3-2. The implementing organizations are MOSTEC, the Province of Darkhan Uul and the Province of Orkhon.
- 3-3. The organization charts of MOSTEC, the Province of Darkhan Uul and the Province of Orkhon are attached as Annex 1.

4. Items requested by the Government of Mongolia

After discussions with the Team, the items described in Annex 2 were finally requested by the Mongolian 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 Mongolian side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex 3.
- 5-2. The Mongolian side will take the necessary measures, as described in Annex 4, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6. Schedule of the Study

JICA will prepare the final report and send it to the Government of Mongolia by June, 2005.

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7. Other Relevant Issues

7-1. Principle of the Study

- (1) The schools, the components and the number of facilities and equipment covered by the Project will not be changed from the Basic Design Report unless their needs have become less compared to the assumption in the Basic Design Report.
- (2) The drawings and the specifications of facilities and equipment covered by the Project will not be changed from the prepared ones for the previous tendering unless necessity arises
- 7-2. Site Preparation Works to be Conducted by the Mongolian Side The Japanese side requested to the Mongolian side to complete the following site preparation works before commencement of the building construction work.
 - To remove playground equipment at Darkhan No.4 school site
 - To remove a basketball court at Darkhan No.11 school site
 - To relocate an electric pole and a power line at Darkhan Od 3 school site
- 7-3. Responsibility of the Results of the Study

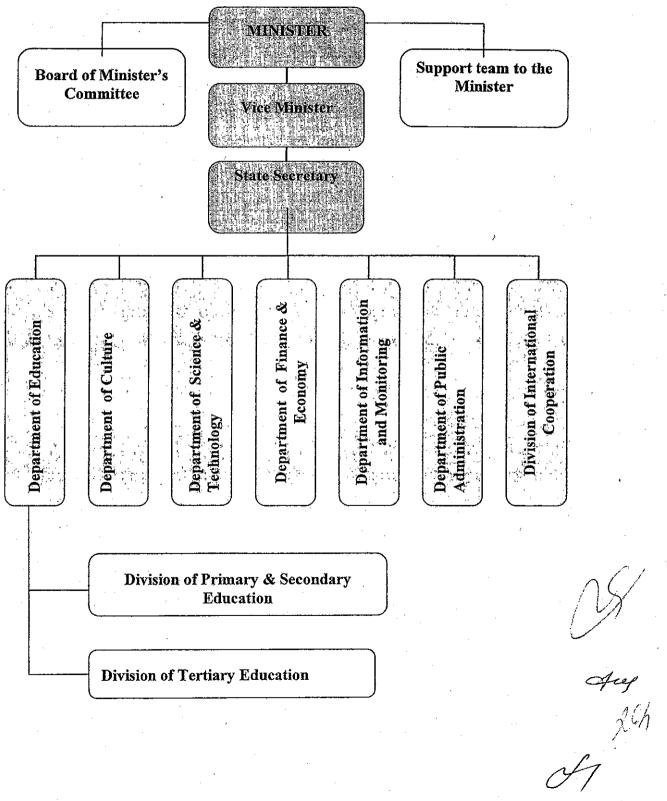
The Mongolian side shall be responsible for the results of the execution of the Project on the basis of all documents and drawings prepared as a result of the Study.

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ANNEX 1

Organizational Chart 2005 February

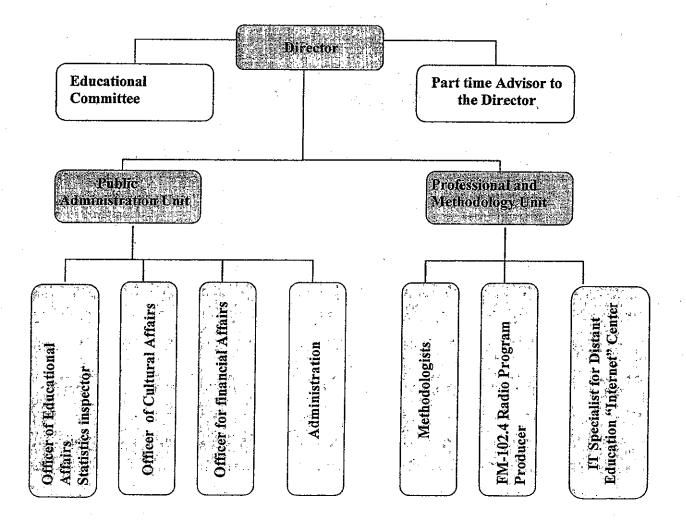
MINISTRY OF EDUCATION, CULTURE AND SCIENCE OF **MONGOLIA**



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Organizational Chart 2005 February,6

ORKHON AIMAG EDUCATION AND CULTURE DEPARTMENT

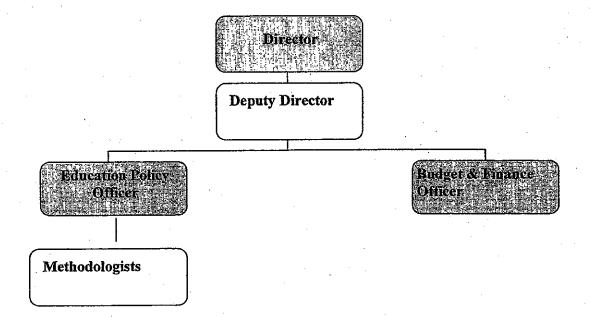


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Organizational Chart 2005 February 6, 2005

DARKHAN-UUL AIMAG EDUCATION AND CULTURE DEPARTMENT



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Annex 2: Major items requested by the Government of Mongolia

No.	School name	Story	No, of Classrooms	Teachers' room Toilet Cloak	Water tank	Sewage tank	Boiler system	Furniture and Educational equipment
D-4	Darkhan No.4	3	21	0	0	0		0
D-11	Darkhan No. 11	3	9	0			0	0
D- od3	Darkhan Od 3	3	8	0				0
0-2	Orkhon No. 2	2	4	0				0
0-6	Orkhon No. 6	2	6	0				0
0-7	0-7 Orkhon No. 7		9	0				0
	Total		57					

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Annex 3: The Japan's Grant Aid Scheme

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

(1) Grant Aid Procedure

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 (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 to conduct a study on the request. If necessary, JICA send a Preliminary Study Mission to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

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

a) confirmation of the background, objectives and benefits of the 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 the technical, social and economic points 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; and

e) estimation of costs of the Project.

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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 the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates in the Study and prepares for a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Study to the recipient country in order to maintain the technical consistency.

(3) Japan's Grant Aid Scheme

1) 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.

2) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors 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.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

the prime contractors, namely consulting, constructing However, 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.)

4) Necessity of "Verification"

The Government of the 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.

Undertakings required to the Government of the recipient country

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 for distribution of electricity, water supply and drainage

and other incidental facilities in and around the sites;

c) to ensure all expenses and prompt execution for unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;

d) 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 contracts;

e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work;

6) "Proper Use"

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

7) "Re-export"

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

8) Banking Arrangement (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 (A/P) issued

Government of recipient country or its designated authority.

9) Authorization to Pay (A/P)

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

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Annex 4: Major Undertakings to be taken by Each Government

	Annex 4: Major Undertakings to be taken by Each Government		
		To be	To be
No.	Items	covered	covered
		Japan	by Mongolia
	To secure land	Japan	Mongona
1		 	•
2	To clear, level, reclaim the site, demolish existing buildings and remove trees when needed	}	
3	To construct gates and fences in and around the site	 	
4	To construct roads	 	
	1) Within the site	•	
	2) Outside the site	 	•
5	To construct building	<u> </u>	
6	To provide facilities for the distribution of electricity, water supply, , heating, drainage and		
	other incidental facilities		
	PM LEGRAN 2 1 LE SE		
	a. The distributing line to the watt hour meter provided by Mongolia		•
	b. The wiring between buildings by the Grant and the watt hour meter	•	
	c. The main circuit breaker	•	
	The second secon		
	a. The connection of city water or well water to cistern tank provided by		•
	the Grant	 	
	b. The cistern tank and water supply system	•	
	a. The public or private heating inlet and outlet pipes to the buildings		•
	b. The heating system inside buildings	•	
	His Drainage Haring Committee and Committee		
	a. The city drainage main (for storm sewer and others to the site)	<u> </u>	•
.	b. The drainage system (for toilet sewer, ordinary waste, storm drainage		
	and others) within the site	3277 0000-0000	
ļ	Telephone systems (1994) Telephone systems (1994)		
	 The telephone trunk line to the main distribution frame/panel (MDF) of 	1	_
]	the building		· · · · · ·
	b. The MDF and the extension after the frame/panel	•	
	6) Furnitire and Equipment (2) 11 (1)		
	a. General furniture	<u> </u>	•
[b. Project equipment and basic educational furniture	•	
7	To bear the following commissions to the Japanese bank for banking services based upon the		
	B/A		
	1) Advising commission of A/P		•
ſ	2) Payment commission		•
8	To ensure unloading and customs clearance at port of disembarkation in Mongolia		
- 1	Marine (Air) transportation of the products from Japan to Mongolia	•	
Ī	2) Tax exemption and customs clearance of the products at the port of disembarkation		•
.]	Internal transportation from the port of disembarkation to the Project site	•	- -
9	To accord Japanese nationals, whose service may be required in connection with the supply of		
· .	the products and the services under the verified contract, such facilities as may be necessary		_
- 1	for their entry into the Mongolia and stay therein for the performance of their work	}	•
10			
- 1	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which		, !
- 1	may be imposed in Mongolia with respect to the supply of the products and services under the		•
	verified contracts.		
11	To maintain and use properly and effectively the facilities contracted and equipment provided		
	under the Grant		-
12	To bear all the expenses, other than those to be borne by Grant, necessary for construction of		
\bot	the facilities as well as for the transportation of the equipment.	1	•
	Banking Arrangement, A/P : Authorization to Pay	<u></u>	

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5. Cost Estimation Borne by the Recipient Country

14	Unit Cost	Cost	Darkhan-Uul				Orkon	rkon -		1,000 Tg
Item	(Tg)	Unit	D-4	D-11	D-od	O-2	O-6	0-7	Total	X Unit Cost
Removal of Obstacles	10,800	m3	43	-	. 27	- .	12		82	885
Water Connection	40,000	m	-	10	10	10	10	10	50	2,000
Sewage Connection	40,000	m	_	10	10	10	10	10	50	2,000
Heating Connection	100,000	m	50	_	10	10	10	10	90	9,000
Electricity Connection	3,500	m	140	50	80	10	10	10	300	1,050
Fence	17,259	m	-	_	280	280	_	240	800	13,807
Gate	108,000	Nos.	-		1	-	-	-	1	108
BA,AP	0.035	%							_	3,728
Total		****								32,578

6. References

No.	Title	Туре	Original/ Copy	Issued by			
Gener	General (Development Plan, Social Economic Background, etc.)						
1	Mongolian Statistical Yearbook 2003	Book	Original	National Statistical Office of Mongolia			
2	Mongolian Action Programme For The 21st Century MAP-21	Book	Original	Project Implementation Unit MAP-21			
3	Action Program of the Government of Mongolia	Book	Сору	Government of Mongolia			
Education							
4	Mongolia Education Sector Strategy 2000- 2005	Book	Original	Ministry of Science, Technology, Education and Culture			
5	Education Sector Development Program	Booklet	Original	Asian Development Bank			
Building Construction							
6	Fire Safety of a Building and Facility	Booklet	Original	Ministry of Infrastructure			
7	Fire Safety Standards for Construction Design and Planning	Booklet	Original	Ministry of Infrastructure			

