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Appendix 1 Member List of the Study Team

Field Study

Position	Name	Organization
Leader	Noriaki NAGATOMO	Senior Advisor to the Director General, Global Environment Department, Japan International Cooperation Agency
Technical Advisor	Sadanobu SAWARA	Visiting Senior Advisor (Water Supply Development) , Japan International Cooperation Agency
Study Planning	Aya OKADA	Program Officer, Disaster Management Division II, Global Environment Department, Japan International Cooperation Agency
Chief Consultant /Water Supply Planning Specialist	Hideki ASADA	Nihon Suido Consultants Co., Ltd.
Waterworks Management Specialist	Shunichi HATANO	Japan Techno Co., Ltd.
Hydrometeorologist /Environmental and social Specialist	Chifumi YAMASHITA	Japan Techno Co., Ltd.
Water Supply Facilities Specialist	Toru HAMANO	Nihon Suido Consultants Co., Ltd.
Construction and Procurement Planner/Cost Estimate Specialist	Yasuo MOTO	Nihon Suido Consultants Co., Ltd.

Draft Report Explanation Mission

Position	Name	Organization
Leader	Tsutomu Shimizu	Senior Representative, Japan International Cooperation Agency Pakistan Office
	Junya Hiroshima	Representative, Japan International Cooperation Agency Pakistan Office
Chief Consultant /Water Supply Planning Specialist	Hideki ASADA	Nihon Suido Consultants Co., Ltd.
Water Supply Facilities Specialist	Toru HAMANO	Nihon Suido Consultants Co., Ltd.

Field Study

			Official Study Team			Consultants Study Team				
			Leader	Technical Adviser	Study Planning	Chief Consultant /Water Supply Planning Specialist	Hydrometeorologist /Environmental and social Specialist	Waterworks Management Specialist	Water Supply Facilities Specialist	Construction and Procurement Planner/Cost Estimate Specialist
			Mr. N. Nagatomo	Mr. S. Sawara	Ms. A. Okada	Mr. H. Asada	Mr. C. Yamashita	Mr. T. Hatano	Mr. T. Hamano	Mr.Y. Moto
1	09/4/ 15	Wed				Travel to Islamabad				
2	09/4/ 16	Thu				Courtesy call to EOJ and JICA, Move to Abbottabad				
3	09/4/ 17	Fri				Courtesy call to District Government in Abbottabad				
4	09/4/ 18	Sat				Team Meeting and Arrangement of Subcontract				
5	09/4/ 19	Sun				Team Meeting,Preparation of Field Survey				
6	09/4/ 20	Mon	Travel to Islamabad			Move to Islamabad	Preparation of Field Survey			
7	09/4/ 21	Tue	AM Meeting with JICA Office, PM Move to Abbottabad			Team Meeting				
8	09/4/ 22	Wed	AM Courtesy call and meeting with District Nazim ,DCO and Commissioner ,PM Site survey(New Tube Well, Route of Treated Water Transmission Pipeline etc)			Field Survey				
9	09/4/ 23	Thu	AM Meeting of Minutes PM Site survey(Intake Point,WTP etc)			Field Survey				
10	09/4/ 24	Fri	AM Site Survey (New Reservoirs), Meeting with Abbottabadon,PM Move to Islamabad			Field Survey				
11	09/4/ 25	Sat	Report Writing / Internal Meeting			Field Survey				
12	09/4/ 26	Sun	Report Writing / Internal Meeting			Team Meeting				
13	09/4/ 27	Mon	AM Countersigning of M/D by EAD, Report to JICA Office,PM Report of Embassy of Japan			Move to Islamabad	Preparation of Office Space			
14	09/4/ 28	Tue	Arrival at Japan			Field Survey, Data collection and Processing				
15	09/4/ 29	Wed				Field Survey, Data collection and Processing				
16	09/4/ 30	Thu				Field Survey, Data collection and Processing				
17	09/5/ 1	Fri				Field Survey, Data collection and Processing				
18	09/5/ 2	Sat				Field Survey, Data collection and Processing				
19	09/5/ 3	Sun				Field Survey, Data collection and Processing				
20	09/5/ 4	Mon				Field Survey, Data collection and Processing				
21	09/5/ 5	Tue				Field Survey, Data collection and Processing				
22	09/5/ 6	Wed				Field Survey, Data collection and Processing				
23	09/5/ 7	Thu				Field Survey, Data collection and Processing				
24	09/5/ 8	Fri				Field Survey, Data collection and Processing				
25	09/5/ 9	Sat				Field Survey, Data collection and Processing				
26	09/5/ 10	Sun				Data Processing				
27	09/5/ 11	Mon				Field Survey, Data collection and Processing				
28	09/5/ 12	Tue				Team Meeting,Field Survey,Data collection and Processing				
29	09/5/ 13	Wed				Field Survey and Data Processing		Return to Japan		
30	09/5/ 14	Thu				Field Survey and Data Processing		Arrival at Japan		
31	09/5/ 15	Fri				Field Survey and Data Processing				
32	09/5/ 16	Sat				Field Survey and Data Processing				
33	09/5/ 17	Sun				Field Survey and Data Processing				
34	09/5/ 18	Mon				Field Survey and Data Processing				
35	09/5/ 19	Tue				Travel to Islamabad, Report to JICA Office				
36	09/5/ 20	Wed				Return to Japan				
37	09/5/ 21	Thu				Arrival at Japan				

Draft Report Explanation Mission

			Official Study Team		Consultants Study Team		
			Leader		Chief Consultant /Water Supply Planning Specialist	Water Supply Facilities Specialist	
			Mr. Shimizu	Mr. Hiroshima	Mr. H. Asada	Mr. T. Hamano	
1	09/9/ 9	Wed			Leave for Pakistan (Narita-Bangkok)11:00-15:30, TG 641 (Bangkok-Islamabad)19:00-23:10, TG 349 Arrival in Pakistan		
2	09/9/ 10	Thu			9:30 Meeting at JICA 2100 Pick up Hamano at Airport	Leave for Pakistan (Goa-Mumbai)08:10-09:10, 9W 480 (Mumbai-Kalach)14:10-16:30, PK 275 (Kalach-Islamabad)19:00-20:55, PK 370 Arrival in Pakistan	
3	09/9/ 11	Fri		0630 Move to ABB 0900 Discussion with relevant organizations (NWFP, DCO&TMO of District Government Abbottabad on DF/R and M/D			
4	09/9/ 12	Sat			Data Compilation		
5	09/9/ 13	Sun			Data Compilation		
6	09/9/ 14	Mon		Discussion on M/D with relevant organizations (NWFP, DCO&TMO of District Government Abbottabad) * Final draft of M/D would be shared with NWFP and EAD within same day.			
7	09/9/ 15	Tue			Data Compilation		
8	09/9/ 16	Wed	AM Signing on M/D with relevant organizations @ Islamabad				Data Compilation
9	09/9/ 17	Thu			Data Compilation		
10	09/9/ 18	Fri			Data Compilation		
11	09/9/ 19	Sat			Leave for Japan (Islamabad-Bangkok)00:20-06:25, TG350 (Bangkok-Narita)07:35-15:45, TG 676 Arrival in Japan	Leave for India (Islamabad-Lahore)11:00-11:55,PK 651 (Lahore-Delhi)15:30-16:10,PK 270	
12	09/9/ 20	Sun				(Delhi-Goa)10:35-13:05, IT 652 Arrival in India	

Appendix 3 List of Parties Concerned in the Recipient Country

Ministry of Finance, Economic Affairs and Statistics

Mr. Ghulam Muhammad Mehar

Mr. Zafar Hasan Reza

Deputy Secretary (ADB/Japan),
Economic Affairs Division
Joint Secretary (ADB/JAPAN),
Economic Affairs Division

Commissioner in charge of Five (5) Districts of North West Frontier Province

Mr. Waqar Ayub

Government of North West Frontier Province

Mr. Allahuddin Khan Gandapur

Chief Engineer-WS&S/PHE,
Works and Services Department

Mr. Mohammad Ikram Khan

Secretary,
Planning and Development Department

District Government Abbottabad

Mr. Sardar Haider Zaman

District Nazim

Mr. M. Junaid Tanoli

Deputy District Nazim

Mr. Syed Zaheer-ul-Islam

District Coordination Officer

Mr. Mr. Inayatullah Wasim

Executive District Officer (EDO)
Finance and Planning Department

Mr. Mr. Muhamad Shafique

District Officer (DO)
Finance and Planning Department

Mr. Zia-ud-Din

Executive District Officer (EDO)
Works and Services Department

Mr. Abdul Latif

Deputy District Officer (DDO)
Water Supply and Sanitation (WS&S)
Works and Services Department

Mr. Shahid Mehmood

Assistant District Officer-I (ADO-I)
Water Supply and Sanitation (WS&S)
Works and Services Department

Mr. Zahid Hussain Shah

Sub-Engineer
Water Supply and Sanitation (WS&S)
Works and Services Department

Tehsil (Town) Municipal Administration Abbottabad, TMA Abbottabad

Mr. Arbab Jamil	Tehsil Municipal Officer, TMO
Mr. Anwar Zaib	Town Officer, TO Finance
Mr. Sard Ali Khan	Town Officer, TO Infrastructure, and Deputy Director of NUDP
Mr. Syed Manzoor Al. Husnaim	Assistant Technical Officer, ATO, Infrastructure

Nawansher Service Unit, Nawansher Union Council, U/C Urban

Mr. Mazhar Awan	Chief Officer
Mr. Abdul Waheed	Nazim

Jhagi U/C

Mr. Sardar Muhammad Rafiq	Nazim
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Others

Mr. Rahil Khan	Director Maintenance, Regional Office Abbottabad, National Highway Authority (NHA)
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JICA Pakistan Office

Mr. Otake Tomoharu	Chief Representative
Mr. Shimizu Tsutomu	Senior Representative
Mr. Hiroshima Junya	Representative
Mr. Koyanagi Yoshimoto	Representative
Mr. Mahmood A. Jilani	Deputy Resident Representative/Chief Programme Officer

MINUTES OF DISCUSSIONS
ON THE PREPARATORY STUDY (BASIC DESIGN STUDY)
ON "THE PROJECT FOR THE IMPROVEMENT OF WATER SUPPLY SYSTEM IN
ABBOTTABAD" IN THE ISLAMIC REPUBLIC OF PAKISTAN

Based on the results of the Preparatory Study, the Government of Japan decided to conduct a Preparatory Study (Basic Design Study) on "the Project for the Improvement of Water Supply System in Abbottabad" (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Islamic Republic of Pakistan (hereinafter referred to as "the Pakistan") the Preparatory Study (Basic Design Study) team (hereinafter referred to as "the Team"), which is headed by Mr. Noriaki Nagatomo, Senior Adviser of the Global Environment Department, JICA, and is scheduled to stay in the country from April 15 to May 20, 2009.

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

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

Islamabad, April 27, 2009 <u>永友紀章</u> Noriaki Nagatomo Leader Preparatory Study Team Japan International Cooperation Agency	<u>Allahuddin Khan Gandapur</u> Chief Engineer-WS&S/PHE Works and Services Department Government of North West Frontier Province
<u>Sardar Haider Zaman</u> District Nazim District Government Abbottabad Government of North West Frontier Province	<u>S. Zaheer-ul-Islam</u> District Coordination Officer District Government Abbottabad
Witnessed by: <u>Ghulam Muhammad Mqhar</u> Deputy Secretary (ADB/JAPAN) Economic Affairs Division Ministry of Finance, Economic Affairs and Statistics	Witnessed by: <u>Muhammad Iqbal Khan</u> Secretary Planning and Development Department Government of North West Frontier Province

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the water supply services for the residents of the following areas including 10 villages of Abbottabad district.

- 1) Abbottabad TMA (urban)
- 2) Nawansher Service Unit (urban)
- 3) Sheikhul Bandi
- 4) Salhad
- 5) Mirpur
- 6) Jhangi UC (Derawanda, Jhangi, Lama Maira, Banda Ghazan, Banda Dalazak, Banda Phugwarian, Dobathar)

2. Project sites

The sites of the Project are shown in Annex-1.

3. Responsible and Implementing Agency

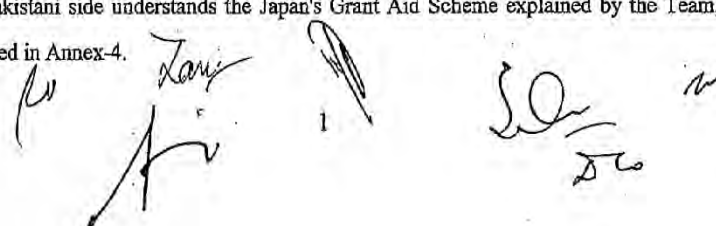
- 1) The counterpart ministry is the Economic Affairs Division, the Ministry of Finance, Economic Affairs and Statistics, the Government of Pakistan.
- 2) The responsible organization is the Government of the North West Frontier Province (hereinafter referred to as "the NWFP").
- 3) The implementing organization is the District Government Abbottabad under the Government of the NWFP. The Project related organization structure is shown in Annex-2.

4. Items requested by the Government of the Pakistan

After discussions with the Team, the items, described in Annex-3 "The Concept of the water supply system by the Basic Design of 2004" were reconfirmed by the Team and the Pakistani side. The Team will conduct the basic design and the cost estimation of the items.

5. Japan's Grant Aid Scheme

- 1) The Pakistani side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-4.

The block contains several handwritten signatures and initials in black ink. On the left, there is a large, stylized signature that appears to be 'Zame'. To its right is a smaller, more compact signature. Further right is a signature that looks like 'S. Q.' followed by some less distinct marks. There are also some isolated initials or marks scattered around these signatures.

- 2) The Pakistani side will take the necessary measures as described in Annex-5 "Major Undertakings to be taken by Each Government" for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6. Schedule of the Study

- 1) The consultants will proceed to further studies in Pakistan until May 20, 2009.
- 2) JICA will prepare the draft basic design report in English and dispatch a mission in order to explain its contents around September 2009.

7. Other relevant issues

1) Validity of the PC-1

The Pakistani side assured that the PC-1 approved in 2005 was still valid. However, if the revision of the Project cost through the basic design study shows more than 15% excess of the original cost stipulated in the PC-1, it is necessary for the Pakistani side to revise the said PC-1. The Pakistani side assured that the revision of PC-1, if needed, would be approved by the Federal Government of Pakistan (CDWP) by the end of November, 2009.

2) Environment and Social Considerations

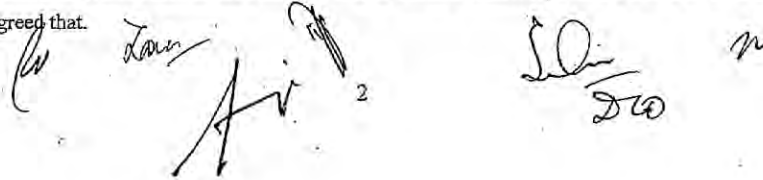
2-1) The Team explained to the Pakistani side that the Project should follow the Japan International Cooperation Agency Guidelines for Environmental and Social Considerations, issued in April 2004 and that the Project is categorized as B according to the guideline.

2-2) Validity of IEE (Initial Environmental Examination) on the Project

The Pakistani side informed the revalidation of No Objection Certificate regarding IEE to JICA based on the letter "Revalidation of NOC Regarding IEE (Initial Environmental Examination)" from Environmental Protection Agency of NWFP to District Government Abbottabad on February 23, 2009 shown in Annex-6. Both sides reconfirmed that implementation of EIA (Environmental Impact Assessment) is not required.

3) Undertaking of the Pakistani side

Though general undertakings of the Pakistani side are shown in Annex-5, the Japanese side emphasized responsibilities of the Pakistani side to execute following matters and the Pakistani side agreed that.

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3-1) Land acquisition

The Team came to know that some part of the planned land for facilities are privately owned or need the permission for use and requested the Pakistani side to secure the land in equitable manner and inform JICA of the result in writing. Pakistani side agreed to complete necessary procedures for land acquisition by February 2010.

3-2) Operation and Maintenance Organization

The Pakistani side is planning to establish an operation and maintenance organization for Surface Water Gravity Supply System shown in Annex 37. As for Ground Water Supply Systems of 10 villages, Water Supply and Sanitation/PHE of the District Government Abbottabad remains responsible for operation and maintenance.

The Pakistani side agreed to take concrete actions including personnel arrangement and budget allocation toward the establishment of the system by February 2010.

For the establishment of the organization, the Pakistani side requested and the Team agreed to conduct soft components in the Project as listed below.

- Management, operation and maintenance of the tube wells of Ground Water Supply System of the Project
- Operation and maintenance of slow sand filter system
- Establishment of a bulk water supply unit to Abbottabad city, Nawansher town and 10 villages in Abbottabad District
- Establishment of a volumetric water tariff system

3-3) Budget allocation

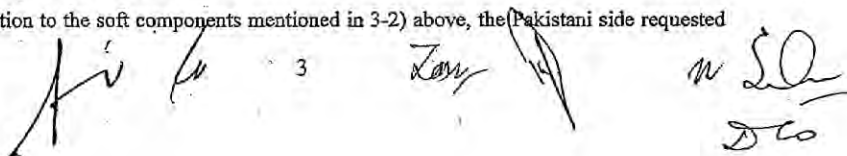
The Pakistani side agreed to allocate the budget for expense of acquisition and temporary easement of land and others in PSDP of 2009/10. As for necessary expense of 2010/11, also, Pakistani side will allocate the budget in PSDP.

3-4) Tax payment

Both sides confirmed that Value Added Tax, customs duties and any other taxes and fiscal levy charges in Pakistan (Federal, Provincial and District) arisen from the Project activities shall be exempted by beneficiary organizations as occasion arises.

4) Capacity Building of the staff

In addition to the soft components mentioned in 3-2) above, the Pakistani side requested

 3

trainings in Japan for some technical/administrative staffs for the organization. The Team will convey this request to the JICA Pakistan office for its consideration.

5) Safety of the Team members

The Pakistani side ensured to take any measures deemed necessary to secure the safety of the members of the Team during the Study.

Annex-1: The sites of the Project

Annex-2: The Project related organization structure

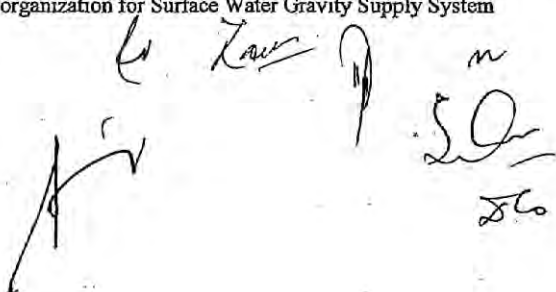
Annex-3: The Concept of the water supply system by the Basic Design of 2004

Annex-4: Japan's Grant Aid Scheme

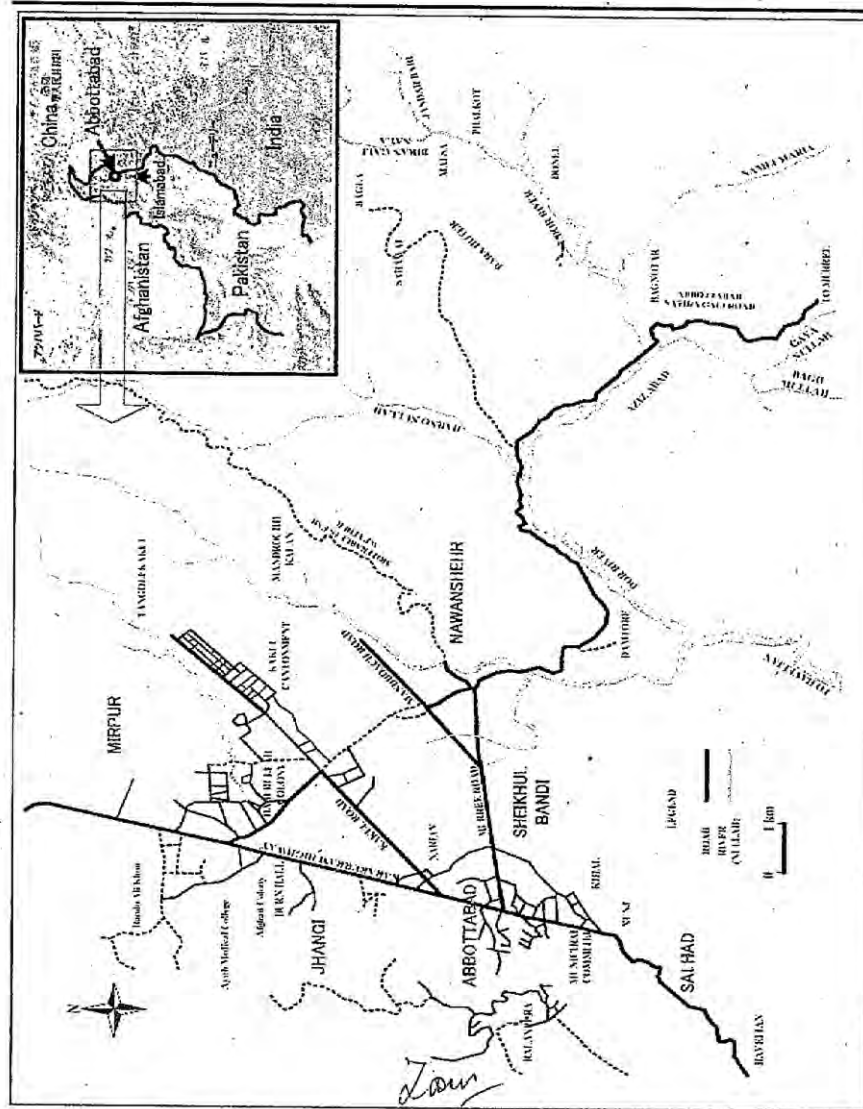
Annex-5: Major Undertakings to be taken by Each Government

Annex-6: The letter "Revalidation of NOC Regarding IEE(Initial Environmental Examination)"

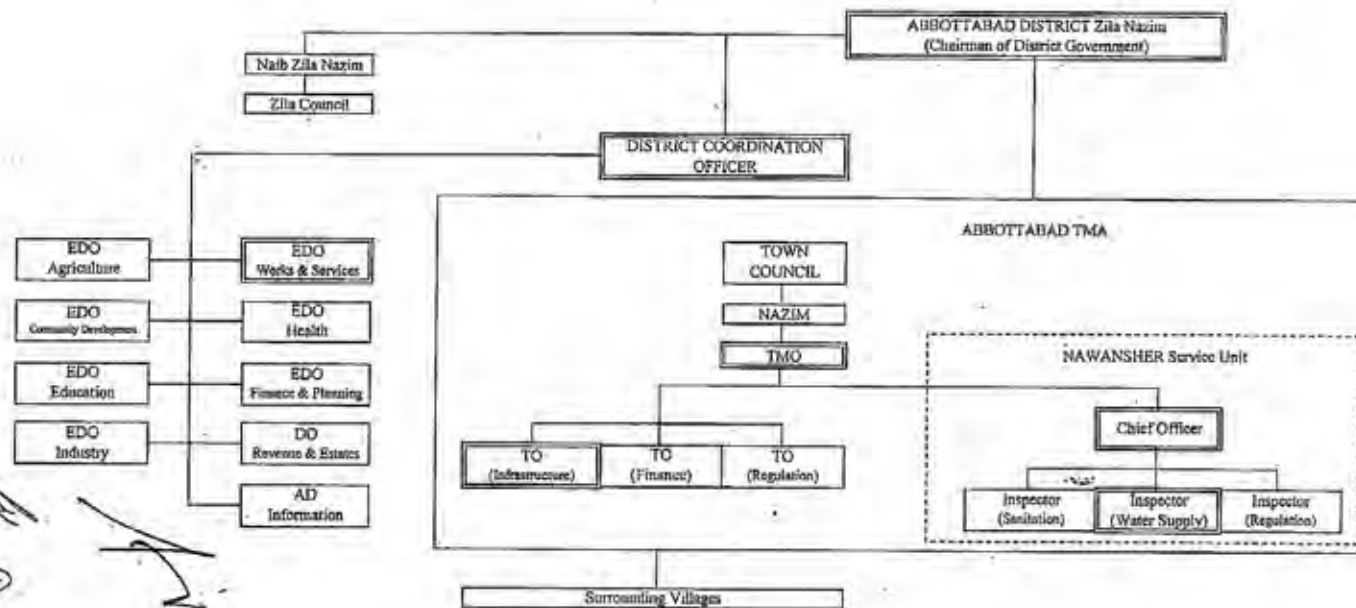
Annex-7: Operation and maintenance organization for Surface Water Gravity Supply System

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The sites of the Project



The Project related organization structure



<Legend>

Nalib Zila Nazim: Deputy Chairman of District Government
 Nazil Council: District Council
 EDO: Executive District Officer
 DO: District Officer
 AD: Assistant Director

Nazim: Mayor
 TMA: Town Municipal Administration
 TMO: Town Municipal Officer
 TO: Town Officer

The Concept of the Water Supply System by the Basic Design of 2004

Facilities	Surface Water Gravity Supply System	Ground Water Supply System
Intake Facilities	Capacity: 2000/sec from Gaya rive, Bagh river and Namly Maira river Bar Screen:4sites	Capacity: 14.80/sec from newly constructed wells 88.50/sec form existing wells
Raw Water Transmission Pipeline	ϕ 500mm x 4.7km (DIP) ϕ 450mm x 6.1km (DIP) ϕ 350mm x 1.8km (DIP) ϕ 250mm x 4.5km (SP) ϕ 200mm x 1.4km (SP) ϕ 150mm x 2.0km (SP)	
Treatment Facilities	Slow and filter system Capacity:17,300m ³ /d (2000/sec)	
Treated Water Transmission Pipeline	ϕ 500mm x 2.4km (DIP) ϕ 400mm x 2.1km (DIP) ϕ 300mm x 1.4km (DIP) ϕ 250mm x 6.1km (SP) ϕ 200mm x 1.1km (SP) ϕ 150mm x 11.0km (SP) ϕ 100mm x 0.2km (SP)	ϕ 150mm x 2.3km (SP) ϕ 100mm x 3.9km (SP)
Reservoirs	Sheikhul Bandi 130m ³ Salhad 180m ³ Nawanshehr 340m ³ Mirpur 620m ³ Derawanda 220m ³ Banda Ghazan 530m ³	Banda Phugwarian 120m ³ Dobathar 300m ³ Lama Maira 110m ³

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as part of this realignment, JICA was reborn on October 1, 2008. After the reborn of JICA, following the decision of the Government of Japan (hereinafter referred to as "the GOJ"), Grant Aid for General Project is extended by JICA.

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

1. Grant Aid Procedures

Japanese Grant Aid is conducted as follows-

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

2. Preparatory Survey

(1) Contents of the Survey

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

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant

Aid Scheme from a technical, financial, social and economic point of view.

- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

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

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

(2) Selection of Consultants

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

(3) Result of the Survey

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

3. Japan's Grant Aid Scheme

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

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

(2) Selection of Consultants

The consultant firm(s) used for the Survey Will be recommended by JICA to the recipient

country to also work on the Project's implementation after the E/N and the G/A, in order to maintain technical consistency.

(3) Eligible source country

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

(4) Necessity of "Verification"

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

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

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

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

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

recipient country or its designated authority under the Verified Contracts.

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

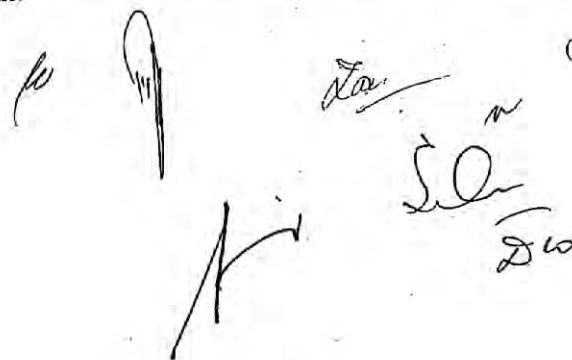
(9) Authorization to Pay (A/P)

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

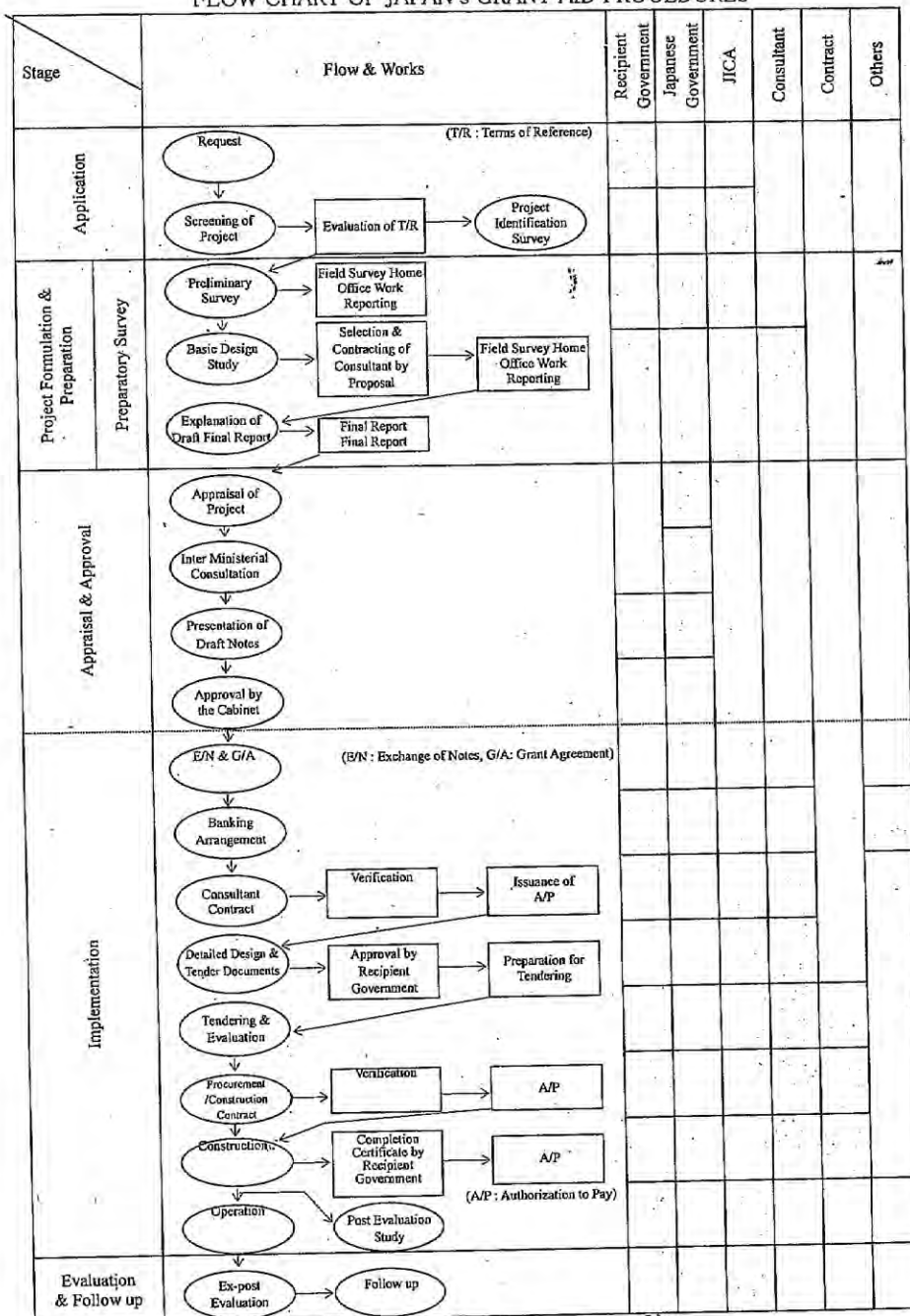
(10) Social and Environmental Considerations

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

(End)

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FLOW CHART OF JAPAN'S GRANT AID PROCEDURES



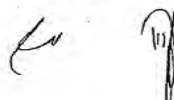
Annex-5

Major Undertakings to be taken by Each Government (Construction)

NO	Items	To be covered by the Grant	To be covered by Recipient side
1	To secure land		•
2	To clear, level and reclaim the site when needed		•
3	To construct gates and fences in and around the site		•
4	To construct the parking lot	•	
5	To construct roads		
	1) Within the site	•	
	2) Outside the site		•
6	To construct the building	•	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1) Electricity		
	a. The distributing line to the site		•
	b. The drop wiring and internal wiring within the site	•	
	c. The main circuit breaker and transformer	•	
	2) Water Supply		
	a. The city water distribution main to the site		•
	b. The supply system within the site (receiving and/or elevated	•	
	3) Drainage		
	a. The city drainage main (for storm, sewer and others) to the site		•
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	•	
	4) Gas Supply		
	a. The city gas main to the site		•
	b. The gas supply system within the site	•	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame / panel (MDF) of the building		•
	b. The MDF and the extension after the frame / panel	•	
	6) Furniture and Equipment		
	a. General furniture		•
	b. Project equipment	•	
8	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		•
9	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 customs clearance of the products at the port of disembarkation		•

	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
10	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		•
11	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		•
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		•
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		•

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









Major Undertakings to be taken by Each Government (Equipment)

NO	Items	To be covered by the Grant	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project	(●)	(●)
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		●

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

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The letter "Revalidation of NOC Regarding IEE (Initial Environment Examination)"



Memorandum: GIKAM/ITEROBHEMA

**Environmental Protection Agency
Environment Department
Govt. of NWFP**

No. EPA/109/Gen-IEE/1162
Date: 23.2.09

To

District Coordination Officer,
Abbottabad.

Subject: Revalidation of NOC Regarding IEE (Initial Environmental Examination).

Kindly refer to your letter No. 460 dated 24-01-2009 on the above cited subject and refer to this Agency letter No. EPA/109/Gen/IEE/295 dated 26-05-2004. The Environmental Protection Agency Govt. of NWFP has no objection for the implementation of Gravity Flow Water Supply Scheme Abbottabad till May 2010 subject to the following.

- Scope of work mentioned in the IEE Report should be remained the same.

Decision of the Peshawar High Court, Abbottabad bench regarding the

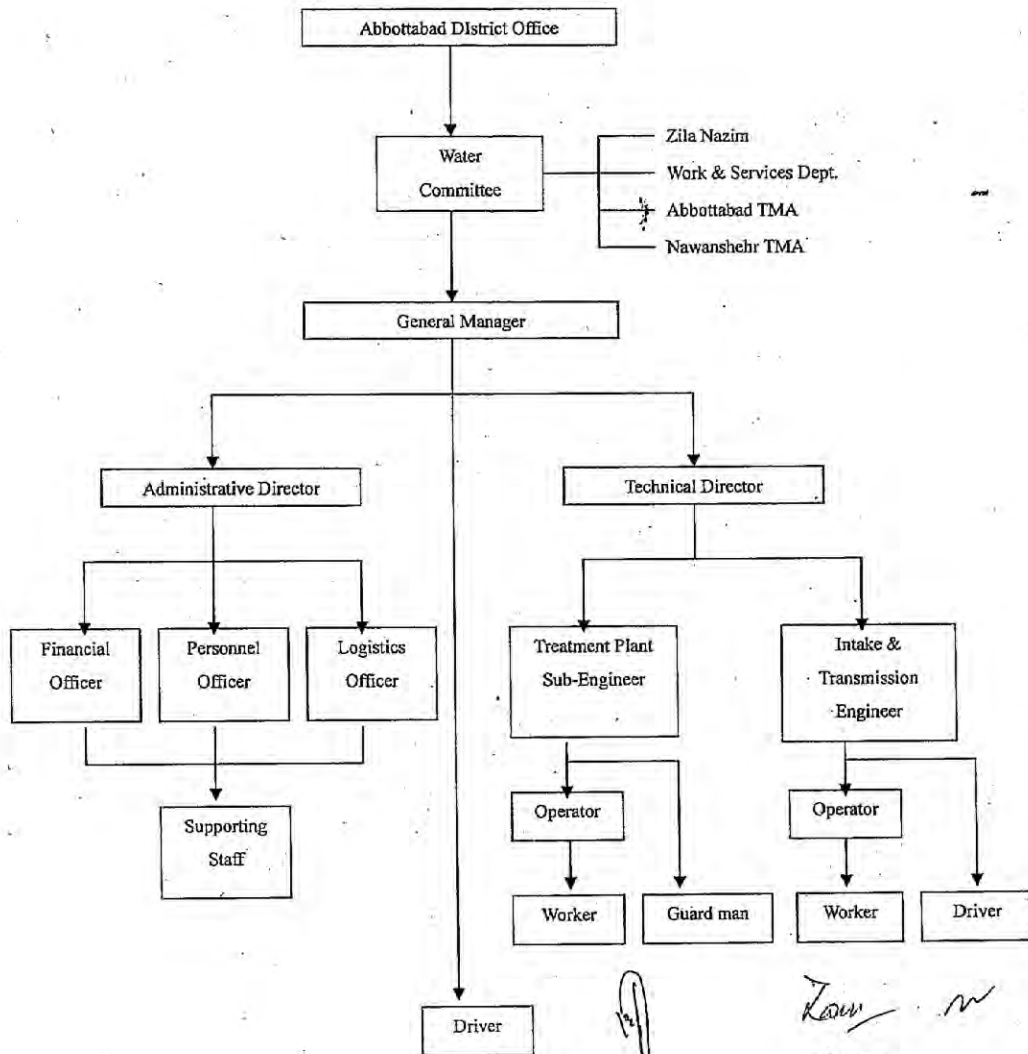
said scheme should be implemented.

- The scheme activity should be carried out according to the minutes of the meeting held on 06-05-2006 under the chairmanship of Additional Chief Secretary.

Director General

3rd Floor, SDU Building, Khyber Road, Peshawar Cantt
Telephones: 92 (91) 9210262 Fax: 92 (91) 9210280

Operation and maintenance organization for Surface Water Gravity Supply System



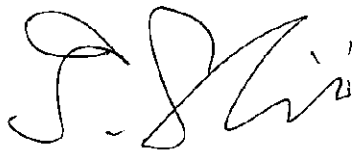
MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY (BASIC DESIGN STUDY)
ON THE PROJECT FOR THE IMPROVEMENT OF WATER SUPPLY SYSTEM
IN ABBOTTABAD
IN THE ISLAMIC REPUBLIC OF PAKISTAN
(EXPLANATION ON DRAFT BASIC DESIGN STUDY REPORT)

In April and May 2009, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey (Basic Design Study) Team on "The Project for The Improvement of Water Supply System in Abbottabad (hereinafter referred to as "the Project")" to the Islamic Republic of Pakistan. Through discussion, field survey and technical evaluation of the results in Japan, JICA has prepared the draft basic design study report (hereinafter referred to as "the Draft Report").

In order to explain and consult with the Government of Pakistan on the components of the Draft Report, JICA has sent to Pakistan the Draft Report Explanation Team (hereinafter referred to as "the Team"), headed by Mr. SHIMIZU Tsutomu, from 9th to 18th September 2009.

As a result of discussions, both sides confirmed the main items described in the Attachment.

Islamabad, 16th September, 2009



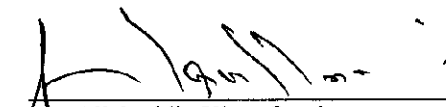
Mr. Shimizu Tsutomu
Leader, Draft Report Explanation Team
Japan International Cooperation Agency



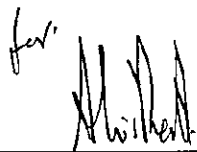
Mr. Syed Zaheer-ul-Islam
District Coordination Officer
District Government Abbottabad



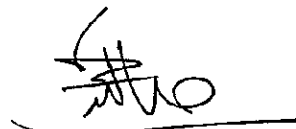
Mr. Arbab Jamil
Tehsil Municipal Officer
Tehsil Municipal Administration Abbottabad
District Government Abbottabad



Mr. Allahuddin Khan Gandapur
Chief Engineer-WS&S/PHE
Works and Services Department
Government of North West Frontier Province



Mr. Mohammad Ikram Khan
Secretary
Planning and Development Department
Government of North West Frontier Province



Mr. Zafar Hasan Reza
Joint Secretary (ADB/JAPAN)
Economic Affairs Division
Government of Pakistan

Attachment

1. Components of the Draft Report

The Pakistani side agreed and accepted in principle, the contents of the Draft Report explained by the Team. Both sides confirmed the contents of the Project as shown in ANNEX-1 and the Project site as shown in ANNEX-2.

2. Japan's Grant Aid Scheme

The Pakistani side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Pakistani side as explained by the Team as per the Minutes of Discussions signed by both sides on 27th April 2009 (hereinafter referred to as "the previous M/D").

3. Responsible and Implementing Agency

3-1. The responsible agency is the Government of North West Frontier Province (hereinafter referred to as "the Government of NWFP").

3-2. The implementing agency is the District Government Abbottabad under the Government of NWFP.

4. Confidentiality of the Project

4-1. Detailed specifications of the Facilities

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

4-2. Confidentiality of Project Cost Estimation

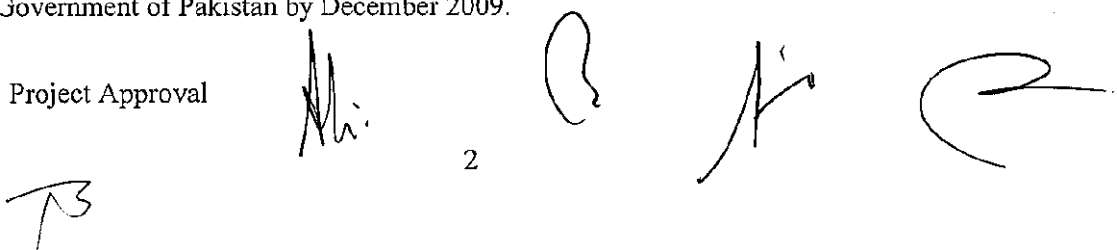
The Team explained that the cost estimation of the Project as described in ANNEX-3. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside parties before signing of all the Contract(s) for the Project. Both sides understood that the Project Cost Estimation attached as ANNEX-3 is not final and is subject to change.

5. Schedule of the Study, Project Approval and Necessary Procedure for Implementation

5-1. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Pakistan by December 2009.

5-2. Project Approval

Handwritten signatures and initials are present below the 'Project Approval' section. There are four distinct signatures: a stylized 'Mi' on the left, a circular mark in the center, a signature that looks like 'A' on the right, and a large, sweeping signature on the far right. Below the 'Mi' signature is the number '2'. To the left of the 'Mi' signature is a large handwritten 'TB'.

Based on the Draft Report and the previous M/D, the Project will be evaluated by the Japanese authorities and sent to the Japanese Cabinet for final decision, with condition of approval of the revised PC-I by the Government of Pakistan.

5-3. Necessary Procedure for Implementation

After the Project is approved by the Japanese Cabinet, both sides shall proceed to signing of E/N and G/A. E/N is agreed and concluded between the Government of Pakistan and the Government of Japan. G/A is agreed and concluded between the Government of Pakistan and JICA.

6. Social and Environmental Considerations

The Team explained that some negative impacts might be caused by the Project according to the "JICA's guideline of social and environmental considerations". In order to mitigate the negative impacts, the Pakistani side agreed to take the measures as follows.

a) Mitigation measures on the environmental and social impacts

Item	Mitigation measures
Groundwater	Subsidence may occur if a large volume of ground water is extracted. Therefore, extraction of the groundwater from the tubewells should be implemented with appropriate pumping rate. In addition, the groundwater level of the tubewells should be monitored periodically.
Air Quality	Currently, there is no standard regarding the use of bleaching powder in Pakistan. However, like in Japan, appropriate safe measures such as use of mask, glasses, safety wear etc. would be required for the workers in order to prevent direct contact with the powder.
Explanation to the Public	Pakistani side is planning to set the water tariff based on the amount of the water used by the users. The plan is going to be explained to the users during implementation of the soft component program.
Impacts during Construction	- During the construction, water will be sprayed on the road to settle the dust. Daily and periodical inspection of the construction machines will be conducted in order to reduce the exhaust gases, noise and vibrations. The contractors will also take appropriate measures for the disposing the wastes. Soil erosion would be minimized by constructing appropriate concrete-made drainage and fully compacting road. - Annoyance to the general public living in the vicinity by transporting materials for the construction would be minimized through informing the date and time in advance. - The contractor will prepare safety action plan and provide safety training especially to the workers.

The Pakistani side completed the Environmental Checklist as shown in ANNEX-4.

7. Other Relevant Issues

7-1. Actions to be taken by Pakistani side

Both sides confirmed that timely implementation of the items to be covered by Government of Pakistan will play a vital role for the success of the Project. Based on this understanding, both sides agreed the timeframe as shown in ANNEX-5. Among them, the following issues will be addressed quickly.

7-1-1. Revision of PC-1

The Pakistani side has to revise the PC-I approved in 2005 since the Project cost indicated in ANNEX-3 shows more than 15% excess of the original cost. The Pakistani side assured that the revised PC-1 would be approved by the Federal Government of Pakistan (CDWP) by the end of November 2009 as confirmed on the previous M/D.

The Pakistani side will promptly inform JICA Pakistan office the result after the approval by CDWP.

7-1-2. Land Acquisition

The Pakistani side explained that they had proceeded to acquire the land for the proposed facilities and access roads, and Government of NWFP has already allocated some funds in the Provincial ADP (Annual Development Plan) 2009/10. Full funds will be available after the approval of the revised PC-1 promptly.

Both sides confirmed that the necessary procedures for land acquisition would be completed by February 2010 as agreed on the previous M/D.

7-1-3. Operation and Maintenance Organization

The Pakistani side shall complete necessary measures for the establishment of the new operation and maintenance organization, and report to JICA Pakistan Office by February 2010 as agreed upon the previous M/D.

7-2. Validity of IEE (Initial Environmental Examination) on the Project

The both sides reconfirmed that EIA (Environmental Impact Assessment) is not required for this Project as confirmed on the previous M/D. The Pakistani side assured that No Objection Certificate for the IEE issued in 2004 would be extended accordingly when it is necessary, before its expiration in May 2010.

7-3. Tariff Revision

Both sides confirmed the tariff revision based on the metered rate system as an

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important agenda for sustainable management of new water supply system. Necessary steps would be steadily taken by Pakistani side from the initial stage of the Project as shown in ANNEX-6.

7-4. Security Arrangement

The Pakistani side promised to take necessary measures in order to ensure the security for Japanese nationals and other staffs, who will be engaged in the Project during its implementation.

END

ANNEX-1: The Contents of the Project

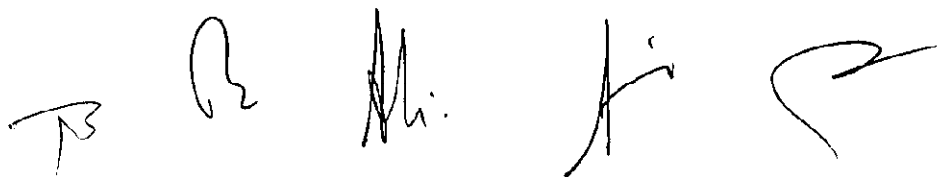
ANNEX-2: The Project Sites

ANNEX-3: Project Cost Estimation

ANNEX-4: Environmental Checklist

ANNEX-5: Tentative Schedule of Obligations of the Recipient Country

ANNEX-6: Tentative Action Plan for Water Tariff Revision



The Contents of the Project

1. Surface Water System

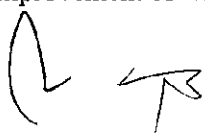
- Construction of Intake facilities: 4 sites.
- Installation of raw water transmission mains: 20.4 km
- Construction of water treatment plant: 17,280 m³/day
- Installation of treated water transmission mains: 25.6 km
- Construction of distribution reservoirs: 6 sites. (1,320 m³)

2. Groundwater System

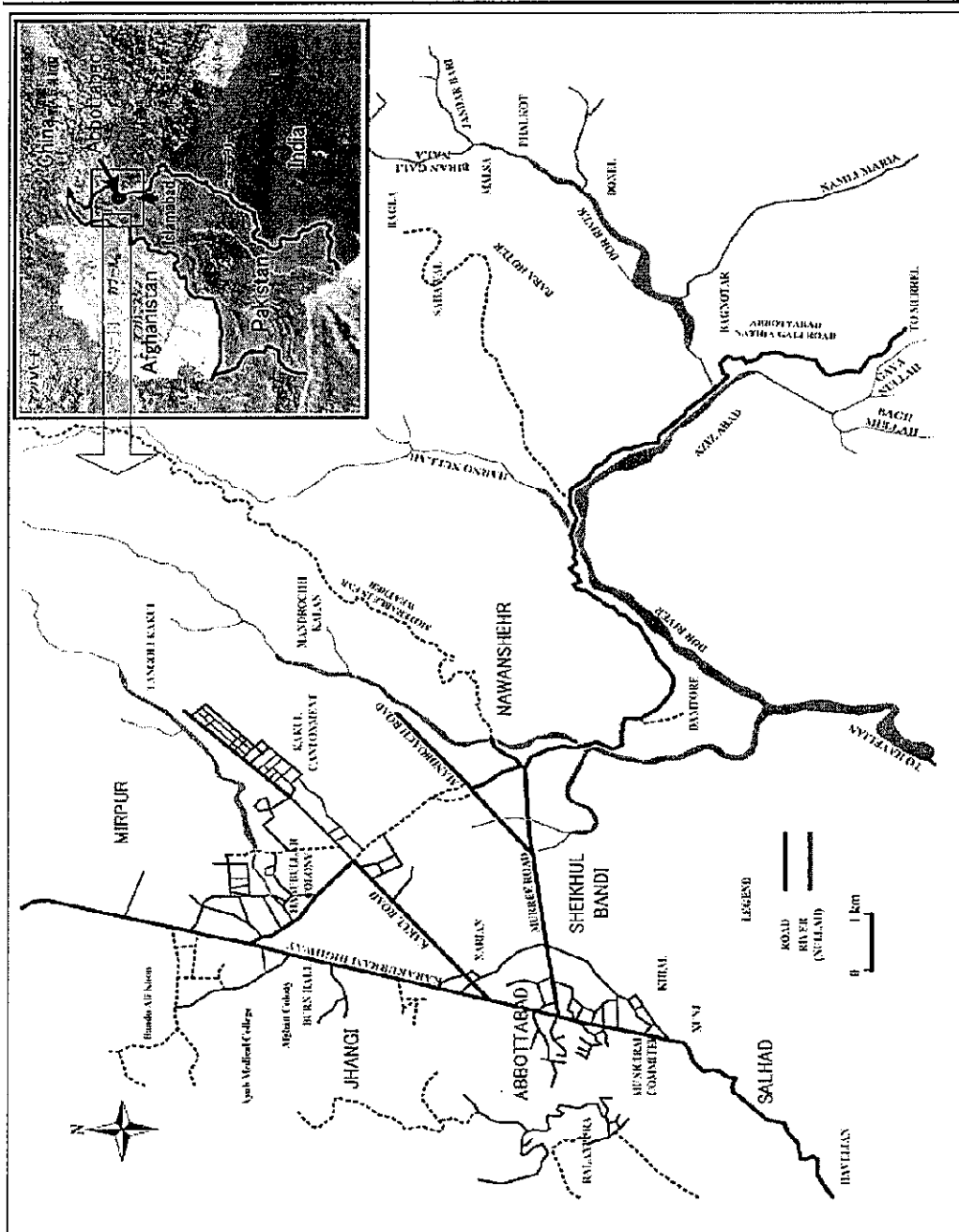
- Construction of wells: 4 sites.
- Installation of new well pumps: 4 sites.
- Replacement of the existing well pumps: 12 nos.
- Construction of distribution reservoir: 1 site. (300 m³)
- Installation of transmission mains: 3.6 km

3. Technical Assistance(Soft components)

- Training for tube well management and operation and maintenance of pump
- Capacity development for operation and maintenance of slow sand filtration system
- Assist of establishment of surface water system unit
- Improvement of water tariff collection system



The Project Sites



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Environmental Check List

(1/5)

Category	Main Check Items	Confirmation of Environmental Considerations
1 Permits and Explanation	(1) EIA and Environmental Permits ① Have EIA reports been officially completed? ② Have EIA reports been approved by authorities of the host country's government? ③ Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? ④ In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	Environmental Protection Agency of North West Frontier Province has assured that the IEE report approved in 2004 has been valid until May 2010. Both sides agreed that the implementation of the EIA study is not necessary this time. Pakistani side has also assured that the validity of IEE would be extended accordingly when it is necessary before its expiration in May 2010.
	(2) Explanation to the Public ① Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public? ② Are proper responses made to comments from the public and regulatory authorities?	Pakistan side is planning to set the water tariff based on the amount of the water used by the users. The plan is going to be explained to the users during implementation of the soft component scheme.
2 Mitigation Measures	(1) Air Quality ① Is there a possibility that chlorine from chlorine storage facilities and chlorine injection facilities will cause air pollution? Do chlorine concentrations within the working environments comply with the country's occupational health and safety standards?	There is no risk of air pollution since it is planned to use breaching powder instead of liquid type for the chlorination. Currently, there is no standard regarding the use of bleaching powder in Pakistan. However, like in Japan, appropriate safe measures such as use of mask, glasses, safety wear etc. would be required for the workers in order to prevent direct contact with the powder. Therefore, the same safety measure will be applied.
	(2) Water Quality ① Do pollutants, such as SS, BOD, COD contained in effluents discharged by the facility operations comply with the country's effluent standards?	There is no risk of pollution from the effluent because of the use of slow sand filter that does not use chemical matter for the treatment. The back-wash water from the filter will be consisting of inorganic matter such as sand and silt; in addition the washing will be implemented only 3 or 4 times a year. Therefore, pollution due to discharging the effluent into the river is not anticipated.
	(3) Wastes ① Are wastes, such as sludges generated by the facility operations properly treated and disposed of in accordance with the country's standards?	There is no risk of pollution from the sludge because of the use of slow sand filter that does not use chemical matter for the treatment. Sludge will be extracted from wastewater/basins/drying beds periodically for disposal and they will be transported to the appropriate dumping sites accordance with suitable disposable measures.

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Category		Main Check Items	Confirmation of Environmental Considerations
2 Mitigation Measures	(4) Noise and Vibration	① Do noise and vibrations generated from the facilities, such as pumping stations comply with the country's standards?	Problems caused by the noise and the vibration are not anticipated since similar water abstraction facilities have already been in operation around the area.
	(5) Subsidence	① In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	Subsidence may occur if a large volume of ground water is extracted. Therefore, extraction of the groundwater from the tubewells should be implemented with appropriate pumping rate. In addition, the groundwater level of the tubewells should be monitored periodically.
3 Natural Environment	(1) Protected Areas	① Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	None of the proposed project sites is located in protected areas. Therefore, the project will not affect any protected areas.
	(2) Ecosystem	① Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? ② Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? ③ If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? ④ Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	None of the project sites encompass primeval forests, tropical rain forests, ecologically valuable habitats or protected habitats of endangered species. Therefore, significant ecological impacts are not anticipated.

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Category		Main Check Items	Confirmation of Environmental Considerations
4 Social Environment	(1) Resettlement	① Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? ② Is adequate explanation on relocation and compensation given to affected persons prior to resettlement? ③ Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? ④ Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? ⑤ Are agreements with the affected persons obtained prior to resettlement? ⑥ Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? ⑦ Is a plan developed to monitor the impacts of resettlement?	None of project sites encompass involuntary resettlement. Construction of the project will require acquisition of at least 3 ha land out of the vacant lot of 118 ha reserved for the project. In total the project will affect none of households. The total cost for implementation of the land acquisition will be borne by Pakistani side. Land acquisition shall be done by full replacement cost as per the laws of Provincial/Federal government.
	(2) Living and Livelihood	① Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary? ② Is there a possibility that the amount of water used (e.g., surface water, groundwater) by the project will adversely affect the existing water uses and water area uses?	The proposed water supply project will not adversely affect the living conditions of inhabitants. The conflicts over water usage between Abbottabad district and Haripur district have already been settled owing to the recommendation of Peshawar High Court with coordination by North-West Frontier Province and agreement on the project by the Governor of Haripur district.
	(3) Heritage	① Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	There are no archeological, historical, cultural, and religious heritages around the proposed project sites.
	(4) Landscape	① Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	All the facilities will not affect the view of their surrounding environments from a distant.

(4/5)

Category		Main Check Items	Confirmation of Environmental Considerations
4 Social Environment	(5) Ethnic Minorities and Indigenous Peoples	① Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples? ② Are considerations given to reduce the impacts on culture and lifestyle of ethnic minorities and indigenous peoples?	There are no minorities or indigenous people living around the proposed project sites. Therefore, the proposed project will not adversely affect any minorities or indigenous people.
5 Others	(1) Impacts during Construction	① Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? ② If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? ③ If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts? ④ If necessary is health and safety education (e.g., traffic safety, public health) provided for project personnel, including workers?	① During the construction, water will be sprayed on the road to settle the dust. Daily and periodical inspection of the construction machines will be conducted in order to reduce the exhaust gases, noise and vibrations. The contractors will also take appropriate measures for the disposing the wastes. Soil erosion would be minimized by constructing appropriate concrete-made drainage and fully compacting road. The back-wash water from the filter will be consisting of inorganic matter such as sand and silt. Therefore, the effluent will not cause water contamination. ② The proposed projects will not adversely affect the natural environment. ③ Annoyance to the general public living in the vicinity by transporting materials for the construction would be minimized through informing the date and time in advance. ④ The contractor will prepare safety action plan and will provide safety training especially to the workers.
	(2) Monitoring	① Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? ② Are the items, methods and frequencies included in the monitoring program judged to be appropriate? ③ Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? ④ Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	If the projects sites are not arranged by the proponent even after the E/N and G/A, the proponent should inform the update status to JICA every month. If the project sites are arranged, the proponent should submit copies of the contract to JICA.

(5/5)

Category		Main Check Items	Confirmation of Environmental Considerations
6 Note	Note on Using Environmental Checklist	① If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	None

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Note: Notification, which the particular land is needed for a public purpose, has been done by the District Government Abbottabad to all land owners in December 2003 in accordance with the Land Acquisition Act, 1894. The process of land acquisition will be commenced from January 2010, and after the approval of the Project, the process of land acquisition will be completed by March 2010.

Tentative Action Plan for Water Tariff Revision THE PROJECT FOR THE IMPROVEMENT OF WATER SUPPLY SYSTEM IN ABBOTTABAD

		Order year	2009			2010												2011												2012												2013											
(Item)		Month	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8				
		Action by																																																			
A. Revision of water tariff																																																					
1. Estimation of water tariff level and preparation of implementation plan, and notification to the NWFP Government		DCO, EDO Finance, WS&S/PHE, TMA, NWSR																																																			
2. Basic Agreement of affiliated organization		DCO, WS&S/PHE, TMA, NWSR																																																			
B. Shifting to metered rate system from present flat rate system																																																					
1. Procurement & Installation of customer water meter		WS&S/PHE																																																			
2. Trial execution of metered rate system in pilot area		WS&S/PHE																																																			
3. Review & Improvement of meter reading and billing collection system		WS&S/PHE																																																			
4. Commencement of metered rate system in all area		WS&S/PHE, TMA, NWSR																																																			
C. Set-up of water tariff system																																																					
1. Examination of appropriate water tariff plan		DCO, EDO Finance, WS&S/PHE, TMA																																																			
2. Review and adjustment of proposed water tariff		DCO, EDO Finance, WS&S/PHE, TMA																																																			
3. Basic Agreement of affiliated organization		DCO, WS&S/PHE, TMA																																																			
D. First revision of water tariff																																																					
1. Set-up first water tariff plan		DCO, EDO Finance, WS&S/PHE, TMA, NWSR																																																			
2. Approval of proposal first water tariff plan		DCO, EDO Finance																																																			
3. Procedure of first water tariff plan		DCO, EDO Finance, WS&S/PHE, TMA, NWSR																																																			
4. Issuance of first water tariff revision		DCO, WS&S/PHE, TMA																																																			
Technical Assistance (Soft Component)	Education (Japanese consultant)																																																				
	Institution (Japanese consultant)																																																				
	Water tariff system (Japanese consultant)																																																				
	Education (Pakistani consultant)																																																				
	Institution / water tariff system (Pakistani consultant)																																																				

Note: DCO, WS&S/PHE and Finance are all under District Government Abbottabad.
TMA means TMA Abbottabad.
NWSR means Nawansher Service Unit.

Appendix 5 Soft Component (Technical Assistance) Plan

Soft Component Program

1. Background

This Project plans to develop the surface water sources and establish the gravity water supply system composing of raw water conveyance, water treatment, treated water transmission and distribution reservoirs by effective use of the existing tube wells and minimizing the groundwater exploitation from newly developed tube wells, based upon the results of the evaluation on the groundwater resources.

The contents of soft component scheme requested by the Government of Pakistan include 1) technical training for well management, operation and maintenance of pumps 2) capacity building for operation and maintenance of slow sand filtration system 3) supports for organizing the Gravity Water Supply Unit, and 4) establishment of metered tariff system.

In this Preparatory Survey, the following tasks on operation and maintenance, which EDO Works & Service of District Government Abbottabad, TO (Infrastructure) of Abbottabad TMA and Service Unit of Nawanshehr Urban Union Council that operates and maintains of existing wells face on, were clarified.

1) Need for well management, operation and maintenance of pumps

During this Survey, current conditions of existing tube wells, operation time, pumping discharge, water level and pump conditions were examined. As a result, out of 31 wells, 5 wells which operated at the previous survey were discontinued in last 5 years because of pump failures and lowering of pumping ability caused by caving. The pumping abilities of the rest also run down gradually which is shown the change of average pumping amount from 160 l/sec in last survey to 141.1 l/sec.

Lowering of pump ability is caused by phenomenon like strainer clogging. When pumping is forced with clogged strainer, the ground water which flows into the screen becomes turbulent, and sand and small gravel enter the inside of the well. Sand and small gravel wears away the impeller, and as a consequence, the pump can be broken. Furthermore, flowing of sands and gravel outside of casing can cause the collapse of well and subsidence around the well. Besides, the groundwater of target sites is recharged by precipitation, so it is required to operate wells with monitoring safe pumping amount.

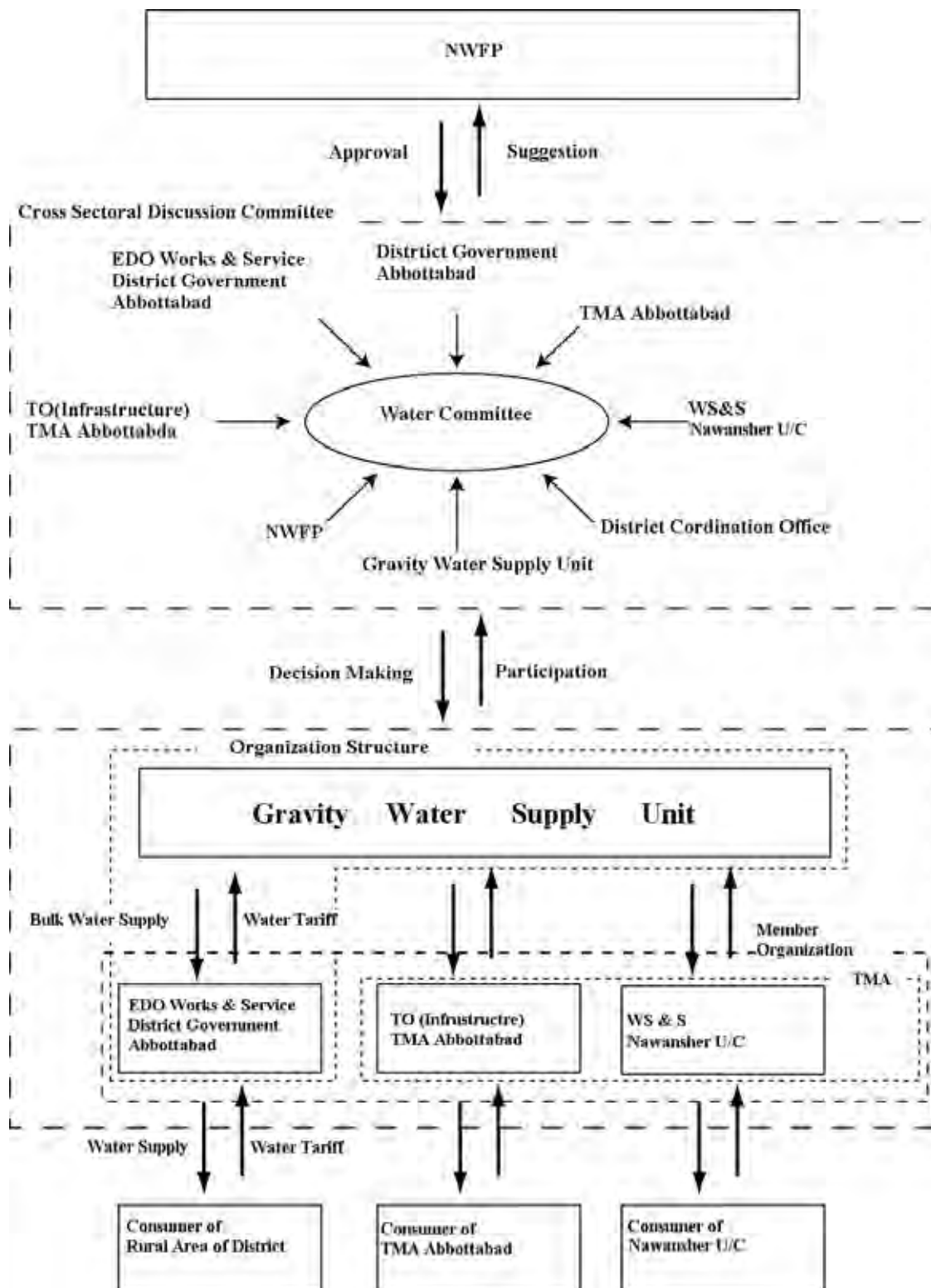
To solve the above problems, pump operators are supposed to be responsible for the operation of wells by monitoring safe pumping and water level, however, current existing wells are operated only with their own experience and no equipments to measure the water level and flow properly. For the replaced pump and new well which is planned to be constructed under the Project, guide pipe for water level meter and flow meter will be installed. Also instruction and assistance for operators will be provided in order to recognize the problems of existing wells and to maintain wells adequately.

2) Need for capacity building for operation and maintenance of slow sand filtration system

The implementing agency, District Government Abbottabad, has no experience of water treatment plant although it is now handling the operation and maintenance of more than 200 water supply systems in the District. Therefore, in order to transfer proper technical knowledge on water treatment by slow sand filtration and practical know-how on operation and maintenance for water treatment plant to them, sufficient training is required for the engineers and operators of Gravity Water Supply Unit, who will be in charge of the management of the Surface Water Supply System.

3) Need for management guidance for organizing unit for surface water supply system

The surface water supply system will be managed by a new organization, Gravity Water Supply Unit, to provide bulk water supply to the three independent organizations as shown below. However, there is no bulk water supply and experience in management of water treatment plant in Abbottabad District. Hence, it is necessary to provide advice and guidance through discussion with the three organizations and other related organizations, and facilitate preparation and coordination for establishment of the Gravity Water Supply Unit. To achieve the project goal, smooth operation by reinforcing the organizational structure and capacity building is indispensable.



4) Assistance for establishment of metered water tariff system

In the Government of Pakistan, metered water tariff system will be adopted in the Project sites where more than ten thousand target people lives. For the sound water

project, it is indispensable to introduce metered tariff system and increase the tariff rate. However, there are still some challenges such as beneficiaries' consensus building, installment of water meter connecting with more than ten thousand households, training for water meter readers who are supposed to cover wide area and establishing finance and tariff system. It is not so easy for existing organizations to solve above problems without sufficient experience and ability that the assistance is required.

2. Objective

To achieve the objective of this Project as providing safe and stable water by promoting effective use of groundwater, establishment of new organization (Gravity Water Supply Unit) providing bulk water supply to three independent organizations and securing proper operation and maintenance of the Surface Water Supply System and sound service operation of three organizations, Soft Component will be implemented by means of following activities;

- 1) Technical training for well management and operation and maintenance of pumps
- 2) Capacity building for operation and maintenance of slow sand filtration system
- 3) Management guidance for organizing management unit for surface water supply system
- 4) Management guidance for improving water tariff collection

3. Anticipated Effects

The following effects are anticipated as the outputs of soft component scheme.

Output 1) Proper management of tube well facilities

Capacity on well management and operation and maintenance of pumps will be built.

- Well monitoring system will be established
- Operator will acquire techniques on pump operation and management based upon the information of well monitoring

Output 2) Proper operation and maintenance of surface water supply system

Organizational structure for the surface water supply system will be strengthened by the Government of Pakistan.

- Water Committee will be established and functioned as cross sectoral discussion committee
 - ✧ Related organization will be convened and bylaws will be set
 - ✧ Gravity Water Supply Unit will be approved by each organizations
 - ✧ Amount of water allocation will be determined and agreed
 - ✧ Tariff of bulk water supply will be determined and agreed
- Function of Gravity Water Supply Unit will be launched
 - ✧ Establishment of organization will be approved by NWFP
 - ✧ Personnel will be secured by the District Government Abbottabad
 - ✧ Bylaws will be set

Output 3) Strengthened administrative and technical division of surface water supply system

In Gravity Water Supply Unit, administrative division will acquire know-how of water

management and operators of technical division will acquire the technique on operation and maintenance of slow sand filtration system.

- Administrative Division
 - ✧ Overall practical water supply service will be comprehended
 - ✧ Water supply service will be implemented based upon service plan
- Technical Division
 - ✧ Filtration velocity of slow sand filtration will be controlled properly
 - ✧ Operation will be controlled in accordance with the condition of water source
 - ✧ Chlorine dosage rate will be controlled properly
 - ✧ Sludge removal and cleaning of sedimentation basin and washing of roughing filter will be done adequately
 - ✧ Sand in slow sand filter will be scraped, washed and refilled properly
 - ✧ Quantity and quality of raw water will be controlled properly

As a precondition, it is required that NWFP approved the establishment of Gravity Water Supply Unit and EDO Works & Services of District Government Abbottabad play a centre role in securing personnel .

Output4) Improvement of the environment for establishment of metered tariff system
The environment of the metered tariff system transferred from the fixed tariff system will be improved by the Government of Pakistan.

- Beneficiaries will consent the shift to metered tariff system
- Required number of water meter reader will be trained
- Management system of collected water tariff will be established

However, procurement and installation of water meter by the Government of Pakistan is external condition. Without the completion of installation of water meter to each household by the launch of facility, it is impossible to introduce the metered tariff system.

4. Confirmation method on the achievement of outputs

Followings are confirmation method on the achievement of above outputs.

Output 1) Proper well management and operation and maintenance of pumps
Capacity on well management and operation and maintenance of pumps will be built.

Target group: Operator

Evaluation on the work and ability of operators and proper training will be implemented by Japanese consultant. Operation and monitoring manual for operators will be drawn up by Japanese consultant and operators. After the training, effect measure of operator will be implemented and operational condition at the test and active stage will be evaluated by monitoring.

Confirmation time: At the time of completion of Soft component

Output 2) Proper operation and maintenance of surface water supply system

Organizational structure for the surface water supply system will be strengthened by the Government of Pakistan.

Working group will be established by the Government of Pakistan and both Japanese and local consultants will strengthen Water Committee and Gravity Water Supply Unit through the discussion with the working group, and providing guidance and support to them.

Water Committee will be composed of District Government and three independent organizations. It is required for working group to make call-up list for Water Committee, design draft bylaws and have consensus of Water Committee. Accordingly, Japanese consultant will guide and assist the working group to held Water Committee and make decisions.

District Government will approve bylaws and minutes which include member list, role and power of committee and will be evaluated after Water Committee is held. In addition, both Japanese and local consultant will support Water Committee to discuss the amount of water allocation and tariff of bulk water supply system, to have agreement and execute a contract. Consensus on water allocation and tariff of bulk water system and executed contract will be evaluated.

In establishing Gravity Water Supply Unit, Japanese and local consultants will discuss with working group and Water Committee, consider the role, number, qualification and experience of staff based on the organizational chart, which was planed in the preparatory survey, and select staffs. The working group will set the bylaws of Gravity Water Unit. Japanese consultant will provide the guidance and assistance for setting direction on division of duties, personnel bylaws, pay regulation, personnel evaluation method, etc and local consultant will support to set them down. Established Gravity Water Supply Unit, letter of authorization issued by the Government of NWFP, staff list and improved bylaws approved by District Government will be evaluated.

Confirmation time: At the time of completion of Soft component

Output 3) Strengthened administrative and technical division of surface water supply system

In Gravity Water Supply Unit, administrative division will acquire know-how of water management. Operators of technical division will acquire operation and maintenance of slow sand filtration system.

For the smooth promotion of surface water supply system, assistance will be provided to draw up management plan of surface water supply service. Improved management plan of surface water supply service approved by the District Government and both invoice and payment book will be evaluated.

Classroom lecture and OJT on operation and maintenance of slow filtration facility will be implemented for operators. After completion of training, operation records, which includes raw water monitoring, dissolved oxygen, fecal coliform, bacteria, desludging,

cleaning, washing of roughing filter, scraping sand out of slow sand filter, sand washing, sand refilling, and chlorine control, will be evaluated.

Confirmation time: At the time of completion of Soft component

Output4) Improvement of the environment for establishment of metered tariff system

The environment of the metered tariff system transferred from the fixed tariff system will be improved by the Government of Pakistan.

Japanese and local consultant will prepare the textbook and manual for the training, provide classroom lecture and OJT on water meter read. After the completion of the training, effect measure will be implemented and the meter readers will be evaluated. Also the following documents will be prepared.

- Training textbook for water meter reader
- Water tariff collection manual
- Water meter maintenance manual
- List of water meter readers
- Invoice book
- Payment book

Confirmation time: At the time of completion of Soft component

5. Soft component activity (Input Plan)

To achieve the objective and output of soft component mentioned above, required activities were planned. Each activity corresponding above outputs were planned as follows.

Module1.Activity on Proper well management and operation and maintenance of pumps
Main activity is classroom lecture and OJT targeting operators.

1) Training plan on operation and maintenance method of tube well facilities based on the management ledger will be drawn up by Japanese consultant

The scope of training is planned as follows.

- Distribution reservoir and pump operation
- Operation and maintenance with measurement equipments such as flow meter and water level meter
 - ✧ Maintenance method
 - ✧ Calibration of measurement equipment
- Methodology on ledger management of tube wells

2) Drawing up manual and textbook for the training

Japanese consultant will prepare the manual and textbook covering the above scope. The textbook will be written in local language.

3) Conducting Lecture

Using the manual, technical guidance as a main body of lecture will be provided by Japanese. Using textbook, additional explanation will be provided. The number of

trainee will be one third of operators of each agency. Trainees, who are supposed to have work experience in operation and maintenance of wells, will be selected based upon the recommendation of each agency.

4) Overall evaluation of the training output

Examination will be implemented before and after the lecture to measure the training output to know how much basic knowledge is acquired. And also it will be confirmed whether operation record and ledger sheet are prepared properly or not.

Module 2. Organizing Water Committee and Gravity Water Supply Unit

Assistance will be provided by both Japanese and local consultants to support the Government of Pakistan to acquit their obligation.

- Water Committee
 - ✧ Establishment of working group of Water Committee
 - ✧ Preparation for holding Water Committee (drawing up the draft bylaws, call-up list and draft agenda)
 - ✧ Repetitive holding of Water Committee
 - ✧ Agreement and contract on water allocation of bulk water supply
 - ✧ Agreement and contract on tariff of bulk water supply
- Gravity Water Supply Unit
 - ✧ Government of NWFP approving establishment of Gravity Water Supply Unit
 - ✧ Establishment of personnel selection committee and selection policy
 - ✧ Personnel selection
 - ✧ Bylaws preparation

Module 3. Strengthening administrative and technical division of surface water supply system

1) Training plan on slow sand filtration system will be designed by Japanese consultant. The scope of training plan will be as follows.

- Administrative division
 - ✧ Guidance of preparation of water supply service plan
 - ✧ Guidance of preparation of invoice book
 - ✧ Guidance of preparation of payment book
- Technical division
 - ✧ Guidance of water quantity control method
 - ✧ Guidance of water filtering process and monitoring method
 - ✧ Guidance of chlorinating and maintenance method
 - ✧ Guidance of sludge removal method from sedimentation basin and washing method of roughing filter
 - ✧ Guidance of sand scrapping and washing method of slow sand filter
 - ✧ Guidance of supervising method of water quality

2) Manual and textbook preparation for the training

Japanese consultant will prepare manual and textbook covering the above scope of training. The manual and textbook for technical and administrative division will be prepared in local language and English respectively.

3) Conducting lecture

Using the manual, technical guidance as a main body of lecture and additional explanation using textbook will be provided by Japanese consultant. All operators of technical division will be targeted. Three trainees of administrative division will be selected from Gravity Water Supply Unit and one trainee will be selected from each agency.

Trainees will be selected based on the recommendation from each agency. It is required for trainees to communicate in English and have work experience in operation and maintenance of wells.

4) Overall evaluation on the training output

Examination will be implemented before and after the lecture to measure the training output to know how much basic knowledge is acquired. And also it will be confirmed whether operation record and ledger sheet are prepared properly or not.

Module 4. Assistance for establishment of metered water tariff system

Addition to the classroom lecture and OJT for meter readers, assistance will be provided by both Japanese and local consultant for consensus-building among three organizations and beneficiaries for establishing metered water tariff system.

a. Capacity building of meter reader

1) Training plan will be designed by Japanese consultant.

The scope of training plan will be as follows.

- Practical training for water tariff collection
 - ✧ Meter reading
 - ✧ Water meter maintenance
- Guidance of preparation for invoice book
- Guidance of preparation for payment book

2) Manual and textbook preparation for the training

Japanese consultant will prepare manual and textbook covering the above scope of training.

3) Conducting lecture

Using the manual, practical guidance as a main body of lecture and additional explanation by using textbook will be provided by local consultant under the instruction of Japanese consultant. The trainees will be all meter readers of each agency. New meter readers will be selected based on the recommendation from each agency

4) Overall evaluation on the training output

It will be confirmed by Japanese consultant whether operation record and ledger sheet are prepared properly or not.

b. Beneficiaries consensus building

Three organizations will introduce metered tariff system and change the water tariff collection system. Hence, sufficient explanation to the beneficiaries will be required. Assistance will be provided for consensus building among three organizations and

beneficiaries. The contents of assistance will be as follows.

1) Conflict Assessment

- ✧ Stakeholder Analysis
- ✧ Designing activity plan

2) Establishment of bulk water supply system and conducting campaign activity on improved service

3) Disseminating new water tariff system and installment of water meter

4) Holding public hearing and open-house (to disseminate water- saving method)

6. Resource procurement method for the implementation of soft component

Personnel to be assigned for the implementation of soft component will be as follows.

1) Japanese consultant (Specialist in operation and maintenance of wells) 1 person

Specialist in operation and maintenance of wells with sufficient experience on the ground water development projects will be assigned. Local consultant will not be assigned because there are not proper personnel who can carry out the training on well maintenance such as well monitoring.

Japanese consultant will be in charge of following activities.

- Classroom lecture and OJT on well management and pump operation and maintenance
- Designing plan and activity process and supervising the programme on well operation and maintenance
- Communicating with and reporting to the implementing agency and related Japanese organization
- Discussing and coordinating with each related agency of this programme in accordance with the construction work

2) Japanese Consultant (Specialist in system and organization) 1 person

Specialist with sufficient experience on system and organization of water supply service will be assigned and implement following activities.

- Supporting the implementing agency for organizing Water Committee in establishing surface water supply system
- Designing plan and activity process and supervising the programme on improvement of system and organization
- Communicating with and reporting to the implementing agency and related Japanese organization
- Discussing and coordinating with each related agency of this programme in accordance with the construction work
- Providing technical assistance to the local personnel who will be the main actor of activities

3) Japanese consultant (specialist in operation and maintenance of surface water supply system)

Engineer with sufficient experience on operation and maintenance of slow sand filtration system will be assigned and implement following activities.

- Providing classroom lecture and OJT on operation and maintenance of slow sand filtration system

- Designing plan and activity process and supervising the programme on operation and maintenance of slow sand filtration system
- Communicating with and reporting to the implementing agency and related Japanese organization
- Discussing and coordinating with each related agency of this programme in accordance with the construction work
- Providing technical assistance to the local personnel who will be the main actor of activities

4) Japanese consultant (Specialist in water tariff improvement) 1 person

Specialist with sufficient experience on water supply service and operation and maintenance will be assigned and implement following activities.

- Designing plan and activity process and supervising the programme in establishing metered water tariff system
- Communicating with and reporting to the implementing agency and related Japanese organization
- Discussing and coordinating with each related agency of this programme in accordance with the construction work

5) Japanese consultant (Specialist in social education)

Specialist with sufficient experience on participatory development project will be assigned and will implement following activities.

- Providing assistance for consensus building among beneficiaries and holding public hearing in establishing metered water tariff system
- Designing plan and activity process and supervising the programme in consensus building among beneficiaries and
- Communicating with and reporting to the implementing agency and related Japanese organization
- Discussing and coordinating with each related agency of this programme in accordance with the construction work

6) Local consultants

Implementing agency doesn't have enough know-how for this soft component activity. Therefore, the local consultants who have similar experience and ability will be employed. Technique will be transferred and fixed to them. The local consultants are supposed to have similar experience and ability of smooth communication with beneficiaries. Setting up the subcontract with local consulting firm was examined, however, there is no consulting firm which is specialized in water supply service. Therefore, some personnel will be employed from local university and consulting firm and implement the activities in establishing Gravity Water Supply Unit and metered water tariff system under the supervision of Japanese consultant.

① Personnel for supporting system and water tariff improvement 4 persons

Under the instruction of Japanese consultant, the local consultants will establish the Gravity Water Supply Unit and water metered tariff system with implementing agency. Local consultants will report to Japanese consultants on the progress and outputs of each activity. Local consultants are supposed to have experience of establishment of

operation and maintenance system, programme of capacity building on finance and accounting.

② Personnel for conducting social education 6 persons

Under the Japanese consultant, local consultant will implement interview survey to beneficiaries and campaign activity on consensus building of beneficiaries. The local consultant is supposed to have the experience on participatory planning, monitoring and evaluation and programme on capacity building of communities.

7. Schedule of soft component program

The schedule of soft component program is attached.

8. Outputs of soft component

Outputs of soft component activity are as follows.

- ① Final report on the soft component
- ② Well monitoring system manual
- ③ Operation record of pump
- ④ Bylaws of Water Committee
- ⑤ Agreement and contract on water allocation of bulk water supply
- ⑥ Agreement and contract on water tariff of bulk water supply
- ⑦ Bylaws of Water Committee
- ⑧ Water supply service plan
- ⑨ Invoice and payment book
- ⑩ Facility operation manual
- ⑪ Operation record of surface water supply system
- ⑫ Training textbook for meter reader
- ⑬ Water tariff collection manual
- ⑭ Invoice and payment book for water metered tariff

9. Approximate estimate of soft component

The cost for the soft component is estimated approximately 34 million yen

10. Obligation of implementing agency

Obligations of implementing agency for soft component activity is as follows

- Establishment of Water Committee
- Establishment of Gravity Water Unit
- Personnel allocation in Gravity Water Unit
- Installing water meter

Completion of securing personnel and budget for establishing Water Committee and Gravity Water Unit until February 2010 were agreed on minutes. It is highly possible to implement actually because the budget was already estimated in last PC-1.

Water meter will be installed in all household of targeting site of this project. Hence, even if the budget is estimated, the timing of actual distribution of budget should be considered. Otherwise, insufficient budget could be impediments of the project.

Soft Component Activity (Input Plan)

Module 1 Activity on proper well management and operation and maintenance of pumps (June 2012)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
1-1 Designing Training Plan	Recognizing the current condition of well maintenance and operation. Accordingly, designing training plan. 1 Recognizing current condition (pump operation, quantity and quality of water) 2 Settle the contents of lecture and date 3 Selection of Trainee and conference room	3 organizations	● Recognizing the operational condition of facilities ● Operator inspection ● Compiling existing data ● Collecting request and having discussion	Specialist in operation and maintenance of well 1 person (Japanese consultant)	5	● List of trainees ● Summary of the training plan
1-2 Preparation of Textbook and Manual 【The Contents of Textbook】 ● Hydrogeology ● Well Structure ● Well Test ● Water Level Measure Method ● Water Flow Measure Method ● Equipments Maintenance Method ● Preparation of Well Management ledger	Preparing the textbook for classroom lecture and OJT. Preparing practical manual for pump operators	3 organizations	● Preparation of textbook for training ● Preparation of textbook for operation	Specialist in operation and maintenance of well 1 person (Japanese consultant)	5	● Training textbook ● Operation Manual
1-3 Classroom Lecture and OJT	1 For effect measure, examination will be implemented in the beginning of the training. 2 Conducting lecture using above textbook. 3 Conducting OJT for new wells and rehabilitated wells using the above manual. 4 Inspecting the sites of well boring and rehabilitation if possible.	Pump Operators of 16 targeting wells.	● Classroom lecture ● OJT	Specialist in operation and maintenance of well 1 person (Japanese consultant)	9	● Attendance book ● Examination result ● Well operation ledger for OJT
1-4 Effect Measure	Confirmation on operational condition for effect measure at the test and active stage.	Pump Operators of 16 targeting wells.	● Examination for effect measure ● Confirmation on operational condition and additional instruction after the completion of training.	Specialist in operation and maintenance of well 1 person (Japanese consultant)	7	● Examination result ● Pump operation record
Specialist in operation and maintenance of well Total 1 person (Japanese consultant)				Actual working period Travelling period Total	26 4 30	

Notes

Implementation Period: Launching training before the completion of construction of new wells, pumps and renewal of pumps of existing wells is preferable

Targeting Group of Training: Pump Operators as targeting group of training inspect the sites of well boring and rehabilitation before or during the training is preferable

Soft Component Activity (Input Plan)

Module 2-1 Assistance for organizing Water Committee (Japanese Consultant for first travelling period) (July 2010)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
2-1-1 Designing plan for holding Water Committee	Confirmation of established working group in the EDO Works & Service District Government Abbottabad.	NWFP 3Organizations	● Discussion and Interview ● Stakeholder Analysis ● Preparation of call-up list	Specialist in system and organization 1 person (Japanese Consultant)	7	● Approval certification on establishment of working group ● Call-up list
	Stakeholder Analysis for setting subject of discussion			Personnel for supporting system and water tariff improvement 1 person (Local Consultant)	(7)	
2-1-2 Preparation for holding Water Committee		NWFP 3Organizations	● Preparation of draft byelaws of Water Committee ● Preparation of setting draft subjects of discussion ● Setting schedule for the committee	Specialist in system and organization 1 person (Japanese Consultant)	7	● Draft byelaws of Water Committee ● Draft subject of discussion
				Personnel for supporting system and water tariff improvement 2 persons (Local Consultant)	(2×7)	
2-1-3 Holding Water Committee	Assisting the progress of first Water Committee and setting schedule for the second and later ones	NWFP 3Organizations Water Committee		Specialist in system and organization 1 person (Japanese Consultant)	4	● Attendance list ● Proceeding summary
				Personnel for supporting system and water tariff improvement 2 persons (Local Consultant)	(2×7) *	
Subtotal 1 Specialist in system and organization one person (Japanese Consultant)				Actual working period	18	
Subtotal 1 For supporting system and water tariff improvement (Local Consultant)				Actual working period	(35)	

Soft Component Activity (Input Plan)

Module 2-2 Assistance for organizing Water Committee (Japanese Consultant : first travelling period) (August 2010)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
2-2-1 Assistance for securing approval from NWFP on Gravity Water Supply Unit	Confirming the approval of establishment of Gravity Water Supply Unit	EDO Works & Services	● Confirmation on approval certificate	Specialist in system and organization 1 person (Japanese Consultant)	1	● Approval certificate
2-2-2 Assistance for establishing committee for personnel selection and policy	Assistance for setting stipulation of personnel selection	EDO Works & Services	● Advice and assistance for personnel selection	Specialist in system and organization 1 person (Japanese Consultant)	3	● Draft criteria on personnel selection
2-2-3 Assistance for preparation of bylaws	Assistance for preparation of bylaws in accordance with the operation of the Gravity Water Supply Unit	EDO Works & Services	● Advice and assistance for preparation of bylaws	Specialist in system and organization 1 person (Japanese Consultant)	4	● Draft bylaws
				Personnel for supporting system and water tariff improvement 2 persons (Local Consultant)	(25)**	
Subtotal 1 Specialist in system and organization one person (Japanese Consultant)				Actual working period	8	
Subtotal 1 For supporting system and water tariff improvement (Local Consultant)				Actual working period	(25)	
Total (Subtotal 1+2) Specialist in system and organization one person (Japanese Consultant)				Actual working period	26	
				Travelling period	4	
				Total	30	
Total (Subtotal 1+2) For supporting the system and water tariff improvement 2 persons (Local Consultant)				Actual working period	(60)	

*Considering 3 days continued support by Japanese consultant after returning to Japan $2 \times (4+3) = 14$ days

**Considering 3weeks continued support by Japanese consultant after returning to Japan $21+4=25$ days

Soft Component Activity (Input Plan)

Module 2-1 Assistance for organizing Water Committee (Japanese Consultant from the end of first travelling to the beginning of second travelling) (October 2010-March 2011)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
2-1-4 Continued Support for Water Committee	Coordinating preparation of service plan of each agency	Water Committee	● Support organizations in analysis ● Advice for Water Committee	Personnel for supporting system and water tariff improvement 2 persons (Local Consultant)	(1×30)	● Proceeding summary ● Prepared document
2-1-5 Designing Water Supply Service Plan	Supporting preparation of service plan of each agency for discussion on water allocation and tariff of bulk water supply	3 organizations Gravity Water Supply Unit	● Present analysis ● Draft preparation ● Discussion	Specialist in water tariff improvement 1 person (Japanese consultant)	26*	● Water supply service plan of each agency
				Personnel for supporting system and water tariff improvement 2 persons (Local Consultant)	(30+4×30)*	
Total Specialist in metered water tariff 1 person (Japanese consultant)				Actual working period	26	
				Travelling period	4	
				Total	30	
Total For supporting the system and water tariff improvement 1 person (Local Consultant)				Actual working period	150	

*Lecture to each agency for the launch of designing water supply service will be conducted. 26 days activities consist of 1) 2 days for recognizing current condition, 2) 10days for textbook preparation, 3) 14 days for lectures.

**Designing water supply service plan with each agency taking 4 months (1month for each). 30days activities consist of 1) 7 days for recognizing and analysing current condition, 2) 7 days for discussion on policy of water supply service plan, 3) 7days for preparation of draft plan, 4) 7days for discussion on the draft, 5) 2 days for approval of last draft. To cover the huge contents of lecture, local consultants will prepare the textbook in advance (for 30 days).

Soft Component Activity (Input Plan)

Module 2-1 Assistance for organizing Water Committee (Japanese Consultant : second travelling period) (April 2011)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
2-1-6 Facilitating approval and contract conclusion on allocation of bulk water supply	Facilitating approval on allocation and tariff of bulk water supply	Water Committee 3 organizations Gravity Water Supply Unit	● Confirmation of service plan of each agency ● Discussion with related organizations ● Discussion in Water Committee ● Facilitating the preparation of approval and contract conclusion	Specialist in system and organization 1 person (Japanese Consultant)	26	● Approval or contract on allocation of bulk water supply
				Personnel for supporting system and water tariff improvement 1 person (Local Consultant)	(1×30)*	
2-1-7 Facilitating approval and contract conclusion on bulk water tariff	"	Water Committee 3 organizations Gravity Water Supply Unit	"	Specialist in system and organization 1 person (Japanese Consultant)	"	● Approval or contract on tariff of bulk water supply
				Personnel for supporting system and water tariff improvement 1 person (Local Consultant)		
Total Specialist in system and organization one person (Japanese Consultant)				Actual working period	26	
				Travelling period	4	
				Total	30	
For supporting the system and water tariff improvement 1 person (Local Consultant)				Actual working period	(30)	

*30 days consists of 4days for pre preparation and 26 days for accrual activities

Soft Component Activity (Input Plan)

Module3 Activity on operation and maintenance of surface water system (December 2012)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
3-1 Designing training plan	Designing training plan in accordance with operational condition supposed by spec of facility	Gravity Water Supply Unit	● Recognizing operational condition of facilities ● Inspection ● Compiling existing data ● Collecting request and discussion	Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)	7	● Training Plan
3-2 Manual preparation	Preparing manual in accordance with the contents of lecture	Gravity Water Supply Unit	● Preparation of operation manual	Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)	14	● Operation manual
3-3 Lecture 【Contents】 ● Introduction of water quantity control method ● Introduction of water filtration process and monitoring method ● Introduction on chlorine dosage and management method ● Introduction on sludge removal from sedimentation basin and washing of roughing filter method ● Introduction on scrapping sand in slow sand filter and washing method ● Introduction on supervision of water quality method	1 Implementing examination for the effect measure in the beginning of lecture 2 Conducting lecture with above manual	Each operator	● Classroom lecture	Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)	7	● Examination for effect measure ● Attendance list
3-4 Test operation	Launching the test operation with manual	Each operator	● OJT	Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)	26	● Water quality management ledger ● Daily operation record
3-5 Confirmation of operation	Confirming the operational condition	Each operator	● Introduction for confirmation	Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)	2	● Confirmation record
Total Specialist in operation and maintenance of surface water system 1 person (Japanese consultant)				Actual working period Travelling period Total	56 4 60	

Soft Component Activity (Input Plan)

Module 4-1 Consensus-building among beneficiaries for change of water tariff system (October 2012)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
4-1-1Confirmation of water supply service condition, needs and operational condition of facilities of each agency	Recognizing current water supply condition of target site, selecting stakeholder for analysis and having appointment for the stakeholder analysis	3 organizations Beneficiaries	● Reorganizations of water service plan of each organizations ● Preparation of stakeholder analysis list	Specialist in social education 1person (Japanese consultant)	5	● List of stakeholder analysis
4-1-2 Stakeholder analysis and conflict assessment	Conducting interview survey to related persons and collecting information which will be required in the possibility of consensus building	3 organizations Beneficiaries	● Interview survey ● Stakeholder analysis	Specialist in social education 1person (Japanese consultant)	7	● Result of stakeholder analysis
				Personnel for conducting social education 1 person (Local consultant)	(2)	
4-1-3Designing consensus-building programme	Setting approach for consensus building and date based on the above result	3 organizations Beneficiaries	● Programme preparation	Specialist in social education 1person (Japanese consultant)	8	● Consensus-building programme
				Personnel for conducting social education 1 person (Local consultant)	(8)	
4-1-4 Holding public hearing and open house for the campaign of new water tariff system and installment of water meter	Conducting approach for consensus building	3 organizations Beneficiaries	● Training for persons in charge of each campaign ● Preparation of materials and panel for campaign ● Campaign Activity	Specialist in social education 1person (Japanese consultant)	36*	● Open house holding record
				Personnel for conducting social education 6 persons (Local consultant) 3groups (2persons/group)	(30×6)	
Total Specialist in social education 1person(Japanese consultant)				Actual working period Travelling period Total	56 4 60	
Total Specialist in social education(Local consultant)				Actual working period	(190)	

*4 days for preparation of material for activities, 2 days for personnel training for campaign and 30 days for conducting campaign. Conducting campaign to approximately 20,000 household taking 30 days (200 household /day/group × 3groups)

Soft Component Activity (Input Plan)

Module 4-2 Establishment of water tariff collection system (January 2013)

Contents of Activity	Objective	Target Group	Implementation Method	Implementation Resource	Period	Outputs
4-2-1Designing training plan for capacity building of water reader	Referring to the activity of meter readers of Service Unit of Nawanshehr Urban UC, training plan will be designed in accordance with the current condition. 1 Inspecting the operational condition of service Unit of Nawanshehr Urban UC to recognize the current condition and considering the water tariff collection system to spread to other organizations 2 Inspection of activities of meter reader 3 Confirming the condition of preparation for the shift to water metered tariff system in District Government Abbottabad and Abbottabad TMA 4 Examining draft water metered system 5 Trainee selection	3 organizations	● Discussion with 3organizations ● Interview survey for collecting needs	Specialist in metered water tariff collection 1 person (Japanese consultant)	4	● Trainees list ● Draft training plan
				Personnel for supporting system and water tariff improvement 1 person (Local Consultant)	(4)	
4-2-2 Preparing textbook and manual for the training 【Contents of textbook】 ➢ Meter reading method ➢ Invoice book ➢ Payment book ➢ Water meter maintenance	Preparing textbook and manual for training	3 organizations	● Preparation of textbook for training reflecting above draft training plan ● Preparation of textbook	Specialist in metered water tariff collection 1 person (Japanese consultant)	4	● Training textbook ● Water tariff collection manual
				Personnel for supporting system and water tariff improvement 1 person (Local Consultant)	(4)	
4-2-3 Conducting classroom lecture with prepared textbook and manual	1 Conducting examination in the beginning of the training for the effect measure 2 Conducting lecture with above textbook 3 Conducting OJT with above manual	Meter readers (approximately 40 persons)	● Classroom lecture ● OJT	Specialist in metered water tariff collection 1 person (Japanese consultant)	14	● Examination result ● Meter read record (for OJT) ● Invoice book (for OJT) ● Payment book (for OJT)
				Personnel for supporting system and water tariff improvement 4 persons (Local Consultant)	(14×4)	
4-2-4 Effect measure	Conducting examination for effect measure Confirming the current condition in the site if water meter has already been installed	Meter readers (approximately 40 persons)	● Examination on effect measure ● Confirmation and introduction on condition of activities after the training	Specialist in metered water tariff collection 1 person (Japanese consultant)	4	● Examination result
				Personnel for supporting system and water tariff improvement 4 persons (Local Consultant)	(4×4)	
Total Specialist in metered water tariff collection 1 person (Japanese consultant)				Actual working period	26	
				Travelling period	4	
				Total	30	
Total For supporting the system and water tariff improvement (Local consultant)				Actual working period	(80)	

Schedule of Soft Component Program

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List of Collected Data

Survey Title: The Improvement of Water Supply System in Abbottabad in the Islamic Republic of Pakistan

No	Title	Media	Original/ Copy	Insurance	Year
1	Plan Showing Main Water Supply System For U/C Malik Pura And U/C City TMA ABBOTTABAD, For U/C Kehal And U/C City Urban TMA ABBOTTABAD		Copy	TMA ABBOTTABAD	
2	WATER SUPPLY SCHEME NAWANSHER		Copy	NAWANSHER	
3	Revalidation of NOC Regarding IEE(Initial Environmental Examination)		Copy	Environmental Protection Agency Environment Department Govt. of NWFP	2009
4	GOVERNMENT OF NORTH WEST FRONTIER PROVINCE IEE FOR GRAVITY FLOW WATER SURPPLY SCHEME ABBOTTABAD		Copy	WATER SUPPLY SANITATION WORKS & SERVICES DEPARTMENT ABBOTTABAD	
5	GI Pipe Price		Copy		
6	WATER SUPPLY SCHEME (1)Mirpur,(2)Banda Phagwarian, (3)Sheikhul Bandi,(4)Banda Ghazan, (5)Banda Dilazak, (6)Dera Wand, (7)Dobather Banda Amlok,(8)Lama Maria Banda Jalal Khan,(9)Jhangi,(10)Shalhad		Copy		
7	IMPROVEMENT OF WATER SUPPLY SYSTEM NAWANSHER DESIGN REPORT (ADB Loan)	Book	Copy	National Institute of Population Studies Islamabad, Pakistan	2008
8	OXFORD SCHOOL ATLAS FOR PAKISTAN	Map	Original	OXFORD UNIVERSITY PRESS	2008

Survey Title: The Improvement of Water Supply System in Abbottabad in the Islamic Republic of Pakistan

No	Title	Media	Original/ Copy	Insurance	Year
9	PAKISTAN Political	Original	Copy	Tehmoor Brothers	
10	PAKISTAN Map ADOMINISTRATIVE DISTT	Map	Original	ANMOL Publication	
11	Dor River Flow		Copy	At Rajoia Guaging Station	2003-2008
12	Rain Fall		Copy	At Kakul	2003-2008
13	Building Code of Pakistan(Seismic Provisions-2007)	Book	Copy	GOVERNMENT OF ISLAMIC OF PAKISTAN MINISTRY OF HOUSING & WORKS,ISLAMABAD	2007
14	ABBOTTABAD GUIDE MAP(S=1:15,000)	Map	Original	PRINTED AT THE SURVEY OF PAKISTAN OFFICES,RAWALPINDI.	
15	ABBOTTABAD DISTRICT(S=1:86,000)	Map	Original	Published under the direction of Major General Jamil-ur-Rahman Afridi,HI(M),afwc,psc,M.Sc.Engg(London),DIC,MIE(Pak),PE,Surveyor General of Pakistan.	
16	MURREE GUIDE MAP AND SURROUNDING AREAS (S=1:15,000)	Map	Original		
17	ROAD MAP OF PAKISTAN (S=1:2,000,000)	Map	Original	PRINTED AT THE SURVEY OF PAKISTAN OFFICES,RAWALPINDI.	
18	TEHSIL MUNICIPAL ADMM ABBOTTABAD		Copy		
19	WATER SUPPLY SERVICES UNIT NAWANSHEHR (Collection of User Charges)		Copy		7 /2007- 6/2008
20	WHO GUIDE LINES FOR DRINKING WATER QUALITY		Copy	PUBLIC HEALTH ENGINEERING PROVINCIAL LABPRATORY,KOHAT ROAD PESHAWAR	2009
21	A compendium of standards for Wastewater reuse in the Eastern Mediterranean Region	Book	Copy	World Health Organization Regional Office for the Eastern Mediterranean Regional centre for Environmental Health Activities CEHA	2006
22	PLANNING and DESIGN OF PURAL WATER SYSTEMS		Copy	PHED or WS&S,Peshawar	
23	Priority Diseases		Copy	DHQ and Exective Direct office (Health) Abbottabad	2008,2009
24	Process of Land Aquisition		Copy		

Survey Title: The Improvement of Water Supply System in Abbottabad in the Islamic Republic of Pakistan

No	Title	Media	Original/ Copy	Insurance	Year
25	Concept Paper for Capacity Development for Water and Sanitation Sector Punjab WASA Academy(Draft)		Copy	The Urban Unit, P&D Development, Government of Punjab	
26	INTRODUCTORY GUIDE PUNJAB GEOGRAPHICAL IMFORMATION SYSTEM	Pamphlet	Original	ditto	
27	SUMAARY OF THE DOCUMENTS REQUIRED TOBE ATTACHED WITH THE APPLICATION SUBMITTED FOR ISSUANCE OF LICENCE TO A CONSTRUCTOR		Copy		
28	CONTRACTORS'ENLISTMENT		Copy		
29	GI Pipe Price		Copy		2008
30	BASE MAP PESCO ABBOTTABAD DIVN		Copy		2009
31	CITY MAPS: Karachi,Lahore • Peshawar	Map	Original	Nelles Verlag GmbH	2007
32	NORTH-WEST FRONTIER PROVINCE	Map	Original	PRINTED AT THE SURVEY OF PAKISTAN OFFICE	2003
33	Data for Existing Tubewells		Copy		
34					
35					