

資料5 協議議事録 (M/D) 概略設計案説明調査時

**Minutes of Discussions**  
**on the Preparatory Survey for the Project for**  
**Urgent Improvement of Water Sector for the Host Communities of Syrian**  
**Refugees in Northern Governorates in the Hashemite Kingdom of Jordan Phase 2**  
**(Explanation on Draft Preparatory Survey Report)**

With reference to the minutes of discussions signed between Water Authority of Jordan (here in referred to as "WAJ") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on December 21<sup>st</sup>, 2015 in response to the request from the Government of the Hashemite Kingdom of Jordan (hereinafter referred to as "GOJ") dated August, 2014, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of the progress of the Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates in the Hashemite Kingdom of Jordan Phase 2 (hereinafter referred to as "the Project"), headed by Yuki Aratsu, JICA Senior Assistant Director, Global Environment Department, scheduled to stay in the country from 3<sup>rd</sup> to 9<sup>th</sup> December, 2016.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Amman, December 7, 2016



Eng. Yuki Aratsu  
Leader  
Preparatory Survey Team  
Japan International Cooperation Agency  
Japan



Eng. Tawfiq Z. Habashneh  
Secretary General  
Water Authority of Jordan  
Jordan

## ATTACHMENT

### 1. Objective of the Project

The objective of the Project is to improve water supply services in Irbid by/through rehabilitation of distribution pipes in Hawwara and Sarih district.

### 2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates in the Hashemite Kingdom of Jordan Phase 2”.

### 3. Project site

Both sides confirmed that the sites of the Project are in Hawwara district (Zone 1, 2) and Sarih district (Zone 3, 4), which are shown in Annex 1.

### 4. Responsible authorities for the Project

Both sides confirmed that the authorities responsible for the Project are as follows:

- 4-1. Water Authority of Jordan (hereinafter referred to as “WAJ”) will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings of the Project shall be taken care by relevant authorities properly and on time. The organization chart is shown in Annex 2.
- 4-2. The line Ministry of the Executing Agency is the Ministry of Water and Irrigation (hereinafter referred to as “MWI”). MWI shall be responsible for supervising the Executing Agency on behalf of the Government of Jordan.
- 4-3. Yarmouk Water Company (hereinafter referred to as “YWC”), as shown in Annex 2, is the responsible agency for operation and maintenance of the facilities to be constructed by the Project.

### 5. Contents of the Draft Report

The Jordanian side agreed in principle on the contents of the Draft Report in preparation explained by the Team. Key items are highlighted as follows:

- 5-1. The order of priority is confirmed by the Technical Notes agreed between the Jordanian side and the Team dated September 1, 2016. In the Technical Notes,

1

service pipes with water meter originally requested by the Jordanian side are excluded from the scope of the Project mainly because the Jordanian side is able to carry out the the service pipe connection works with their own sources.

5-2. The Team explained to the Jordanian side that designing process of the water pressure in the Draft Report is necessary to elaborate in order to complement the explanation in the Technical Notes dated on November 17, 2016. The Jordanian side agreed to the further elaboration of the design pressure in some areas subjected to high hydrostatic pressure due to topographic conditions. The Jordanian side explained that it recognized risks of high pressure to high density polyethylene (HDPE) pipe and decided use of HDPE pipe (grade PN25) in such areas. The Jordanian side also agreed to maintain the pressure reducing valves properly for minimizing risks of excessively high internal pressure to the polyethylene pipe.

6. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Target value of the key indicators are attained only when the prerequisite of the Project mentioned in the Draft Report are achieved. The Jordanian side shall be responsible for monitoring and facilitating the progress of other projects mentioned as “Prerequisite of the Project and Relationship with other Project” in the Draft Report.

[Quantitative indicators]

Indicator	Baseline Value (current value measured as of year 2016)	Target Value ( year 2020)
Water Supply Pressure	0.11Mpa – 0.50 Mpa	0.25 Mpa -0.75 Mpa

[Qualitative indicators]

- Improvement of water supply services by reduction of leakage and adjustment of water supply pressure by rehabilitation of the distribution pipeline networks of the Project area

7. Undertakings

Both sides confirmed the undertakings of the Project as described in Annex 4. The Jordanian side assured to take necessary measures and coordination including allocation of the necessary budget.

8. Cost estimate

Both sides confirmed that the cost estimate described in Annex 4 is provisional and supposed to cover the cost of Zones 1, 2, and 3, in case the project is implemented by the Japanese Grant Aid. The cost and the coverage zones are subject to the approval of the Government of Japan. It is further agreed that the costs are indicative at the Outline Design level. More accurate costs will be calculated and the contents of Annex 4 in the course of Detailed Design will be also updated.

9. Confidentiality of the cost estimate

Both sides confirmed that the cost estimate in Annex 4 should never be duplicated or disclosed until all the contracts under the Project are concluded.

10. Disclosure of Information

Both sides confirmed that the Survey results excluding the Project cost estimate will be disclosed to the public promptly after completion of the Preparatory Survey. All the Survey results including the Project cost estimate will be disclosed to the public after all the contracts of the Project are concluded.

11. Schedule of the Preparatory Survey

JICA will prepare the Draft Report based on the confirmed items in this Minutes of Discussions and submit it to the Jordanian side by the middle of January, 2017.

The Jordanian side will review the Report and submit the comment to JICA by the middle of February, 2017.

The final report will be sent to the Jordanian side around March 2017.

12. Schedule for the project implementation

12-1 The Team explained to the Jordanian side that the expected schedule for the project implementation is as attached in Annex 3.

12-2 Both sides confirmed that the schedule is tentative and will be changable. JICA explained that participation of Japanese enterprises in this project is not guranteed at this moment. JICA also explained to the Jordanian side that the Japanese side is finding the way to collaborate with other partner to realize the Project so as to mitigate delay of its implementation considering urgency of the Project.

13. Following conditions are confirmed in case the Project is implemented by the Japanese grant aid through JICA

13-1 Environmental and Social Considerations

13-1-1 General Issues

13-1-1-1 Environmental Guidelines and Environmental Category

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as B because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

13-1-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 6. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Jordanian side shall submit the modified version to JICA in a timely manner.

13-1-2 Environmental Issues

13-1-2-1 Environmental Impact Assessment (EIA)

Both sides confirmed that the EIA is unnecessary for the Project as the Ministry of Environment (hereinafter MOE) declared it as Annex 7.

13-1-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project as Annex 8. Both sides agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the Detailed Design stage.

13-1-3 Social Environment

13-1-3-1 Land Acquisition and Resettlement

Both sides confirmed that land acquisition and resettlement are not expected to occur in implementation of this Project.

13-1-4 Environmental and Social Monitoring

13-1-4-1 Environmental and Social Monitoring

Both sides agreed that the Jordanian side will submit results of environmental and social monitoring to JICA by using the monitoring form attached as Annex 9. The monitoring form should be submitted to JICA every month during the



construction period.

#### 13-1-4-2 Information Disclosure of Monitoring Results

Both sides confirmed that the Jordanian side will disclose results of environmental and social monitoring to local stakeholders through their website / in their field offices.

The Jordanian side agreed JICA will disclose results of environmental and social monitoring submitted by the Jordanian side as the monitoring forms attached as Annex 9 on its website.

#### 13-2 Monitoring during the implementation

The Project will be monitored by the Executing Agency, and monitoring results will be reported to JICA every month by using the form of Project Monitoring Report (PMR) attached as Annex 5.

#### 13-3 Project completion

Both sides confirmed that the Project completion date is defined as when all the facilities constructed and equipment procured by the grant are in operation. The Jordanian side shall report the completion of the Project to JICA promptly, but in any event not later than six months after the date of completion of the Project.

#### 13-4 Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the Project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Jordanian side will be required to provide necessary support for the data collection.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Project Implementation Schedule

Annex 4 Major Undertakings to be taken by the Government of Jordan

Annex 5 Project Monitoring Report (template)

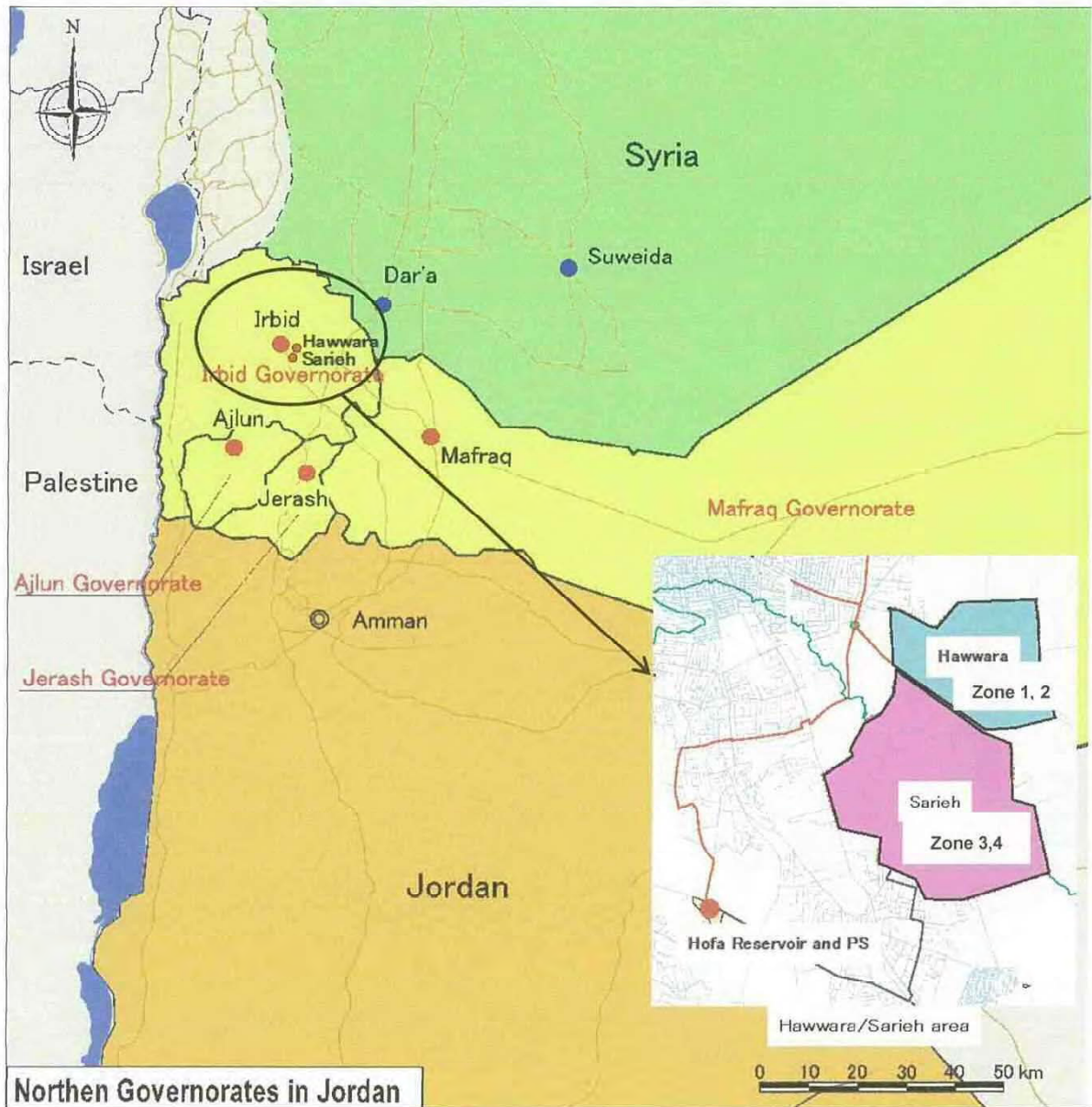
Annex 6 Environmental Check List

Annex 7 Letter by the Ministry of Environment, The Hashiemite Kingdom of Jordan

Annex 8 Environment Management and Monitoring Plan

Annex 9 Environmental and Social Monitoring Form

Annex 1 Project Site

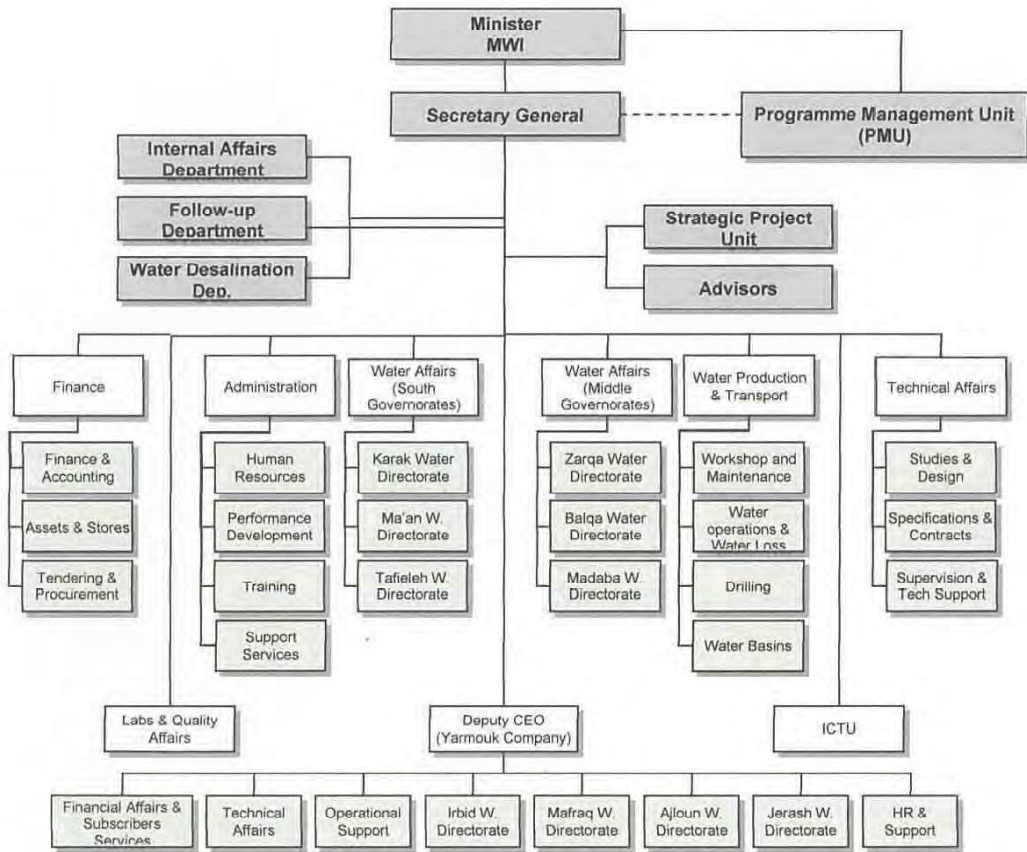




Annex 2 Organization Chart

1. Water Authority of Jordan (WAJ)

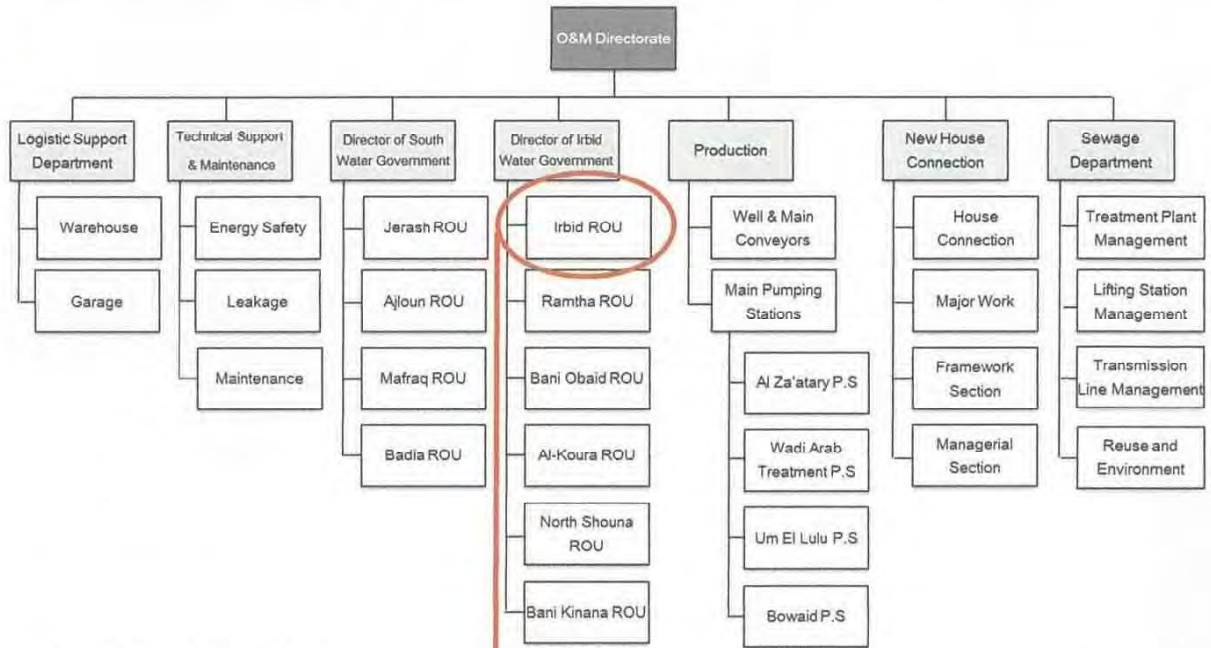
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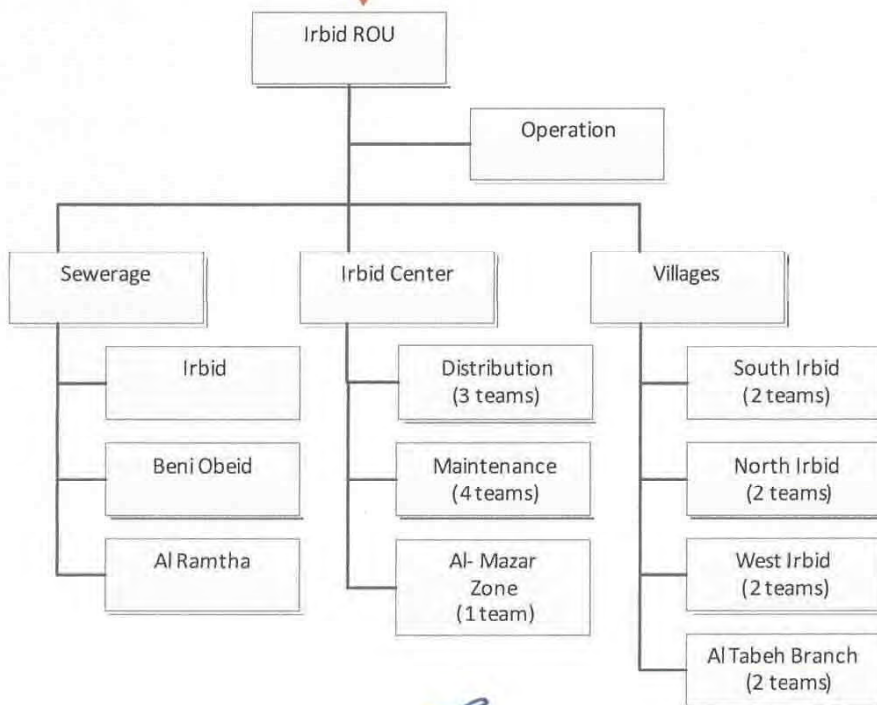
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2. Yarmouk Water Company (YWC)

*J*



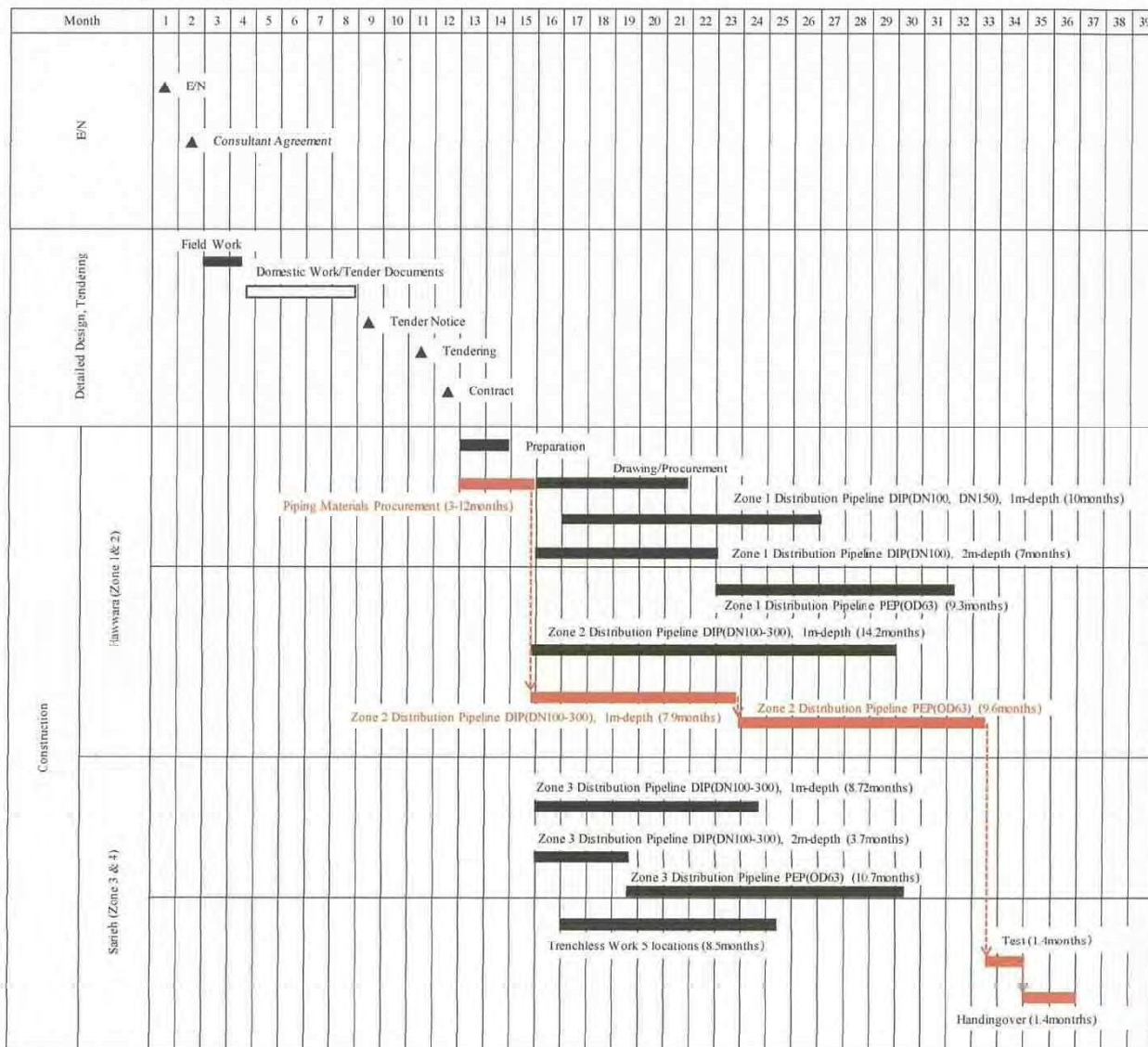
(Regional Operation Unit of Irbid)



*J*  
*YWC*  
*J*

AN

### Annex 3 Project Implementation Schedule



Critical Path



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## Annex 4

**Major Undertakings to be taken by the Jordanian Side**

Items	Estimated cost (thousand JD)	Remarks
1. Installation of distribution pipeline		
(1) To provide water and chemicals for testing and cleaning & disinfection of distribution pipeline	15	
(2) To cooperate for construction work on the road including acquisition of its approvals and permissions, and traffic control procedure	--	
(3) To cooperate during pipe connection work such as attendance at water suspension work, its notice to people and so on.	--	
2. Installation of service pipes	834	Based on estimated customers of 2,382 including water meters
(1) To install service pipes including water meters		
(2) To provide water and chemicals for testing		
3. Common Items for construction works		
(1) To provide temporary stock yards without charge for construction materials and machineries and lands for temporary works	--	
4. Other Items		
(1) To coordinate for required approvals and permissions from relevant authorities to implement detailed design and construction works	--	
(2) To cooperate in consultation with residents living near the construction sites and to coordinate procedures for traffic control in works with relevant authorities	--	
(3) To carry out necessary procedures for issue of A/P required for payments to Japanese Consultants and Contractor and to bear the commissions for advising and payment to a bank in Japan for banking services based upon the Banking Arrangement	5	
(4) To ensure prompt unloading and customs clearance of the goods for the project at the port of disembarkation in Jordan	--	
(5) To accord Japanese nationals whose services may be required in connection with the supply of products and services under the verified contract such facilities as may be necessary for their entry into Jordan and stay there for the performance of their works.	--	
(6) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in Jordan with respect to the supply of the products and services under the verified contract. And to take necessary measures for such tax exemption.	--	
(7) To use, operate and maintain properly the facilities and equipment constructed or procured under the Japan's Grant Aid program.	--	
(8) To bear all the expenses, other than to be borne by the grant Aid, necessary for construction of the facilities.	--	
5. After the Project		
(1) To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid <ul style="list-style-type: none"> <li>➤ Allocation of maintenance cost</li> <li>➤ Operation and maintenance of facilities</li> <li>➤ Routine check/Periodic inspection</li> </ul>	--	

**Major Undertakings to be covered by the Japanese Grant**

Items	Tentatively Estimated Cost (million Yen)	Remarks
1. Installation of distribution pipeline	3,800	
(1) To procure piping materials		
(2) To install distribution pipeline, pressure reducing valves		
(3) To carry out testing, cleaning and disinfection of distribution pipeline		Water and chemicals are provided by the recipient country without charge.
2. Operation guideline		
(1) To prepare operation & maintenance manual for pressure reducing valves		
(2) To conduct initial training on operation of pressure reducing valves		
3. Consulting service for Detailed Design and supervision of the construction	270	
4. Contingency	200	

**Project Monitoring Report**  
**on**  
**Project Name**  
**Grant Agreement No. XXXXXXXX**  
 20XX, Month

**Organization Information**

<b>Authority (Signer of the G/A)</b>	Person in Charge _____ _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
<b>Executing Agency</b>	Person in Charge _____ _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
<b>Line Ministry</b>	Person in Charge _____ _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

**Outline of Grant Agreement:**

<b>Source of Finance</b>	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
<b>Project Title</b>	
<b>E/N</b>	Signed date: Duration:
<b>G/A</b>	Signed date: Duration:



**1: Project Description**

**1-1 Project Objective**

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**1-2 Necessity and Priority of the Project**

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

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**1-3 Effectiveness and the indicators**

- Effectiveness by the Project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr )	Target (Yr )
Qualitative Effect		

**2: Project Implementation**

**2-1 Project Scope**

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D) Attachment(s):Map	Actual: (PMRand PCR) Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	(M/D)	(PMR and PCR)  Please state not only the most updated schedule but also other past revisions chronologically.

'Soft component' shall be included in 'Items'.	All change of design shall be recorded regardless of its degree.
--	--

2-1-2 Reason(s) for the modification if there have been any.

(PMR and PCR)

2-2 Implementation Schedule  
 2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
[M/D]  'Soft component' shall be stated in the column of 'Items'.  Project Completion Date*	(M/D)		(PMR, PCR) As of (Date of Revision)  Please state not only the most updated schedule but also other past revisions chronologically.

\*Project Completion was defined as \_\_\_\_\_ at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

(PMR and PCR)

2-3 Undertakings by each Government

2-3-1 Major Undertakings  
 See Attachment 2.

2-3-2 Activities  
 See Attachment 3.

2-3-3 Report on RD  
 See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

Table 2-3-1 Comparison of Original and Actual Cost by the Government of Japan  
 (Confidential until the Tender)



Items			Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Consulting Services	- Detailed design - Procurement Management - Construction Supervision			
Total				

Note: 1) Date of estimation:  
 2) Exchange rate: 1 US Dollar = Yen

Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

Items			Cost (Million USD)	
	Original	Actual	Original	Actual
	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Total				

Note: 1) Date of estimation:  
 2) Exchange rate: 1 US Dollar = (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR, PCR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

<b>Original:</b> (M/D)
<b>Actual, if changed:</b> (PMR and PCR)

**2-6 Environmental and Social Impacts**

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

**Environmental Monitoring**

[Name of EA] and the JICA mission confirmed environmental monitoring will be conducted by [Name of EA] in accordance with the Environmental Monitoring Plan described in the [Preparatory Study Report / Environmental Impact Assessment (EIA) / Environmental Management and Monitoring Plan].

[Name of EA] and the JICA mission agreed that [Name of EA] will submit the results of environmental monitoring to JICA XX Office as a part of [Project Status Report (PSR) / Quarterly Progress Report (QPR) / Monthly Progress Report] by filling in the Monitoring Form attached as Attachment XX on a quarterly basis during construction and semiannually after the completion of the Project for two years. In case JICA finds that there is a need for improvement in a situation with respect to environmental considerations after the agreed monitoring period, JICA may request to extend the period of monitoring and reporting until JICA confirms the issues have been properly addressed in accordance with the agreement between [Name of EA] and JICA.

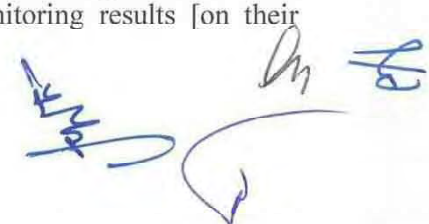
**Social Monitoring**

[Name of EA] and the JICA mission confirmed monitoring of [land acquisition and resettlement / indigenous people plan] proposed in [the RAP / Indigenous People Plan (IPP)] will be conducted by [Name of EA / Consultant]. [Name of EA] agreed that progress of land acquisition and implementation of RAP will be monitored until land acquisition and resettlement activities including livelihood restoration program are completed. [Name of EA] will report the monitoring results to JICA XX Office on a [quarterly / semiannually / annually] basis as a part of [PSR / QPR / Monthly Progress Report] by filling in Attachment XX.

In case there is a remaining issue that needs to be addressed (e.g. insufficient restoration of livelihood of displaced Project Affected Persons (PAPs)), JICA may request to extend the period of monitoring and reporting until JICA confirms the issues have been properly addressed and solved in accordance with the agreement between [Name of EA] and JICA.

**Information Disclosure of Monitoring Results**

[Name of EA] and the JICA mission confirmed it will take stipulated procedures for information disclosure in accordance with [Name of concerned Act / Law / Regulation]. In addition, the JICA mission requested [Name of EA] to disclose the monitoring results to local project stakeholders, and [Name of EA] agreed to disclose monitoring results [on their website / in their field offices].



[Name of EA] agreed JICA's disclosure of provided monitoring results in the Monitoring Form (Attachment XX) on its website to the extent that they are made public in XX. When third parties request further information, JICA disclose it, subject to approval by [Name of EA].

**3: Operation and Maintenance (O&M)**

**3-1 O&M and Management**

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)
Actual: (PCR)

**3-2 O&M Cost and Budget**

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)
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**4: Precautions (Risk Management)**

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:

	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
<b>Actual issues and Countermeasure(s)</b>	
(PMR and PCR)	

### 5: Evaluation at Project Completion and Monitoring Plan

#### 5-1 Overall evaluation

Please describe your overall evaluation on Project.

(PCR)

#### 5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

**5-3 Monitoring Plan for the Indicators for Post-Evaluation**

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

(PCR)



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Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
5. Monitoring report on environmental and social considerations
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)  
(Completion Report Only)

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Classification	Environmental Item	Major Check Items	Yes: Y No: N	Specific Environmental and Social Considerations (Reason for the Yes / No, basis, mitigation, etc.)
1 Licensing and explanation	(1) EIA and Environmental licensing	(a) Environmental assessment report (EIA report), etc. was created? (b) EIA report was either approved by the country's government? (c) Approved EIA report has collateral condition? If there is a collateral condition, the conditions are satisfied? (d) In the case other than the above, if necessary, environmental licensing from the competent authority of the local was acquired?	(a) N (b) N (c) N (d) N	(a) (b) (c) (d) At the stage that the scope of the water supply network of Hawwara and Sariel is determined by the basic design, the application for a preliminary review of the EIA to the MOE will be carried out
	(2) Explanation to local stakeholders	(a) About the impact and the contents of the project, an appropriate description to local stakeholders including information disclosure was carried out, and the understanding was gained? (b) The comments from the residents were reflected on project content ?	(a) N (b) N	(a) (b) After the above 1 (1), the EIA category to be carried out is specified by the central licensing committee. After the instruction, the explanation to stakeholders will be conducted if necessary
	(3) Consideration of alternatives	(a) Multiple alternatives of the project plan (when studying, and including items related to environmental and social) were considered?	(a) Y	(a) In Itofa-Bait Ras Pipeline, it is considered rerouting proposed and adopted the current plan.
2 Pollution measures	(1) Air quality	(a) Is there the air pollution caused by chlorine from the injection equipment and storage facility for chlorine disinfection? (b) Chlorine in the work environment is consistent with the occupational safety standards of the country?	(a) N (b)	(a) (b) Since the project is installation of water pipes and renovation of water supply network, chlorine is not used. Measures dust generated during the construction period is planned.
	(2) Water quality	(a) SS, BOD, COD, pH, and the like item of wastewater generated in accordance with the facility operation are consistent with drainage standards of the country?	(a) Y	(a) YWC manages it, and drinking water standard is satisfied. Since the project is installation of water pipes and the renovation of the water supply network, the project does not concern water quality management. However, the water quality of the terminal is improved by renovation.
	(3) Waste	(a) Waste sludge generated in accordance with the facility operation is either treated and disposed of properly in accordance with the provisions of the country?	(a) Y	(a) YWC is managee it, and the criteria is satisfied. Since the project is installation of water pipes and the renovation of the water supply network, the project does not performed waste management
	(4) Noise and vibration	(a) Noise and vibration from the pump facility, etc., are consistent with the standards of the country?	(a) Y	(a) YWC is managee it, and the criteria is satisfied. Since the project is installation of water pipes and the renovation of the water supply network, the project does not concern facility operation management. Measures noise and vibration generated during the construction period is planned.
	(5) Land subsidence	(a) When performing the pumping large amounts of groundwater, is there a possibility that the land subsidence occurs?	(a) N	(a) Since the project is installation of water pipes and the renovation of the water supply network, the project does not concern increase of groundwater intake.
3 Natural environment	(1) Protected areas	(a) Site is located in protected areas designated by laws of the country or international treaties and conventions? Project affects the protected areas?	(a)N	(a) The project area has more than 10km away from the Reverses the country specifv, the impact does not affect.
	(2) Ecosystem	(a) Site includes virgin forest, tropical natural forest, habitat ecologically important (coral reefs, mangrove swamps, tidal flats, etc.)? (b) Site includes the habitats of endangered species required protection by law of the country or international treaties and conventions? (c) If a significant impact on the ecosystem is concerned, measures to reduce the impacts on the ecosystem is conducted? (d) Water intake (surface water, underground water) by the project affects the aquatic environment such as rivers? Measures to reduce the impacts on the aquatic ecosystems etc. are carried out?	(a) (b) (c) (d)	(a) (b) (c) (d)
	(3) Hydrology	(a) Water intake (groundwater, surface water) by the project affects an adverse effect on the flow of surface water and ground water?	(a)	(a)

Classification	Environmental Item	Major Check Items	Yes: Y No: N	Specific Environmental and Social Considerations (Reason for the Yes / No, basis, mitigation, etc.)
4 Social environment	(1) Resettlement	(a) With the implementation of the project, involuntary resettlement occurs? If that occurs, efforts to minimize the impact of relocation is conducted? (b) For residents to transfer, appropriate description of compensation and life reconstruction measures would be done before the transfer? (c) Search for residents relocation was carried out, and the resettlement plan including compensation by the replacement cost and the recovery of livelihoods after relocation is conducted? (d) Payment of compensation is either carried out in the pre-transfer? (e) Compensation policy has been developed in the document? (f) The plan, among the relocated residents, in particular for socially vulnerable such as women, children, the elderly, the poor, ethnic minorities, indigenous peoples, etc has been made with appropriate consideration? (g) For relocated residents, the pre-transfer agreement can be gotten? (h) The organizational framework established to properly implement the resettlement is considered? Enough capacity to implement the plan and budget measures can be secured? (i) Monitoring for the impacts of resettlement is planned?	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j)	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j)
	(2) Life and livelihood	(a) Adverse effect results to the life of residents by the project? Adequate measures is considered to reduce the impacts, if necessary? (b) Water intake (surface water, underground water) by the project affects existing water use?	(a) (b)	(a) (b)
	(3) Cultural heritage	(a) Is there risk by the project to heritages and historical sites which are archeologically, historically, culturally, and religiously precious? In addition, measures that have been stipulated in accordance with the country's laws are taken into account?	(a)	(a)
	(4) Landscape	(a) When the landscape to be considered particularly presents, the project adversely affects to it? If it is affected, necessary precautions is taken?	(a)	(a)
	(5) ethnic minorities	(a) Consideration to reduce the impact to minority of the country, indigenous cultures and lifestyle have been made? (b) Rights related to land and resources of ethnic minorities and indigenous people are respected?	(a) (b)	(a) (b)
	(6) Working environment	(a) In the project, the Act on the working environment of the country must be observed is kept? (b) Safety considerations in the hard part of the individuals involved in the project such as installation of safety equipment according to industrial accident prevention, management of hazardous substances, etc. are being measures? (c) Support implementation in the soft part of the individuals involved in the project such as the establishment of safety and health plan and safety training for workers (including public health and traffic safety) is planned and implemented? (d) Appropriate measures that security personnel involved in the project make sure not to violate the safety of the project stakeholders and local residents are taken?	(a) (b) (c) (d)	(a) (b) (c) (d)






Classification	Environmental Item	Major Check Items	Yes: Y No: N	Specific Environmental and Social Considerations (Reason for the Yes / No, basis, mitigation, etc.)
4 Social environment	(1) Resettlement	(a) With the implementation of the project, involuntary resettlement occurs? If that occurs, efforts to minimize the impact of relocation is conducted? (b) For residents to transfer, appropriate description of compensation and life reconstruction measures would be done before the transfer? (c) Search for residents relocation was carried out, and the resettlement plan including compensation by the replacement cost and the recovery of livelihoods after relocation is conducted? (d) Payment of compensation is either carried out in the pre-transfer? (e) Compensation policy has been developed in the document? (f) The plan, among the relocated residents, in particular for socially vulnerable such as women, children, the elderly, the poor, ethnic minorities, indigenous peoples, etc. has been made with appropriate consideration? (g) For relocated residents, the pre-transfer agreement can be gotten? (h) The organizational framework established to properly implement the resettlement is considered? Enough capacity to implement the plan and budget measures can be secured? (i) Monitoring for the impacts of resettlement is planned?	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j)	(a) (b) (c) (d) (e) (f) (g) (h) (i) (j)
	(2) Life and livelihood	(a) Adverse effect results to the life of residents by the project? Adequate measures is considered to reduce the impacts, if necessary? (b) Water intake (surface water, underground water) by the project affects existing water use?	(a) (b)	(a) (b)
	(3) Cultural heritage	(a) Is there risk by the project to heritages and historical sites which are archeologically, historically, culturally, and religiously precious? In addition, measures that have been stipulated in accordance with the country's laws are taken into account?	(a)	(a)
	(4) Landscape	(a) When the landscape to be considered particularly presents, the project adversely affects to it? If it is affected, necessary precautions is taken?	(a)	(a)
	(5) ethnic minorities	(a) Consideration to reduce the impact to minority of the country, indigenous cultures and lifestyle have been made? (b) Rights related to land and resources of ethnic minorities and indigenous people are respected?	(a) (b)	(a) (b)
	(6) Working environment	(a) In the project, the Act on the working environment of the country must be observed is kept? (b) Safety considerations in the hard part of the individuals involved in the project such as installation of safety equipment according to industrial accident prevention, management of hazardous substances, etc. are being measures? (c) Support implementation in the soft part of the individuals involved in the project such as the establishment of safety and health plan and safety training for workers (including public health and traffic safety) is planned and implemented? (d) Appropriate measures that security personnel involved in the project make sure not to violate the safety of the project stakeholders and local residents are taken?	(a) (b) (c) (d)	(a) (b) (c) (d)

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Classification	Environmental Item	Major Check Items	Yes: Y No: N	Specific Environmental and Social Considerations (Reason for the Yes / No, basis, mitigation, etc.)
5 Others	(1) Impact under construction	(a) Mitigation measures are prepared against pollution during construction (noise, vibration, turbid water, dust, exhaust gas, waste, etc.)? (b) The construction adversely affects the natural environment (ecosystem)? In addition, adequate measures considered to reduce impacts is prepared? (c) The construction adversely affects the social environment construction? In addition, adequate measures considered to reduce impacts is prepared? (d) The construction causes road congestion? Adequate measures considered to reduce impacts are prepared?	(a) (b) (c) (d)	(a) (b) (c) (d)
	(2) monitoring	(a) For items that are considered to have potential impacts of the above environment items, monitoring of project operators are planned and implemented? (b) How item of the plan, method, frequency, etc. are determined? (c) Monitoring system of the project operator (Continuity of the organization, personnel, equipment, and adequate budget) or be established? (d) The reporting procedure or the frequency, etc. from the project operator to the competent authority are stipulated?	(a) (b) (c) (d)	(a) (b) (c) (d)
6 points to note	Reference of other checklist	(a) If necessary, it should be evaluated also add the appropriate checks in check list according dam, the river.	(a)	(a)
	Notes on using environmental checklist	(a) If necessary, check the influence of environmental problems on a global scale or cross-border. (If such an element related to cross-border problems processing of waste, acid rain, ozone layer depletion, global warming can be considered)	(a)	(a)

Note 1) For the "standard of the country concerned" in the table, when there is a significant deviation as compared to the baseline which is internationally recognized, countermeasures are examined, if necessary. Items, which are not yet to be established in the local environmental regulations of the country, is examined by comparison with appropriate standards other than the country (including experience in Japan).

Note 2) Environmental Checklist is intended only to show the standard environment check items. Depending on the condition of the project and the local, it is necessary to add or delete items.



الرقم ١٠٢٢ / ٧ / ٤  
التاريخ  
الموافق ٢٠١٥ / ٩ / ٢٢

معالي وزير المياه والري

تحية طيبة وبعد ،،

إشارة لكتاب معاليكم رقم pmu/14/2375 تاريخ 2014/12/2 ومرفقه دراسة تقييم الأثر البيئي المبدئي لمشروع إنشاء خط ناقل لمياه الشرب من حوفا الى بيت راس وتأهيل شبكات مياه شرب في حوارة والصريح والممول من الوكالة اليابانية للتعاون الدولي (JICA).  
أوافق على تقرير الدراسة أعلاه شريطة:  
1- ضمان عدم تجاوز مستويات الضجيج للحدود المسموح بها.  
2- إعادة تأهيل مواقع العمل.  
3- اتخاذ اجراءات السلامة والحماية للسكان والعاملين في مناطق العمل.  
4- الإلتزام بالإجراءات الوقائية الواردة في الدراسة.  
وذلك استناداً إلى توصية اللجنة الفنية لمراجعة دراسات تقييم الأثر البيئي للمشاريع.

وتفضلوا بقبول فائق الاحترام ،،،

الدكتور طاهر راضي الشخشير

وزير البيئة

الجناب المهندس احمد القزويني  
المستشار العام

Annex 7 Letter by the Ministry of Environment, The Hashemite Kingdom of Jordan  
(Translation)

The Hashemite Kingdom of Jordan  
Ministry of Environment  
P.O.B 1408 Amman 11941  
Tel: +96265560112  
Fax: +96265516277  
Jordan

H.E. Minister of Water & Irrigation

Greetings:

With reference to Your Excellency's, letter No. pmu/14/2375 dated 2/12/2014 together with its attachment of the Evaluation Study of initial environmental impact for the construction of drinking water carrying line project from Hoofa to Bait Ras and prequalify the drinking water networks in Huwwarah and Sareeh which is financed by the Japanese International Cooperation Agency (JICA).

I approve the above study report provided:

1. Ensuring that noise levels do not exceed the permitted levels.
2. Prequalify the work sites again.
3. Take the safety and protection measures for the population work areas.
4. Adhere with the preventive measures stated in the study.

Pursuant to the recommendations of the Technical Committee for reviewing the studies of evaluation of environmental impact of projects.

With kind regards

Dr.Taher Radhi Shakhshir  
(Signed)  
Minister of Environment



Annex 8 Environment Management and Monitoring Plan

Environmental Item	Item	Place	Frequency	Responsible institution
Air Quality	TSP, CO, NO <sub>2</sub> , SO <sub>2</sub>	Neighborhood of Construction site	1 time /month	Contractor YWC, WAJ
Soil pollution	Checking of oil leakage from construction machines and vehicles, and status of repairing Situation of locations where soil is affected by oil leakage	Construction site, construction machinery, Vehicle storage place	1 time /month	Contractor YWC, WAJ
Noise and Vibration	Noise and Vibration	Neighborhood of Construction site	1 time /month	Contractor YWC, WAJ
Livelihood	Condition of blocking, limited approach of commercial facilities	Surrounding Construction site	1 time /week	Contractor YWC, WAJ
Cultural Heritage	Existence of remains and relic	Construction site	MOTA coordination	Contractor MOTA
Work Environment	Situation of wearing working clothes, safe shoes, masks, and other safety related accessories of Workers. Enforcement situation of the safety measures of neighboring inhabitants	Construction site Surrounding Construction site	1 time /week	Contractor YWC, WAJ
Accident	Enforcement situation of traffic safety measures. Traffic man work situation	Surrounding Construction site	1 time /week	Contractor YWC, WAJ

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Annex 9 Environmental and Social Monitoring Form

**Monitoring Form**

**Construction Phase**

**1. Response /Actions to Comments and Guidance from Government Authorities and the Public**

Monitoring Item	Monitoring Results during Report Period
Number and contents of formal comments made by the public	
Number and contents of responses from Government agencies	

**2 . Pollution**

**-Air Quality (Ambient Air Quality)**

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
TSP	mg/cm3			0.26 (24h)				Quarterly
CO	ppm			26 (1h)				
NO2	ppm			0.21 (1h)				
SO2	ppm			0.135 (1h)				

**- Noise**

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
Noise Level	dB			Urban; 65 (Day), 55 (Night)				Daily

Remarks; Urban commercial area

**- Vibration**

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Standards for Contract	Referred International Standards	Measurement Point	Frequency
Traffic Vibration Level	dB					Urban; 70 (Day), 65 (Night)		Daily

Remarks; Urban commercial area

**- Soil Contamination**

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
Treatment of oil leakage	Details of survey results, such as findings.	

**3 .Natural Environment**

**- No Monitoring Items**

**4.Social Environment**

**- Livelihood**

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
Interference of approach to commercial places	Details of survey results, such as findings.	

**- Cultural Heritage**

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
Unearthing of monument and relic	Details of survey results, such as findings.	

**- Work Environment**

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
<ul style="list-style-type: none"><li>• Safety measures for labor</li><li>• Safety measures for inhabitant</li></ul>	Details of survey results, such as findings.	

**- Accident**

Monitoring Item	Monitoring Results during Report Period	Measures to be Taken
<ul style="list-style-type: none"><li>• Measures for traffic safety</li><li>• Crossing guard situation</li></ul>	Details of survey results, such as findings.	

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A large signature with a checkmark-like flourish below it.  
Initials "lm" and "ES" to the right.