

**RESETTLEMENT ACTION PLAN FOR THE AWALI-BEIRUT  
WATER CONVEYOR PROJECT**

**FINAL REPORT**

Prepared by:

**EARTH LINK AND ADVANCED RESOURCES DEVELOPMENT S.A.R.L.  
(ELARD)**

Submitted to:

**COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION  
(CDR)**

Date of Submission:

August 4th, 2010

**ELARD LEBANON**

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION	DOCUMENT TYPE:	Resettlement Action Plan
	PROJECT REF.:	
ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT	NO. OF PAGES:	87
<b>ESIA for Awali-Beirut Water Conveyer Project</b>	VERSION	FINAL REPORT

APPROVED BY	Ramez Kayal	General Manager
REVIEWED BY	Ricardo Khoury	Senior Environmental Specialist
PREPARED BY	Rachad Ghanem	Senior Hydrogeologist/ Project Manager
	Hanadi Musharafiyeh	Social Economist
	Wafaa Halabi	Socio-Economist
	Basma Shames	Geologist / Field Coordinator
	Carlo Bekhazi	Environmental Consultant
	Ghada Chehab	Senior Environmental Consultant
	Rana Ghattas	Quality Management Responsible

**DISCLAIMER**

*This report has been prepared by ELARD , with all reasonable skill, care and diligence within the terms of the contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client. The information contained in this report is, to the best of our knowledge, correct at the time of printing. The interpretations and recommendations are based on our experience, using reasonable professional skill and judgment, and based upon the information that was available to us. This report is confidential to the client and we accept no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.*

**ELARD**

Hojelly Center 6<sup>th</sup> Fl.  
Pere Yacoub Street  
Sin El Fil, 2708 5803  
Tel: +961 (1) 512121/2  
Fax: +961 1 512123  
[www.elard-group.com](http://www.elard-group.com)



## TABLE OF CONTENTS

Table of Contents .....	iii
List of Tables .....	iii
List of Figures .....	iv
Executive Summary .....	I
1. Introduction .....	1-1
2. Description of the project .....	2-1
3. Potential impacts.....	3-1
4. Objectives of the RAP .....	4-1
5. Socio-economic survey .....	5-1
6. Legal framework.....	6-1
7. Institutional Framework.....	7-1
8. Eligibility for compensation under Lebanese Law .....	8-3
9. Community participation and consultations with affected stakeholders.....	9-1
10. Appeals procedures and Grievance redress.....	10-1
11. Organizational responsibilities.....	11-1
12. Implementation schedule.....	12-3
13. Estimated Costs and budget.....	13-1
14. Monitoring and evaluation .....	14-1
15. Appendices .....	15-1
Appendix A: Summarized Socio Economic Survey at level of villages .....	15-2
Appendix B: Previous Expropriations (CDR).....	15-5
Appendix C: New Expropriations (CDR) .....	15-12
Appendix D: New Expropriations (BMLWA) .....	15-29
Appendix E: Public Participation – Minutes of Meeting .....	15-32
Appendix F: Minutes of Meeting (2 <sup>nd</sup> Public Participation) .....	15-36
Appendix G: Map of Second Component.....	15-41

## LIST OF TABLES

Table 2-1	Description of Reservoirs of Component 2 .....	2-4
Table 2-2	Characteristics of Pumping Stations.....	2-5
Table 5-1	Findings at level of expropriated plots for component 1 surface features.....	5-1
Table 5-2	Findings at level of expropriated plots for component 2 .....	5-1
Table 8-1	Summary of Expropriation Activities .....	8-6
Table 8-2	Summary of Easement Rights .....	8-6

Table 9-1	Main raised concerns.....	9-1
Table 9-2	Questions raised during 2nd Public Participation .....	9-2
Table 13-1	Summary of Costs and Budgets of Expropriation .....	13-1
Table 13-2	Summary of Estimated Budgets for Establishing Easement Rights.....	13-1

## LIST OF FIGURES

Figure 2-1	Geographic Location of Project Components .....	2-3
Figure 6-1	Expropriation Procedures.....	6-3
Figure 11-1	Implementation arrangements .....	11-2
Figure 12-1	Implementation Schedule .....	12-4

## EXECUTIVE SUMMARY

This Resettlement Action Plan (RAP) was prepared in the context of the preparation of the LB-Greater Beirut Water Supply Project (GBWSP) partly financed by the World Bank. It determines the procedures required for land acquisitions and resettlement needed for project implementation, and related compensation in accordance with Lebanese Law and the Operational Policies (OP) of the World Bank (WB) defined under OP 4.12 on Involuntary Resettlement.

The GBWSP project includes acquisition of public and private land covering a total area of 426,563 m<sup>2</sup> mainly relating to two main project components establishing a **Bulk Water Supply Infrastructure**: Tunnels, Water Treatment plant, Transmission & Bulk Storage (including the Awali-Beirut Water Conveyor) and **Supply Reservoirs, Distribution Network and Metering** (Improvement and rehabilitation of the water distribution network in Beirut and its suburbs)

The main impacts of the project that give rise to resettlement are the following:

(i) Acquisition of land by use of the Government's power of eminent domain for the purpose of building surface structures (infrastructure related to the conveyor, water treatment plants and storage reservoirs).

(ii) Establishment of Easement right of ways (ROW) by use of the Government's power of eminent domain where the water conveyor is passing underneath the surface as well as restrictions on drilling on plots along the corridor of the conveyor.

CDR and BMLWA have adopted strategies to avoid or at least minimize the need for land acquisitions in connection with this project as much as possible.

As the project will improve the water supply and distribution network across the Greater Beirut Area, including in the low-income neighborhoods of Southern Beirut, the overall social and economic impact of the project are considered positive. Villages along the tunnels will also benefit from additional water supply options through designated points for connection to local distribution networks, should individual local communities decide to do so.

The project will not result in involuntary physical relocation of people nor will it cause demolition of any existing building. A temporary farmer and his family residing and working on one of the project affected sites will be offered alternative employment by the landowner at a different location and under the same conditions. This arrangement has been confirmed to the Bank by the CDR in a separate letter.

Lebanese Law of expropriation established general provisions for prior compensation of expropriated assets and easement fees for other restrictions imposed on property 2.. In addition, the mode of payment when compensating for acquisition of land, will in practice be in several phases, although no real time lag really exist between taking over of land and final payment. In the context of this RAP, CDR and BMLWA will ensure that no land will be taken over under this project without full prior payment of compensation. As regards the WB op. 4.12 requirement for an affordable and accessible grievance mechanism for the third-party settlement of disputes arising from resettlement the requirement under Lebanese law to pay a fee to open an appeals case, and the requirement to pay 3, 5 % of the

additional amount of compensation sought in the appeal, as well as the requirement to be represented by a lawyer, will also be mitigated through this RAP.

In accordance with op. 4.12 affected landowners and users and other stakeholders have been consulted in connection with preparing the ESIA, the socio-economic survey and the expropriations procedures. In addition the project PMU will remain open and accessible to the public during normal office hours to address complaints and to ensure that affected peoples legal rights are being respected in accordance with this RAP.

An implementation schedule and cost estimates for the implementation of the RAP are attached. CDR has previously undertaken land acquisition for the purpose of the current project (mainly for component1). The World Bank has had no involvement with these expropriations and CDR has confirmed this in a letter to the Bank.

## I. INTRODUCTION

This Resettlement Action Plan (RAP) was prepared in the context of the preparation of the LB-Greater Beirut Water Supply Project (GBWSP) partly financed by the World Bank. This Plan determines the procedures required for land acquisitions and resettlement needed for project implementation, and related compensation in accordance with Lebanese Law and the Operational Policies (OP) of the World Bank (WB) defined under OP 4.12 on Involuntary Resettlement

The World Bank's OP 4.12 deals with economic and social consequences directly resulting from investment projects financed by the WB and caused by involuntary taking of land leading to relocation or loss of shelter, loss of assets or access to assets, loss of income sources or means of livelihood, whether or not the affected persons must move to another location. Through the application of this policy, the WB aims at ensuring that the project will have no negative socioeconomic impact on the people. If people undergo negative impacts, they will receive support for resettlement and compensation in such a way that their socioeconomic position will be at least as favorable as in the absence of a project. A resettlement action plan shall be prepared to mitigate the effects derived either from the loss of access to such property, or from the loss of income, or livelihood. This plan must include measures to ensure that the affected people are:

- Informed about their options and rights pertaining to resettlement;
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and
- Provided prompt and effective compensation at full replacement cost for losses of assets directly attributable to the project and before the start of the project activity.

This RAP has been prepared by Earth and advanced Resources Development S.A.R.L (Elard) on behalf of Ministry of Energy and Water (MoEW), The Council for Reconstruction and Development (CDR), the Beirut and Mount Lebanon Water Authority (BMLWA) and in consultation with the Bank in order to ensure that land acquisition and resettlement was performed in an appropriate manner and that any potentially adverse impact is mitigated, in accordance with OP 4.12. The present Plan and the following paragraphs demonstrate that the measures taken by MoEW, CDR and BMLWA are in accordance with OP 4.12, particularly with respect to information and consultation of affected persons, and to the requirement to provide full replacement costs for any property losses resulting from the project activity.

The GBWSP project includes acquisition of public and private land covering a total area of 426,563 m<sup>2</sup>. Some of the land acquisitions undertaken for the purpose of the current project predates the World Bank's involvement. The World Bank has had no involvement with these prior expropriations. <sup>1</sup>The

---

<sup>1</sup> Between 1997 and 1998, the World Bank led several identification missions to Lebanon to assist the Government in the preparation of (i) the Awali Beirut Water Conveyor Project and (ii) the Greater Beirut Water Supply and Wastewater Projects. On the Awali Beirut Water Conveyor Project, the World Bank was preparing to provide a partial guarantee to a BOT (Build Operate Transfer) scheme. This project however was abandoned due to technical and legal reasons. The Greater Beirut Water Supply and Wastewater Project was also abandoned due to CDR's lack of capacity, at the time of project preparation, to prepare projects due to multiplicity of projects and donor priorities and limited number of qualified staff. The wastewater collection and treatment components of the proposed Greater Beirut Water Supply and Wastewater Project have since been financed and implemented by other donors, namely the European Investment Bank.

legislation and procedures used for previous land acquisitions are similar to the ones that apply to acquisitions undertaken in accordance with this RAP and none of these expropriation decrees have been appealed. The present plan provides a full overview of all land acquisitions and resettlement measures related to the current project.

The content of this RAP is based on the examination of project identification and preparation documents, on information and data collected during field visits, on discussions and meetings between stakeholders such as the directly affected land owners and community, the CDR, the BMLWA and the Litany River Authority.

This Plan will be disclosed on the CDR and BMLWA websites and on the WB Infoshop website. It will also be disclosed in a location accessible to the affected populations, such as at the official offices of the Joun, Ourdaniye, Naame, Khalde and Hazmieh Municipalities that are open to the public during regular working hours.



## 2. DESCRIPTION OF THE PROJECT.

The Project is divided into three main components of which the first two are relevant for this RAP

- **Bulk Water Supply Infrastructure:** Tunnels, Water Treatment plant, Transmission & Bulk Storage (including the Awali-Beirut Water Conveyor)
- **Supply Reservoirs, Distribution Network and Metering** (Improvement and rehabilitation of the water distribution network in Beirut and its suburbs)

Component 1 will comprise:

The Awali- Beirut Water Conveyor includes the following sub-components Figure 2-1 :

- **Joun Regulation Structure:** set into the hillside by the existing adit access from the Joun tunnel to the hydro-electric power station.
- **Joun to Ourdaniye Tunnel:** running underground throughout its length of 4.1 Km.
- **Wadi Abou Yabes washout:** (discharge point) for emergency discharge or routine maintenance
- **Ourdaniye Water Treatment Works:** including tunnel inlet and outlet portals and the water treatment works. Sludge treatment and disposal facilities will be associated with this works. A washout will be provided for emergency discharge.
- **Ourdaniye to Khalde tunnel:** underground throughout its length of 19.7 km.
- **Inverted Siphon:** in the Damour river with ventilation shafts at the hills to the south and north of the valley. A washout will be provided for use in emergencies and for maintenance.
- **A surge shaft in the hillside above Khalde:** 2,800 mm diameter shaft in reinforced concrete with surface venting structure 7 m diameter in reinforced concrete, including improved access road.
- **Outlet portal in the hillside above Khalde:** termination structure in reinforced concrete and upgraded access road
- **Flow measurement and sampling chamber** on the hillside above Khalde.
- **Twin Pipeline from Khalde portal to Khalde distribution chamber:** 1.9 km long and 1,400 mm diameter
- **Khalde distribution and connection chamber:** in reinforced concrete containing isolating and regulating valves. Provides washout to local stream.
- **Twin Pipeline form Khalde distribution chamber to Hadath 90 and 125 reservoirs:** 7.6 km long, 1,400mm diameter pipelines in ductile iron with connections to Hadath 90 and 125 reservoirs and local supply.
- **Hadath 125 reservoir:** Storage reservoir, two compartments, effective volume 30,000 m<sup>3</sup> in reinforced concrete with isolating valves and small surface kiosk, including access road. Connection to local distribution system.
- **Hadath 90 reservoir:** Storage reservoir, two compartments, effective volume 50,000 m<sup>3</sup> in reinforced concrete with isolating valves and small surface kiosk, including access road. Connection to local distribution system.

- **Pipeline from Hadath reservoirs to Hazmieh reservoir:** 2.7 km long twin 1,300 diameter pipelines in ductile iron, with option for further extension for supply of treated water to Beirut.
- **Hazmieh 90 reservoir:** Storage reservoir, two compartments, effective volume 20,000 m<sup>3</sup> in reinforced concrete with isolating valves and small surface kiosk, including access road. Connection to local distribution system.

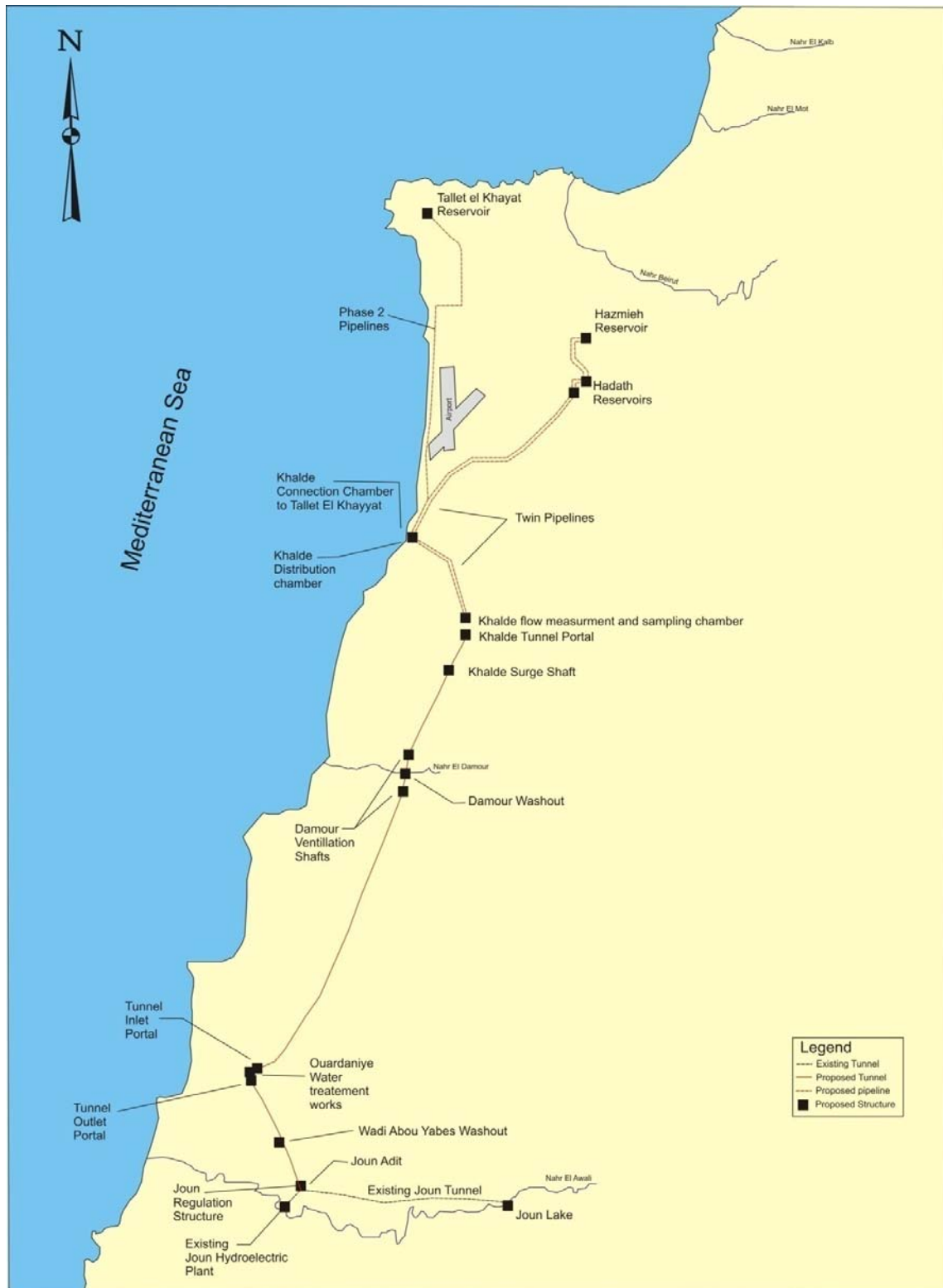


Figure 2-1 Geographic Location of Project Components

Component 2 will comprise:

- The construction of 16 reservoirs (between 500 m<sup>3</sup> and 1000 m<sup>3</sup> storage capacity each) and associated pumping stations distributed across the various distribution zones in the project area;
- The replacement and/or installation of approximately 187 km of distribution network across the project area in Ein El Delbi, Southern Beirut and parts of the Metn area;
- Installation of 200,000 household meters in portions of the project area to be selected by the BMLWA and to operate on a volumetric tariff basis;
- Installation of bulk meters at the reservoirs and distribution chambers;
- A map showing the locations of reservoirs is attached in **Appendix G**

**Table 2-1 Description of Reservoirs of Component 2**

SERVED ZONE	RESERVOIR NAME	CAPACITY (M <sup>3</sup> )	ELEVATION (M)
Naame - Dmaour	Damour	500	125
	Naame Nord Bas	500	100
	Naame Nord Haut	500	200
Khalde - Aaramoun	Aaramoun Sud Bas	500	100
	Aaramoun Sud Haut	500	220
	Khalde Bas	500	120
	Khalde Haut	500	250
Chouelfet	Qobbe Bas	500	100
	Qobbe Haut	500	220
	Oumara	500	260
	Chouelfet Bas	1000	125
Kfarshima	Kfarshima Bas	1000	80
	Kfarshima Haut	1000	200
	Bsaba	500	340
Hadath Haut	Hazmieh Hadath	2000	190
Hazmieh			
Baabda	Baabda	1000	290

**Table 2-2 Characteristics of Pumping Stations**

NAME	Q(M <sup>3</sup> /D)	Q(M <sup>3</sup> /H)	HMT(M)	POWER (HP)	POWER (KW)
Naame Nord Bas	1500	63	110	39	29
Aaramoun Sud Bas	1500	63	130	46	34
Khalde Bas	1500	63	140	49	37
Qobbe Bas	1500	63	140	49	37
Choueifet Bas	4000	167	160	148	111
Kfarshima Bas	4000	167	140	130	97
Kfarshima Haut	1000	42	150	35	26
Hazmieh	24000	1000	65	361	271
Hazmieh Hadath	7000	292	110	178	134

### 3. POTENTIAL IMPACTS

The main impacts of the project that give rise to resettlement are the following:

(i) Acquisition of land by use of the Government's power of eminent domain for the purpose of building surface structures (infrastructure related to the conveyor, water treatment plants and storage reservoirs)

(ii) Establishment of Easement right of ways (ROW) by use of the Government's power of eminent domain where the water conveyor is passing underneath the surface as well as restrictions on drilling on plots along the corridor of the conveyor

The main impacts expected to arise from future land acquisition under both components 1 and 2, include permanent and irreversible loss of land, residence and some loss of greenhouses (agricultural business, and associated economic and other impacts, including drilling access). The World Bank team has visited all project affected areas to verify the potential impact of the project.

Apart from losses associated with a minor agriculture business, there will be no loss of any other businesses or income generating activities nor physical relocation of people as has been confirmed by Elard and the World Bank team during field visits.

A family of farmers working and residing temporarily at a green house located within the treatment plant proposed site at Ouardaniye and who were aware of the status of the land when taking up their temporary engagement with the affected land owner, will be offered alternative employment and housing under the same conditions through an arrangement with the landowner. This arrangement has been confirmed to the World Bank in a letter from CDR. Consultation with these farmers is described further down in this RAP and its annexes.

With respect to areas affected under category (ii), there will not be actual land acquisition or disturbance of the surface land use. However, there will be restrictions imposed on the lots depending on depth of the tunnel beneath, such as prohibition of placing deep foundation and prohibition of drilling wells. The procedure for establishing easement right of ways is described further down in this RAP.

CDR and BMLWA have adopted strategies to avoid or at least minimize the need for land acquisitions in connection with this project as much as possible. These include:

- Limit to the extent possible the amount of involuntary land acquisition to what is strictly necessary to serve the purpose of the design in accordance with World Bank Policy and Lebanese Law
- Avoid elimination or destruction of any constructed buildings or physical relocation of people.
- Selection of reservoir sites whereby previous expropriations has been undertaken by the CDR for other projects; and
- Selection of reservoir sites whereby plots are owned by Municipalities rather than people.

As the project will improve the water supply and distribution network across the Greater Beirut Area, including in the low-income neighborhoods of Southern Beirut, the overall social and economic impact of the project are considered positive. Villages along the tunnels will also benefit from additional water supply options through designated points for connection to local distribution networks, should individual local communities decide to do so.

The existing wastewater infrastructure in Greater Beirut will be rehabilitated and improved to absorb the increased supply in water. About 187 km of network pipelines are to be installed and rehabilitated across Greater Beirut. Moreover, the additional supply expected to meet the city's demand for the future will limit the exploitation and distribution of brackish water that was causing corrosion and deterioration of pipelines in regions suffering from seawater intrusion.

## 4. OBJECTIVES OF THE RAP

The RAP identifies all the impacts on the residence, economic activities and assets caused by acquisition of land by the exercise of the Governments power of eminent domain, namely the state's expropriation of land in the public interest as well as temporary and longer term restrictions placed on land within the corridors of the water conveyer and pipelines. The RAP identifies people affected by the project, describes the nature and scale of the impacts, identifies the mitigation measures to be taken and specifies the legal and institutional framework responsibilities that, together, will ensure that all losses incurred by the taking of land or imposition of other restrictions are fully compensated and do not face any kind of diminution of livelihoods or assets. This means that:

- All owner-occupiers and tenants of residences should be able, through full and prior cash entitlements, to ***re-establish residence in another location of their choice and in an equivalent owned or rented property; and absentee owners will be able to acquire equivalent residential property.***
- All owner-occupier entrepreneurs and tenant entrepreneurs should be able, through full and prior cash compensation, to ***reestablish their enterprise elsewhere in an equivalent owned or rented property of their choice, and to cover all associated costs including lost time; and absentee owners will be able to acquire equivalent premises.***
- All minor business impacts (e.g. fences, impacts on fuel station structures) would be compensated ***in cash or fully remedied by the project according to the entrepreneur's choice.***
- All net losses of asset value through expropriation of land only would be fully compensated. Where there is a sound basis to expect that the expropriation of small portions of land only will not result in a net loss of asset value, and entails no prejudice to residence or economic activity, this will be demonstrated.

All new establishments of ROW for conveyer and pipelines or other kinds of temporary or longer terms restrictions on the use of the land or buildings along the conveyer corridor or pipelines as well as distribution networks and systems that affect incomes and living standards, will be compensated or eased through easement fees as described below.



## 5. SOCIO-ECONOMIC SURVEY

A socio-economic survey was conducted with the local authorities in the Project area to map the demographic, social and economic baseline conditions at the level of towns and villages. This survey is given in **Appendix A**.

Table 5-1 below summarizes the findings at level of plots designated for component 1 surface features:

**Table 5-1 Findings at level of expropriated plots for component 1 surface features**

STRUCTURE/ SURFACE FEATURES	RELOCATED OWNERS	RELOCATED OCCUPANTS	AFFECTED STRUCTURES OR BUILDINGS
Joun flow regulation	None	None	None
Wadi Abou Yabes Washout	None	None	None
Ouardaniye WTW	None	A temporary green house farmer and his family	Green house
Nahr Damour Inverted Siphon	None	None	None
Khalde surge shaft and outlet	None	None	None
Khalde flow measurement and sampling chamber	None	None	None
Distribution Chamber	None	None	None
Hadath 125 reservoir	None	None	None
Hadath 90 reservoir	None	None	None
Hazmieh 90 reservoir	None	None	None

Table 5-2 below summarizes the findings at level of plots designated for component 2 surface features:

**Table 5-2 Findings at level of expropriated plots for component 2**

Structure/ Surface features	Relocated Owners	Relocated Occupants	Affected structures or buildings
Damour	None	None	None
Naame Nord Bas	None	None	None
Naame Nord Haut	None	None	None
Aaramoun Sud Bas	None	None	None

Structure/ Surface features	Relocated Owners	Relocated Occupants	Affected structures or buildings
Aaramoun Sud Haut	None	None	None
Khalde Bas	None	None	None
Khalde Haut	None	None	None
Qobbe Bas	None	None	None
Qobbe Haut	None	None	None
Oumara	None	None	None
Choueifet Bas	None	None	None
Kfarshima Bas	None	None	None
Kfarshima Haut	None	None	None
Bsaba	None	None	None
Hazmieh Hadath	None	None	None
Baabda	None	None	None

As can be seen in the above tables, the project will not result in involuntary physical relocation of people nor will it cause demolition of any existing building. A farmers family as described above, who voluntary took up occupation on the land while being familiar with the status of the land being under an expropriation decree, will however be relocated

The temporary resident caretakers of the green houses adjacent to the apartment building at Ouardaniye WTW were consulted by the World Bank team and Elard during a field visit and advised that they had been aware of the upcoming project and were working in the green houses on behalf of the landowner with the understanding that it was a temporary arrangement until the project got underway.

In accordance with article 22 of the Lebanese Expropriation law No. 58/91, described below, the Expropriation Commission will assess the compensation awarded to the affected landowner based not only on the value of the land, but also taking into consideration other ongoing affected activities, including in this case the green houses and the workers. The owner will in his turn offer the caretakers employment in an alternative location under the same conditions provided by him, as has been confirmed in a letter to the Bank from the CDR.

## 6. LEGAL FRAMEWORK.

**The Law:** The Lebanese constitution guards and protects the right of private property including landed property and the rights attaching to it. The exercise of eminent domain, in Lebanon, for expropriating private property in the public interest is governed by Law No. 58 dated 29/05/1991. This law is extensive and governs many cases. The state may only expropriate these rights when it is legally to be declared in the public interest, and against payment of a prior and equitable compensation ("*indemnité equitable*"). All compensation is by monetary award through independent judicial assessment. Where there is an appeal, at least sixty five of the compensation is paid in advance, and if no structures are found to be existing within expropriation limits (which is the case in this project) additional 25% are paid and the expropriation party reserves the right (only if it wishes so) to hold the remaining 10% till the decision of takeover is issued, but the process of expropriation itself cannot be halted unless the validity of the public interest decree itself is challenged.

### **Overall consistency between Lebanese Law and World Bank Policy on Involuntary Resettlement;**

Lebanese Law of expropriation established general provisions for prior compensation of expropriated assets and easement fees for other restrictions imposed on property. In addition, the mode of payment when compensating for acquisition of land, will in practice be in several phases, although no real time lag really exist between taking over of land and final payment. This is the case for land acquisitions under this RAP, as none of them have any construction on them, except for the greenhouses mentioned above. As described in the section on Appeals and grievance redress on page 11 – 1 and 11- 2 below, CDR and BMLWA will ensure that no land will be taken over under this project without full prior payment of compensation. As regards the WB op.4.12 requirement for an affordable and accessible grievance mechanism for the third-party settlement of disputes arising from resettlement (op.4.12.AnnexA, para 17), the requirement under Lebanese law to pay a fee to open an appeals case and 3, 5 % of the increased compensation amount sought, as well as the requirement to be represented by a lawyer, will be mitigated through this RAP as described in the Appeals and grievance redress section below.

**Procedures :** The Expropriation under Lebanese Law procedure is described in the sections which follow, and illustrated diagrammatically in Figure 6-1 below. Except as discussed below on pages 11-1 and 11-2, in the case of the GBWSP, expropriation follows normal Lebanese practice. Under the provision for expropriation of land in the public interest, The CDR and BMLWA would prepare expropriation draft decrees for signature by the related Minister, the Prime Minister and the President. Annexed to the decree are the following documents:

- A sketch of the entire project proposed
- A detailed plan of the land that will be expropriated
- A list showing the registration number of each property, its location, the names of all the owners and right holders in the Land Registry. The name of the apparent owner is included in the list, following the opinion of the mayor and specifying the property limits.
- A detailed list of the content of the land whose expropriation is proposed, and detailed plans of buildings already constructed before the date of publication of the decree in the government

Gazette. After publication of the decree, any interested party may consult these documents at the government offices, and obtain copies of them.

With the publication of a decree, the affected properties are under servitude. They may be bought and sold, and buildings may be maintained, but no improvements may be made until the expropriation process has been completed. Properties are not held to have been expropriated until the decision of the Expropriation Commission is handed down, which decision is communicated to the Lands registry and entered on the property titles and the cadastral map.

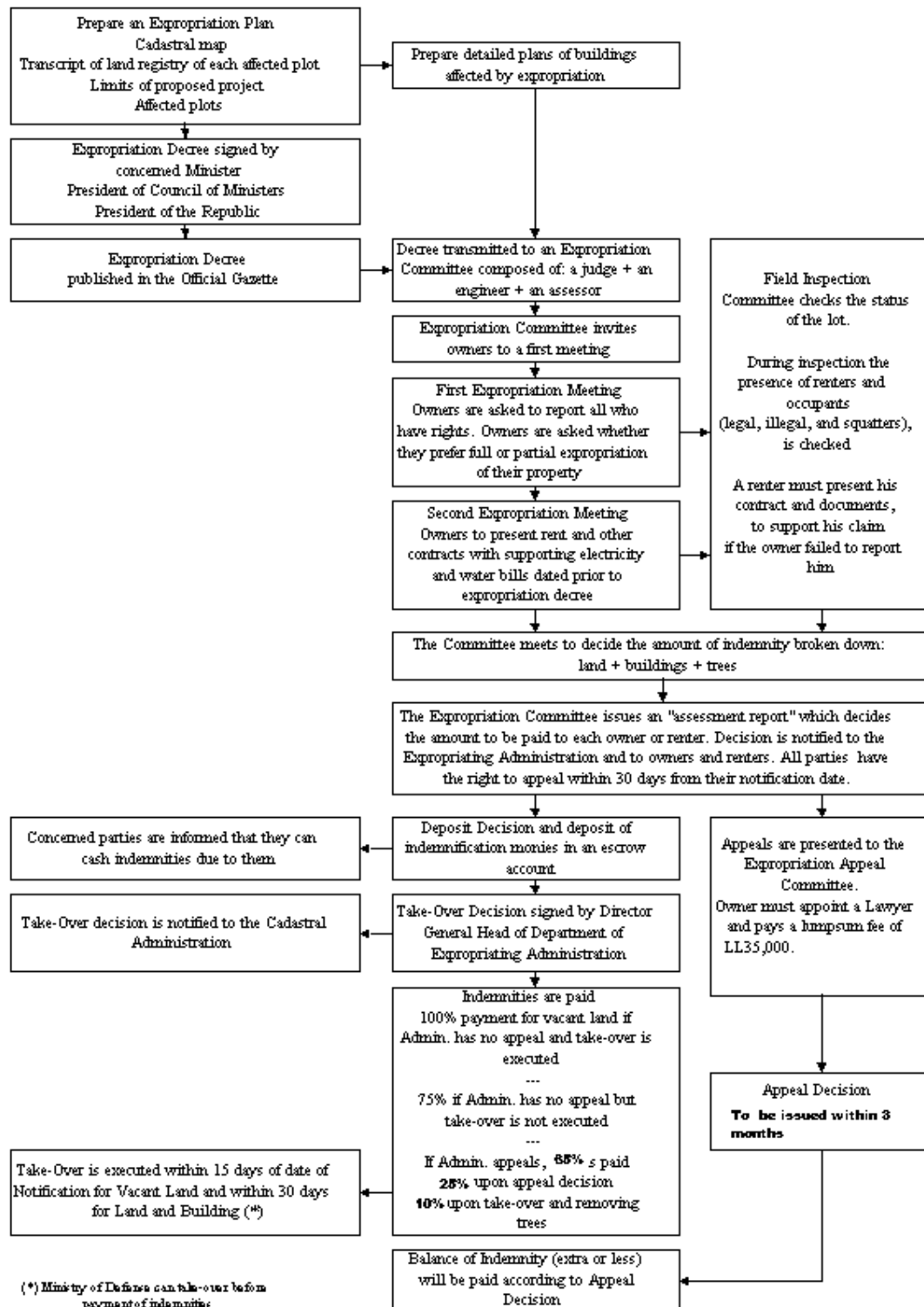
On the basis of a plan, an expropriation decree may cover any portion of land or a building. It is up to the owner to request that the full property (land or building) be expropriated, on the grounds that the non-expropriated remainder of the land would have lost its value. This may be done, for example, when the expropriation of part of a building renders the remainder unusable; or when the expropriation of a lot leaves a remainder too small to qualify for a building permit, and the owner does not have an adjacent plot to which it can be joined.

**Easement Right (Right-of-Way):**

The Lebanese Expropriation Law also reserves the right for an Expropriating Authority to “partially expropriate” a land in public interest. This procedure is initiated when there is a need to use the “above surface” or “below ground” of a piece of land and this would be the case for the surfaces along the tunnel of the GBWSP.

The imposition of partial expropriation rights requires establishing an **Easement Right Decree** for the concerned properties. Issuance of the latter requires exactly the same procedures as in “full expropriation” including preparation of tables and cadastral maps with identification of landowners and affected structures and trees though issuing and approving the Decree.

The difference between the two processes appears only in estimating the compensation. While with the “full expropriation” an owner is fully compensated, the owner of a “servient tenement” (which is the used land) is compensated for allowing the use of parts of the property (above or below) and for being subject to some restrictions on the use of the land. The indemnity would be estimated by the Commission on a case by case basis depending on depth of tunnel and nature of restrictions, and based on the principle of full and prior compensation. As publicly available files indicate, normally 10% of the compensation amount for a full expropriation will be awarded. As for the restriction and considering that the shallowest depth of the tunnel is at around 30m the only foreseen restriction for the GBWSP is that of prohibition of drilling a deep well which in either case requires a special permit from relevant authorities in Lebanon.

**EXPROPRIATION PROCEDURES FLOW CHART****Figure 6-1 Expropriation Procedures**

Expropriation Commissions

Compensation is determined by judicial process. When the Expropriating Authority, in this case CDR or BMLWA, wishes to implement a decree, the dossier is sent to the Expropriation Commission for adjudication of compensation.

These Expropriation Commissions are set up by decree in accordance with proposals from the competent Ministers for each Mouhafazah (Governorate) they comprise

- A Commission of the first instance composed of a chairperson (a judge or magistrate of at least the 10th degree)<sup>2</sup> and two members, an engineer and a property valuer.
- One or more Expropriation Appeals Commissions, considering likewise of a magistrate of at least the 6th degree as chairperson, an engineer and an expert in land law and valuation.
- A chairperson and two other members are named as alternates in case of absence.
- Each Commission has a court clerk and a sworn messenger for summonses and notifications; the Appeals Commission has a clerk and messenger.

The Expropriation Commission is competent to undertake the following:

- Determine all entitlements or compensations resulting from expropriation;
- Decide on requests by owners for total expropriation and full compensation (as noted in the preceding paragraph);
- Determine the value of small portions of land which cannot be used for building;
- Determine disputes regarding the division of compensation between shareholders;
- Determine matters related to the integrity of a plot and the cumulative effect of successive excision of land from a property.

The CDR would be represented in Expropriation Commissions by a legally qualified representative of the agency whereas the BMLWA is represented by a specifically appointed external lawyer. Individual landowners may represent themselves, or be represented by a lawyer. Where individual citizens appear not to be aware of their rights, the presiding judge should not take sides, but may open the way for the owner to realize the possibilities, as required by article 15 of the Expropriation Law. . Expropriation Commissions have wide discretion, and any right that can be shown to be damaged is subject to compensation.

<sup>2</sup> Judges and magistrates in Lebanon range from 1 (the lowest) to 15 (the highest in the land).

## 7. INSTITUTIONAL FRAMEWORK.

### CDR

The CDR is a public institution that was created in 1977 in partial replacement of the Ministry of Planning, to be the Government unit responsible for reconstruction and development. CDR has unprecedented powers to avoid any administrative routine that could slow down the reconstruction process, especially in the financial field. It is financially and administratively independent, and directly affiliated to the Council of Ministers (CoM). The CDR –in cooperation with other ministries- is responsible for (Decree 5/1977):

The CDR is the exclusive party responsible for expropriation procedures, and issuing administrative authorizations and licenses, except in the case where the CoM issues them.

The **CDR Expropriation Unit** comprises 15 staff members headed by a Director who reports to the CDR President. The Unit staff members work closely with the CDR Projects Department Engineers and the Legal Department from the initiation of the decree process until payment of settlements.

The duties of the Expropriation Unit are to ensure that all tasks related to expropriation are completed in accordance with Lebanese Law and to verify the details of the expropriation files. During the project development phase, and as the need for expropriation arises, the Expropriation Unit, along with the engineers from the Projects Department, start working on the expropriation decrees along with consultants commissioned to prepare the expropriation plans and files. Upon approval of the final expropriation decrees, the Unit sends the decrees to the board of CDR for official approval. The decrees are then sent to the CoM for approval and issue. The Unit continues to verify the expropriation files after approval. Upon issue of the Decree, the Expropriation Unit forwards the Decree along with the expropriation files to the Expropriation Commission.

The Unit also provides advice and information to the owners of properties affected by the Decree so that they may present themselves before the commission and provides proof of their legal rights (as owner, tenant, etc.)

### BMLWA

BMLWA was created by **Law 221** which has restructured the water sector in Lebanon. Article 3 of Law 221, delineates the creation of five water establishments among which the Beirut-Mount Lebanon Water Establishment by merging the Beirut and Mount Lebanon Water Authorities. Duties and competencies of the BMLWA are described in Article 4 of **Law 221**. These are:

- To carry out studies, implementation, operation, maintenance and renewing of projects for drinking and irrigation water distribution, (except for irrigation water in the South and South Beqaa that remains under the responsibility of the Litani River authority), within the frame of General Master-Plan according to a Ministry's prior permit to use public water resources.
- To propose tariffs for drinking and irrigation water services taking into consideration general socio-economic conditions of the Country.
- To control the quality of the drinking and irrigation distributed water.

These Water Establishments are operating under its own regulations. It has to hire the services of an audit company concerning their financial status and is managed by a board of Directors constituted of a President and six members.

According to Article 6, the establishment is submitted to the "posteriori" control of the Account Court. Its activities are assessed by a Performance Evaluation Committee composed of the (MoEW as president and 7 members: the General Director of the Ministry of Finances, the General Director of Exploitation in the MHER, the General Director of Hydraulic and Electric Equipment in the MHER, a hydraulic engineer, an economy graduate, a law graduate, and a second category functionary from the General Directorate of Exploitation as "rapporteur".

**Law 377** issued on December 14th 2001 is an Amendment of Laws 221 and 241. In the Article 1, the new version of paragraphs 3 and 11 of Article 2 concerning Law 221 incorporates the responsibilities of the waste water within the competencies of MoEW. Article 2 gives the same amendment for Water Establishments duties by incorporating the handling of the waste water in the subparagraphs of Article 4 of Law 221.

The Articles 3 replaces the name of the Ministry of Hydraulic and Electric Resources mentioned in the Article 5 first paragraph of Law 221, by the corresponding terms; "Ministry of Energy and Water". The Article 4 brings, in addition to the previous modification relative to the MHER, another new appellation:

- General Director of Hydraulic and Electric Equipment is replaced by General Director of Hydraulic and Electric resources.
- Public Water Establishments are replaced by Public Water and Waste Water Establishments PWWEs.

BMLWA is also experienced in handling expropriations for public works, but as its in-house legal services are limited, the practice is to hire an outside expert to handle all expropriations files and liaise with the relevant authorities.

The expropriation files are prepared by the Transactions Department in coordination with the Projects Department. These will be submitted to an assigned external lawyer who will then handle all paper work and expropriation procedures as per the law.

Duties of the assigned Lawyer will comprise comparatively to the Expropriation Unit in CDR the following tasks:

- Ensuring that the prepared files are in compliance with the Lebanese Expropriation Law and procedures.
- Submitting the Expropriation files to the CoM.
- Following-up on Procedures with the relevant authorities
- Passing the files to the expropriation commission once the Decrees are issued and approved.



## 8. ELIGIBILITY FOR COMPENSATION UNDER LEBANESE LAW.

### Valuation and compensation for losses.

Under the GBWSP, the land to be expropriated has no building or construction on it, except for the greenhouse mentioned above, and as explained in tables and figures. Both unused land, agricultural land and land in more urban areas will be affected by expropriations, but except for the temporary caretaker family mentioned above, there is no physical relocation of people involved.

Op. 4.12. requires that replacement cost to be awarded for

a) Agricultural land is the pre-project market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes.

b) For land in urban areas, it is the pre-displacement market value of land equal size and use of similar or improved public infrastructure facilities and surfaces and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.

c) For houses and other structures it is the materials to build a replacement structure, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor or construction fees, plus the cost of any registration and transfer taxes. In determining the replacement cost the appreciation of the assets and the value of salvage materials are not taken into account, nor is the value of benefits to be derived from the project deducted from the valuation of an affected asset.

The Expropriation Commission established under Lebanese Law is fully authorized to use its best judgment in the valuation of assets and entitlements. The Commission pronounces on equitable compensation for any prejudice which has resulted directly from expropriation through eminent domain. The principle of equitable compensation is interpreted to mean the applicable price obtainable on the day of the decision of the Expropriation Commission of the first instance. The Commission interprets this to mean the standards prevailing in the immediate neighborhood of the affected party and it takes into consideration whatever is necessary to restore the injured party to the state before the expropriation. This is considered to be in compliance with op. 4.12 requirements and as demonstrated by the Commission's procedure of valuation below:

The Commission proceeds on the basis of a proposal which they invite the expropriated party to make. They consider any loss or damage to a legal entitlement which can be reasonably demonstrated. The law requires the compensation to take into account any factor that might affect the value of the loss. The major assets concerned are land, buildings, and businesses.

- **Land** is valued at current local market rates, and every factor that affects its value is taken into consideration: size, shape, location (even whether it is on the left or the right hand side of the street);

- **Buildings** are valued by the square metre, taking into consideration age, condition, materials, purpose (commercial properties are generally valued more highly than residential ones), fixtures and interior decoration;
- **Business** evaluation is based on business accounts, or where unavailable, on the evidence gathered on site inspection; compensation includes provision for the loss of business and clientele, the loss of productive time, moving and other incidental expenses associated with relocation;
- **Transition Costs** are included: these include the full costs of relocation of residences and business enterprises, which would be valued separately, the costs and time involved in purchasing a new property are taken into consideration, normally by adding a certain percentage to the market value of the land. The costs of re-establishing a business in another area include not only the direct costs of relocation, but the reestablishment of goodwill in another location and the value of business lost in the transition.
- The Commission takes into account every relevant factor. They may, in addition to the value of major assets (land, buildings, and businesses), also consider quite specific items whose value can be determined: the loss of a parking facility, the value of a tree taking into account its species and age, the approximate hiring costs of a vehicle to move a person's belongings to a new location taking account of the location, time, distance and the size of the vehicle required, or the number of working days that would be lost to a business enterprise. If satisfactory proof is provided then the commission will consider compensation. The owner is required to demonstrate some prima facie evidence of the loss or injury suffered or to be incurred. For example, the Commission may consider the loss of a parking space if it was included in the construction permit for a building, but not if it was absent. After having established the right on the basis of documentation, the commission visits the site to verify the facts and also the prevailing prices, using for example information gained from questioning people in the vicinity.

In addition, and as mentioned above, the expropriating authorities will provide advice and information to the owners of properties affected by the Decree so that they may present themselves before the Commission and provide proof of their legal rights.

The Commission does not summon expert witnesses to assist it in arriving at its conclusions, except in cases where highly technical matters clearly exceed its competence.

The Commission does not prepare a detailed bill of goods, but rather arrives at its best estimate in the light of experience and judgment. When the commission reaches its decision, a formal written and numbered decision is issued, which specifies the amount of compensation, the reasoning on which it was based, and a notification of the entitlements of different shareholders to different proportions of the total compensation. The parties are formally notified and the Administration deposits the whole amount of the compensation awarded, and to notify the person compensated of this fact, together with notice to quit the property.

The real value of the compensation awarded is legally protected. If within the space of six months after notification of the commission's decision, the administration has not deposited the compensation, it is required under force of law to deposit the legal interest accumulated from the date of the Decision. If the administration has not deposited the amount within two years from the date of notification initiating the Expropriation process, the owner may request the Commission to undertake a new evaluation on the basis of current valuation. Property owners are made aware of this provision.

*Compensation, Vacation and Taking Possession:*

After the CDR and BMLWA have documented through certification that the required compensation has been deposited, it proceeds to take legal possession ("main mise") of the property in question through formal notice served on the occupant. Upon notification of the fulfillment of all the conditions of takeover, the Conservator of Lands officially transfers the expropriated property into the public domain for the expropriation of public works, or in the name of the Expropriating Authority in whose name the expropriation has been undertaken. Only after this legal transfer have taken place will the owner be asked to vacate the property through the formal notice.

This notice to quit requires that the occupant leave the place after a period of not less than 15 days if the property has no building on it, or not less than 30 days if it contains a building. This notice is copied to all interested parties and to the lands administration. As practiced by the Expropriation Commissions, the owner cannot collect the final 25 percent of the compensation until the property has been vacated and the notice fulfilled.

None of the affected owner under GBWSP are occupying their properties and thus will not be affected by this mode of payment. In addition Expropriation Commission procedures are limited in time and proceedings are normally completed in a timely manner. To avoid any potential gaps with Bank policy, CDR and BMLWA will not take possession of land prior to final payment, see page 11-1 below.

*Previously undertaken Resettlement measures:*

CDR has previously undertaken land acquisition for the purpose of the current project (mainly for component1). The World Bank has had no involvement with these expropriations.<sup>3</sup>

Some of these acquisitions have been completed and CDR has already taken possession of most of the land in question in accordance with the procedures described above. CDR is currently updating or re-issuing those expropriation decrees that were not previously completed as expropriation decrees stay valid for 8 years and this period has lapsed since then.

The legislation and procedures used for the previous land acquisitions are similar to the ones described in this RAP. Changes in Lebanese expropriations law after the first round of land acquisition that relate to this project, have not affected the laws or regulations pertaining to the current project. A description of these changes in legislation was given to the World Bank team by the CDRs Legal services during a field mission. The World Bank team was also shown samples of previously completed Expropriation Decrees and informed of the fact that there were no cases of appeals associated with previous expropriations. In addition CDR has issued a statement contained in a letter addressed to the World Bank, confirming that the expropriations were done according to Lebanese law and that the World Bank had no involvement with these acquisitions. CDR has also confirmed that there are no pending appeals or otherwise outstanding claims associated with the expropriations.

---

<sup>3</sup> Between 1997 and 1998, the World Bank led several identification missions to Lebanon to assist the Government in the preparation of (i) the Awali Beirut Water Conveyor Project and (ii) the Greater Beirut Water Supply and Wastewater Projects. On the Awali Beirut Water Conveyor Project, the World Bank was preparing to provide a partial guarantee to a BOT (Build Operate Transfer) scheme. This project however was abandoned due to technical and legal reasons. The Greater Beirut Water Supply and Wastewater Project was also abandoned due to CDR's lack of capacity, at the time of project preparation, to prepare projects due to multiplicity of projects and donor priorities and limited number of qualified staff. The wastewater collection and treatment components of the proposed Greater Beirut Water Supply and Wastewater Project have since been financed and implemented by other donors, namely the European Investment Bank.

All previous expropriation related documents are filed and organized at the CDR's expropriation Unit and will be archived in the Court filing system where also the Court Minutes are recorded.

BMLWA has not undertaken previous land acquisition for the purpose of this project and will handle land acquisition files for component 2, as described above and in accordance with this RAP.

The table below provides a full overview of all land acquisitions related to the current project, previous and future.

Table 8-1 below summarizes the status of expropriation while detailed information is given in Appendices B, C and D.

**Table 8-1 Summary of Expropriation Activities**

ITEM	COMPONENT	RESPONSIBLE	TOTAL EXPROPRIATED AREA (M <sup>2</sup> )	EXPECTED PROCEDURE DURATION	DETAILED TABLE
Previous Expropriations for Surface Features	1	CDR	42,656	Completed	Appendix B
New Expropriations for Surface Features	1	CDR	200,965	One year	Appendix C
New Expropriation for Surface Features	2	BMLWA	30,942	One year	Appendix D

Table 8-2 below summarizes the details related to establishment of Easement Right along the tunnel alignment.

**Table 8-2 Summary of Easement Rights**

ITEM	COMPONENT	RESPONSIBLE	TOTAL SERVIENT TENEMENT AREA (M <sup>2</sup> )	EXPECTED PROCEDURE DURATION
New Easement Rights along Tunnel Alignment	1	CDR	152,000	One year

## 9. COMMUNITY PARTICIPATION AND CONSULTATIONS WITH AFFECTED STAKEHOLDERS.

As part of the scoping phase of the ESIA and since project areas for both project component 1 and 2 were known notwithstanding individual plot locations to be expropriated, a first Public Consultation event covering both component 1 and 2 of the project, was held at the Lebanese University in Hadath at the Institute of Fine Arts on the 12<sup>th</sup> of May 2010. Invitations were sent out to concerned Ministries and Municipalities through official facsimile letters from the CDR. Local communities received oral invitations during social interviews as well as written ones via distributed leaflets.

The participating audience included mainly directly affected people, head of Municipalities, Ministry and NGO representatives as well the World Bank's environmental consultant. The list of participants is included in **Appendix E**. Elard consultants presented the project details, potential impacts and mitigation measures in a 45-minute presentation, and opened the floor for one hour of open discussions with the attendees.

In addition Elard also consulted potentially affected local people and concerned Municipalities during the socio-economic survey, undertaken as part of the ESIA. This activity involved conducting interviews and surveys through questionnaires with the communities and head of Municipalities areas under both component 1 and 2 of the project. Project leaflets, prepared in Arabic, were distributed during the socio-economic survey. These aimed at introducing the project while serving as an invitation to participate in a public consultation meeting

Thirdly, KREDO, consulted with head of Municipalities in connection with deciding on the exact locations for the additional reservoirs to be constructed for the distribution network in the suburbs of Beirut under component 2. As a result of these consultations, decisions were made to reduce the scope of expropriation decrees for this component to a minimum.

Various environmental impacts were discussed during the open session and some concerns were raised by the attendees. These are documented in the attached minutes of meeting (**Appendix E**).

The two main serious concerns raised by the public during the consultation meeting on 12 May 2010 are summarized in Table 9-1 below together with an explanation of how these concerns are suggested mitigated by the project.

**Table 9-1 Main raised concerns**

CONCERN	DESCRIPTION	ACTION/ANSWER
<b>Retrieval of 3m<sup>3</sup>/s of water</b>	Concerns were raised regarding type and magnitude of impact that could potentially affect the natural flow of water in the Awali River section downstream the Joun HEP after retrieval of the required amount of water for the Conveyor Project	CDR representative pointed out that the impact would be negligible.  ELARD to investigate the issue and address it in its Environmental and Social Impact Assessment Report
<b>Structural impact from TBM activity</b>	Concerns on adverse impacts on the structural stability of the St. Joseph Carmel School were expressed by the chairperson since the tunnel is passing beneath the school.	CDR to provide adequate geotechnical reports proving that there will be no direct impacts resulting from the tunnel boring activity.

A second Public Consultation covering both components of the project was held for the purpose of disclosing the results of the ESIA study on 27 July 2010 and targeted the same audience including all related stakeholders as for the first consultation. The questions raised by the audience are given in Table 9-2 below:

**Table 9-2 Questions raised during 2nd Public Participation**

QUESTION/COMMENTS	ADDRESSED BY	ANSWER	ANSWERED BY
This project was addressed in the 70's and faced many obstacles especially political ones, one of the obstacles is the fact that this project is taking the water to Beirut without feeding the areas where the tunnel will pass.	Eng. Nashaat Hamieh - Barja Municipality	The tunnel has openings all along to allow future connections to water networks and supply the areas along the tunnel.	Ismail Makke (CDR)
If the 3m <sup>3</sup> /s was allocated in the 70's, is this amount considering the increase in water need from then till now? And is this amount enough to feed Beirut and the areas around the tunnel?		The 3 m <sup>3</sup> /s can meet Beirut's needs, as for the needs of the areas surrounding the tunnel the Awali project if one part of the water project in Lebanon, the Bisri dam will shortly follow the Awali project and both projects will meet the requirements of Beirut and the other areas. The time difference between the 2 projects is one year so we might face a shortage problem for one year only.	Ismail Makke (CDR)
Is the Tunnel designed for 3m <sup>3</sup> /s?	Eng. Pierre Abi Rashed - P.A.R Consultants/Baabda Municipality	The tunnel is designed for 9 m <sup>3</sup> /s.	Ismail Makke (CDR)
When will the Awali and The Bisri project start?	Ministry of Environment	The implementation of the Awali Project will start in April - May 2011. Bisri Dam will follow shortly	Ismail Makke (CDR)
Is Any Part of the tunnel passing on public roads?	Hassan Khawandi - Ministry of public works and transportation	The Tunnel will be underground (under private lands) whereas the twin pipelines will pass under roads	Ismail Makke (CDR)
The tunnel of Nahr Ibrahim took 8 years of work although it needed 4 years, what is the expected delay time for this project?	Mme Khoury - Carmel St Joseph School-Mechref	The problem of Nahr Ibrahim Tunnel was the method of drilling because the drilling was in different types of rocks. For the Awali project the drilling will take place in one type of rocks using TBM (Tunnel Boring Machine). Minor problem that may occur because of underground unexpected issues are the only things that might delay the project, but hopefully it will end within its targeted time	Ismail Makke (CDR)
If we go back to the tunnel profile at what depth from the surface the tunnel will take	Pierre Abi Rashed - P.A.R Consultant/Baabda Municipality	The tunnel will be drilled in rocky lands at a depth ranging from 20 to 190 m. the lowest	Rashad Ghanem (ELARD)

place and by how much sand it will be overlain?		depth will be in the valleys of Wadi abu yabes and Damour River where there will be some gravel/sand.	
We are hearing a lot these days that the Qaraoun Lake is polluted and part of the water coming to the Awali tunnel will be from Qaraoun, so would this water be drinkable?	Elie Farhat - Kfarshima Municipality	If we suppose that nothing is being done to treat the water of the Litani river and it all arrived to the Qaraoun Lake untreated, the water that will be taken from the lake for the Awali tunnel will be mixed with water from Ain El Zarka, the water passing under the Jizzine Tunnel and the water of Bisri lake, so if the water started with a 100% pollution it will reach the tunnel with 10% pollution, and then the water will be treated in the Ouardaniye WTW, thus the water will be clear and drinkable. Furthermore, there is an ongoing plan to treat the water of the Litani River, this plan is implemented by a set of Water Treatment Plants that was built or is being built in Baalbak, Timnine, Zahle, Job Jinnine, Saghbine and Qaraoun, some of these started working and others will start soon.	Ismail Makke (CDR)
Who will follow up on the project while it is being executed and afterwards? The problem is that the studies are always very good but no one follows up afterwards. What about the other areas outside Beirut? What about the Naame Landfill? And what is the effect of the tunnel on the lands that it is passing under?	Mme Khoury – Carmel St Joseph School-Mechref	The status of the Naame Landfill is a part of the national plan for solid waste. As for the Awali project, the ministry of environment had some strict rules regarding the sludge and mud that will be produced from the works, so these will be sent to the Naame landfill as it is the only place available. There is no effect on the lands that the tunnel is passing under, because the tunnel is really deep. As a proof all countries have subways that are much shallower and do not affect the lands, so a tunnel that deep should not have any effect. Another proof is that tunnels were dug long time ago for the litany project and nothing went wrong till now.	Ismail Makke (CDR) - Mr. Nasser Nasrallah (president of Friends of Ibrahim Abd El Al Organization)
The Awali and Bisri projects are related. The fact that the Awali project took into consideration that more water will be conducted through it is a guarantee that the Bisri dam will be executed. Both projects are crucial to provide water to Beirut and the surrounding areas through	Mr. Nasser Nasrallah (president of Friends of Ibrahim Abd El Al Organization)		

openings along the tunnel for future connections.

Kanan Lake is also a good source to feed the areas of Iqlim el Kharoub and this project will be raised later on.

As for the Qaraoun Lake, a plan was set to treat and prevent its pollution. The following water treatment plants are part of this plan:

- Qaraoun station started working
- Saghbine and Jibb Jinnine stations will start working this year, and Jib Jinnine covers the areas from Aammig to Ain el Zibde.
- Areas from Ghazze to North Baaloul and Areas along Rashaya will be also connected to the treatment plant.
- Kob Elias, El Marj, Houch el harime, Bar Elias. Anjar and Majdel Anjar will be also connected to el Marj Station.
- Zahle and its surroundings will have a treatment plant as well as Bednayel, Shmistar and Riyyak.

We can also note that during the summer, Qaraoun lake is not polluted because farmers build small sand dams along the Litany River to divert its water for irrigation purposes, so the polluted water of the litany will not reach the lake, leaving it clear and unpolluted. The problem occurs in the winter where the rain destroys the small dams and bring the water to the lake.

As for the follow up of the projects, Mr Nasrallah advised to increase our awareness and participation, like what we are doing in this meeting, so we can push the ministries and all the concerned responsible to act.

Are the 3 m <sup>3</sup> /s of water that will be used for this project guaranteed all over the year?	Mr. Abd El Rahman Ghaziri – Beirut and Mount Lebanon Water Authority)	The critical time that the water is needed for is from April till October and the Qaraoun Lake was always able to meet its full capacity of 220 million m <sup>3</sup> during this period. The actual usage of the Qaraoun is of 60 million m <sup>3</sup> , and it will reach 120 million m <sup>3</sup> once project 800 starts operating. So the water supply of the Awali project will always be guaranteed. There is a future plan that consists of using the Qaraoun water for Agriculture and drinking a	Ismail Makke (CDR)
---	---	---	--------------------



		lot more than for generating electricity.	
On what basis the capacity of the phase 2 reservoirs was set? Was it set in the 70's also or did it take into consideration the future needs?	Pierre Abi Rashed – P.A.R Consultant/Baabda Municipality	The time scope of the plans is 2030. The 9m <sup>3</sup> /s that were planned for future use for the tunnel and the capacity of the reservoirs can meet the increasing demand for water for a sufficient time period even exceeding the year 2030.	Ismail Makke (CDR)
Will you use explosives in the drilling process? Did you do a survey to the tunnel depth to check the type of material that will be faced? The presentation mentioned around 88 tons of sludge daily, will the Naame Landfill be able to accept this amount and what is the alternative plan?	Mr. Adel Yacoub – Ministry of Environment	For the overall project there will be no use of explosives, these will only be used at the beginning of the tunnel to open an entrance for the TBM Machine. Surveys were done for the tunnel depth. The materials that will result from the drilling will be reused in the project, the remaining sludge or mud will be disposed in the Naame landfill. Naame landfill is receiving daily 2700 ton of solid waste from Beirut and Mount Lebanon, so the 80 or 100 tons of sludge will not have a major effect on the landfill capacity. Once the landfill is closed (after 2 to 3 years) the sludge will move to the alternative developed for it. Mr. Nasrallah interfered and gave a comparison between Dbayeh and the Awali project: In Dbayeh the water is more turbid because it comes from Jeita so it causes sedimentation in Nahr El Kalb. But in Awali the sediments are already deposited in Qaraoun and the only other place where the water becomes turbid is water coming from Ain el zarka to markaba after the first rain. So water reaching the treatment plant is not that turbid.	Ismail Makke (CDR) - Mr. Nasser Nasrallah (president of Friends of Ibrahim Abd El Al Organization)
What is the time frame of the project?		The project should start in April/ May 2011 and should take 3-4 years to be completed.	Ismail Makke (CDR)
Suggestion: to use the water that will get out of the treatment plant and the excess of the water in the tunnel to produce energy.	Eng. Antoinette Sleiman (Litani Water Authority)		
Is the Project going to take from the Water of the Damour River were the 2 ventilation shafts are present?		The tunnel will just pass by the Damour River without using any of its water.	Ismail Makke (CDR)
What is the Tunnel Composed off?		It will consist of reinforced concrete covered by	Ismail Makke (CDR)

	<p>stainless steel for the treated water to pass in.</p> <p>One of the obstacles that delayed the project was to agree whether to do a concrete tunnel or pipelines, and the result was a combination, a tunnel to khalde and pipelines to distribute water from khalde to the reservoirs.</p> <p>The tunnel is less costly than the pipelines.</p>	
Wouldn't it cost less if the WTW was done near Beirut?	<p>May be It will cost a bit less but this way we would be depriving the areas where the tunnel passes from fresh water and this was a major problem during the study of the project.</p>	Ismail Makke (CDR)
How does the expropriation law work?	<p>A legal session formed of a judge and real estate experts will be held for each area that should be expropriated that will take into consideration all the facts related to this area and its surrounding and will issue a decision regarding the price of the area to be expropriated in accordance with the Lebanese expropriation law</p>	Ismail Makke (CDR)

Minutes of Meeting of the second Public Participation are given in Appendix F

According to Lebanese Law, directly affected landowners under this RAP can be consulted after the expropriation Decrees have been issued, signed by the concerned Minister, President of the Council of Ministers and the President of the Republic and stating that the expropriation of subject lots and lands are for public interest. These consultations take place at the local court office housing the Expropriation Commission for that sub-district

Any interested party may also consult the relevant documents at the relevant government offices in this case CDR or BMLWA, and obtain copies of them, as soon as an expropriation decree has been published, as described above.

The ESIA and RAP will be made available to the public at the offices of the CDR and BMLWA on 30 July 2010. It will also be disclosed in a location accessible to the affected populations, such as at the Joun, Ourdaniye, Naame, Khalde and Hazmieh Municipalities.

## 10. APPEALS PROCEDURES AND GRIEVANCE REDRESS

Types of conflicts: In practice, complaints and conflicts which occur during land acquisition, establishment of ROWs necessary to water supply projects may be envisaged as the following:

- Complete refusal of the idea of ceding land or accepting imposed restrictions on property;
- Refusal of the monetary compensation proposed by the government;
- Title deed not up-to-date and old land titles;
- Conflicts between land owners.
- Absence of land owners

Proposed mechanisms: As the project will improve the water supply and distribution network across the Greater Beirut Area, including in the low-income neighborhoods of Southern Beirut, and as such improve vital services to the city, the overall social and economic impact of the project are positive. Because of this, compensations or land acquisition necessary for the project will normally be done amicably on the basis of the legal expertise of the Expropriation Commissions, that independently considers the value, nature of the plot and prices of similar land as described above

Institutional Framework for Conflict Management: If the problem persists –namely, if the land owners feel prejudiced or claim that their rights have not been preserved– they can appeal to the competent legal authorities, in conformity with the law relative to expropriation by reasons of public good and the Tunisian administrative rules in effect.

Appeals Procedures under Lebanese Law: The decisions of the Expropriation Commission may be appealed to the Appeals Commission by either party (the CDR/BMLWA or the individual property owner, but not by public bodies, NGOs or municipalities) and the decisions of the Appeals Commission are binding on both parties. The appellant must be represented by a lawyer. The appeals fee is about USD 125 (including stamp and insurance fees to initiate the appeal) plus 3,5 % of the increased compensation amount demanded in the appeals case. Appeals Commissions may make upward or downward adjustments in the level of compensation awarded and must make a decision within three months of the lodging of the appeal.

Grievance redress and complaints under the GBWSP: *This section addresses how project-related grievances or expropriation appeals are handled under the project, as distinct from Lebanese law as described above.*

The Project Management Unit (PMU) will seek amicable agreements with the land owners. For this purpose, various approaches, information and communications will be used, such as:

- Contacts with the land owners are made either directly during field visits, or by summon through the Expropriation Commissions according to their procedure
- Information and outreach meetings and contacts with media to spread accurate information about the GBWS and its components in addition to the public consultations already undertaken and contacts with affected Municipalities
- The PMU and/or the relevant identified officials in CDR and BMLWA shall be accessible to the public, claimants and owners during regular daily office hours, to provide an adequate basis to ensure affordable access to their legal rights.

- The PMU shall develop procedures for recording and processing grievances and recording its responses to such grievances. Responses should be regularly reviewed by CDR and BMWLA and communicated to the World Bank
- The PMU will ensure in cooperation with CDR and BMWLA that mitigation measures will have been satisfactorily implemented before the implementation of project activities involving land acquisition and that all necessary conditions to proceed to the implementation stage have been fulfilled. *In particular the PMU will ensure that neither CDR or BMLWA takes possession of any land expropriated under this project without full prior payment of the replacement costs to ensure full compliance with op.4.12*
- Under op.4.12 affected land owners should be given a right to appeal their case without paying appeal fees or having to be represented by lawyers as is required under Lebanese Law. In the case of an appeal under land acquisition for this project or any other project-related grievance, the CDR or the BMLWA will contact the World Bank through the PMU refers the appeal or grievance to a grievance redress mechanism consisting of a neutral, independent administrative panel, which panel shall resolve the disputed matter, consistent with the objectives and principles set forth in OP 4.12. The panel shall hold its hearing of the matter at a time and place that is easily accessible to the claimant and issue its decisions in a timely manner. In addition, and in contrast to Lebanese law, the compensation award approved by the grievance redress mechanism shall not be less than the award which is being appealed
- The PMU will ensure that there will be necessary budget resources available to adequately staff the unit, establish necessary liaison and contacts with CDR and BMLWA implementing officials and handle the procedures and measures described in this section

Monitoring and evaluation: RAP implementation progress will be monitored by the Bank who will review regular updates on RAP implementation and compensation of replacement costs through the reporting of the PMU.

## II. ORGANIZATIONAL RESPONSIBILITIES.

MoEW is overall in charge of this project. It will have a Project Steering Committee (PSC) headed by H.E. the Minister with representatives from key stakeholders including the Ministry of Finance., a representative from CDR, the Director of the and an Operations Advisor that will meet once quarterly to review progress on the project. The PSC be assisted by an Operations Advisor, Monitoring & Evaluation specialist and an administrative assistant. The Project Management Unit (PMU) which will act as secretariat to the PSC, will be situated in the BMLWA and will consist of a project coordinator/senior engineer, a procurement specialist, financial management specialist and environmental and social . The environmental and social development specialists will be responsible for coordination, monitoring and supervision of all land acquisition and resettlement activities in accordance with the present RAP and TORs approved by the World Bank.

The project will also support utility operations by financing specialized technical services including an electro-mechanical engineer, a civil engineer with expertise in water supply, a structural engineer and a water treatment/water quality specialist. CDR will also have one engineer in its offices. While component 1 of the project will be implemented by CDR, Components 2 and 3 will be implemented by the BMLWA, through its PMU which is also responsible for project monitoring, coordinating and reporting for all components of the project.

As part of the Strategy and approach for Implementation Support, the Bank will supervise the implementation of the RAP and provide guidance to the PMU/Government of Lebanon to address any issue that might arise

The implementation arrangements are depicted in the

Figure 11-1 below:

## Implementation Arrangements

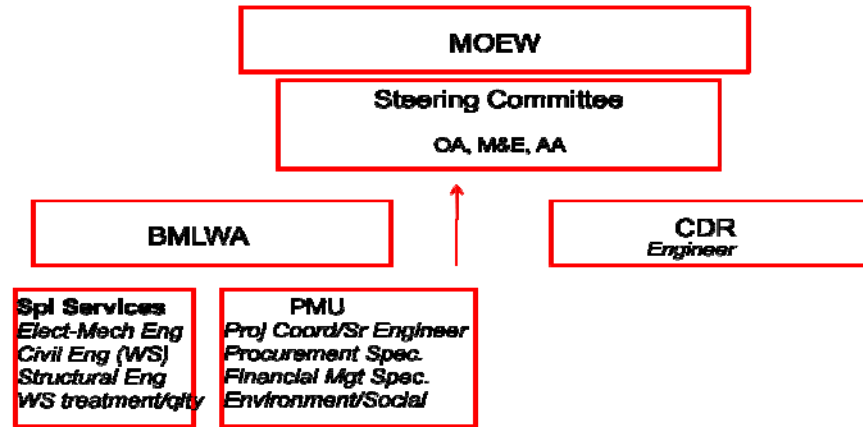


Figure 11-1 Implementation arrangements

## 12. IMPLEMENTATION SCHEDULE.

A tentative schedule covering all resettlement activities from consultation with affected landowners and other stakeholders, preparation of expropriation files through completion of the procedures at court and relevant authorities including compensation to landowners if given in Figure 12-1 below relative to implementation of project components.

As can be seen in the Table the total number of expropriations related to component 1 are expected to be completed by December 2011, while start of works for the tunnel will be in April 2011 and start of works on the treatment plant and the 3 main reservoirs will be early 2012. As for component 2, the expropriation procedures are expected to be completed by October 2011. The sequencing of expropriations is planned to fit this implementation schedule so that all relevant expropriations will be finalized prior to start of work For that component.





### 13. ESTIMATED COSTS AND BUDGET.

This section sheds light on the mechanism adapted by both BMLWA and the CDR for securing that a budget is set aside to provide compensation in accordance with op.4.12.

The estimated budget for expropriations related to surface structures was based on a valuation of assets taking into consideration the replacement costs and current market values of lands. The cost per meter can be inferred from the attached tables.

As for the budget estimated for payment of compensation related to the ROWs for the tunnel, this was also based on an approximate compensation of 10 % of the market value of lands.

In the case of BMLWA, the authority transfers the required amounts from its own account in the Central Bank of Lebanon to one of its private accounts designated for expropriation purposes where it will be deposited until time of payment of compensation in accordance with the decisions of the Expropriation Commission

As for the CDR, it reserves the money from its own budget "the local counterpart budget" designated for expropriation purposes under projects that are internationally financed.

In both cases and as required by law, the funds should be transferred prior to initiating expropriation procedures i.e. before the Commission proceeds with the assessment activities.

The funds remain deposited until the issuance of the takeover decision following which affected people will be paid their indemnities as soon as they claim their right to it by revealing relevant documents proving their ownership of the land.

The estimated budget set aside is sufficiently large in both cases to cover additional costs if the Expropriation Commissions should award higher compensation than estimated by BMLWA and CDR.

Table 13-1 below summarizes the budgeted cost estimates related to expropriations to be Amount conducted by both the CDR and BMLWA under this project and Table 13-2 summarizes the estimated budgets for establishing Easement Rights along the tunnel alignment.

**Table 13-1 Summary of Costs and Budgets of Expropriation**

ITEM	COMPONENT	RESPONSIBLE	/ESTIMATED BUDGET (USD)
Previous Expropriations for Surface Features	1	CDR	2,177,790
New Expropriations for Surface Features	1	CDR	31,734,347
New Expropriation for Surface Features	2	BMLWA	19,640,750

**Table 13-2 Summary of Estimated Budgets for Establishing Easement Rights**

ITEM	COMPONENT	RESPONSIBLE	Amount/ESTIMATED BUDGET (USD)
Easement Right(along Tunnel Alignment)	1	CDR	3,000,000

## **I4. MONITORING AND EVALUATION.**

Project progress will be monitored by the monitoring and evaluation specialist in the project PMU at the BMLWA and the steering committee at MoEW. During early stages of the project implementation, progress monitoring will focus among other things on the implementation of the RAP in cooperation with the designated PMU's social development specialist and the two involved agencies, BMLWA and CDR and as described above. The social and environmental specialist will ensure proper implementation of the RAP. The Bank will review regular updates on RAP implementation and compensation of replacement costs through the reporting of the PMU.

## **I5. APPENDICES**

## **APPENDIX A: SUMMARIZED SOCIO ECONOMIC SURVEY AT LEVEL OF VILLAGES**

VILLAGE /TOWN	GENERAL DESCRIPTION	LIVELIHOOD ACTIVITIES	EDUCATION, CULTURE, COMMUNITY & PUBLIC INFRASTRUCTURE	WATER & WASTEWATER SERVICES	OTHER INFORMATION
Joun	<ul style="list-style-type: none"> <li>Population: 7500-8000</li> <li>Altitude: 350-400 m</li> <li>Surface area: 12 km<sup>2</sup></li> <li>Land ownership: 20-30% publicly owned, and the remaining is privately owned</li> <li>Land use: 80% is designated for agricultural use</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture: Olive groves; Citrus orchards; Vegetables and Flowers in greenhouses; the majority of designated agricultural lands remain uncultivated due to the lack of irrigation water</li> <li>Industry: Agro-food (Olive oil; Orange Blossom water; Rose water; Carob molasses); Manufacture of Nylon, Tyres and concrete building blocks</li> <li>Commerce: Small shops and garages</li> </ul>	<ul style="list-style-type: none"> <li>High literacy rate (95%)</li> <li>Two public &amp; two private schools</li> <li>Public Library</li> <li>Afforestation campaigns</li> <li>Sports facilities</li> <li>Monastery of Saint Saviour</li> <li>Archaeological features</li> <li>Old stone houses</li> <li>One dispensary &amp; resident doctors</li> </ul>	<ul style="list-style-type: none"> <li>Drinking, service and irrigation water is supplied by the Barouk Water Authority and distributed through a public network</li> <li>A public, municipal well supplements the supply in addition to many private wells in privately-owned lands</li> <li>Small hillside reservoirs for rain water harvesting</li> <li>No sewage network; septic tanks are used</li> </ul>	<ul style="list-style-type: none"> <li>A land survey is underway</li> <li>60-70 building permits were handed out in the last three years</li> <li>60% of the population are seasonal residents</li> </ul>
Ouardaniye	<ul style="list-style-type: none"> <li>Population: 4000</li> <li>Altitude: 350 m</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture: Vegetable production in greenhouses</li> <li>Industry: A grain mill and building blocks factories</li> <li>Commerce: Restaurant/Café</li> </ul>	<ul style="list-style-type: none"> <li>One public &amp; one private school</li> <li>One dispensary</li> </ul>	<ul style="list-style-type: none"> <li>Water is supplied through public wells, at depths of 452m and 369m, managed by the municipality, which also manages a distribution network</li> <li>Up to 150 private wells are drilled in the village</li> <li>No sewage network; septic tanks are used</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Al-Damour	<ul style="list-style-type: none"> <li>Population: 30,000</li> <li>Resident population: 10,000 (due to displacement &amp; emigration)</li> <li>Land ownership: The majority of lands are privately owned</li> <li>Land use: 20% are in agricultural use</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture: 100 ha of banana plantations and vegetable production</li> <li>Commerce: Restaurants/Cafés; Small shops and garages</li> </ul>	<ul style="list-style-type: none"> <li>Two public &amp; three private schools</li> <li>Archaeological features</li> <li>One dispensary &amp; resident doctors</li> </ul>	<ul style="list-style-type: none"> <li>The Damour River waters are used for irrigation</li> <li>Drinking and service water are supplied through municipal public wells and private wells</li> <li>A sewage network is present but is not operational; septic tanks are used</li> </ul>	<ul style="list-style-type: none"> <li>A land survey has been carried out</li> <li>Around 30 building permits were handed out in the last three years</li> </ul>
Khalde	Residential and	Very little agricultural activities		<ul style="list-style-type: none"> <li>A water distribution network runs through Khaldeh and is supplied</li> </ul>	<ul style="list-style-type: none"> <li>residential and touristic</li> </ul>

VILLAGE /TOWN	GENERAL DESCRIPTION	LIVELIHOOD ACTIVITIES	EDUCATION, CULTURE, COMMUNITY & PUBLIC INFRASTRUCTURE	WATER & WASTEWATER SERVICES	OTHER INFORMATION
	touristic area, It is a coastal area that is rapidly urbanizing with 15,000-20,000 residents.			from the Mechref village. Water pipes have all been repaired this year. Also, several privately drilled wells exist in the village with a depth ranging from 30-60 m but water is slightly salty. A sewer network is present and is connected to the collector in Khaldeh.	area • rapidly urbanizing
Hadath	Population: 150,000	<ul style="list-style-type: none"> <li>• Industry: Light industries – Elevators, towels, tiles</li> <li>• Commerce: Banks &amp; shops</li> </ul>	<ul style="list-style-type: none"> <li>• Many public service institutions</li> <li>• Four public, 10 private &amp; two vocational schools; three universities, including the largest Lebanese University campus</li> <li>• Two hospitals, three dispensaries and many resident doctors</li> </ul>	<ul style="list-style-type: none"> <li>• Water is supplied through the Ain El-Delbeh water authority and distributed through a municipally-owned and managed network</li> <li>• A sewage network is present and operational</li> </ul>	
Hazmieh	Population: 6,500	Commerce: Over 10 banks and numerous offices	<ul style="list-style-type: none"> <li>• Many public service institutions</li> <li>• One public &amp; six private schools; three universities</li> <li>• Two hospitals, one dispensary and many resident doctors</li> </ul>	<ul style="list-style-type: none"> <li>• Water is supplied through the Ain El-Delbeh water authority from the Daichouniyeh Spring and distributed through a network</li> <li>• A sewage network is present and operational</li> </ul>	

## **APPENDIX B: PREVIOUS EXPROPRIATIONS (CDR)**



Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area In (m²)	Overall Decreee Compension in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compension	Damaged Facilities	Damaged Trees	Comments								
12847	8/8/1998	Wadi Abou Yabess Washout and Access Road	Take Possession	365/2000	8/23/2000	Al Jmeillye	403	7334.00	114.00	7220.00	41,960,000	730	3/24/2000	364/2000	8/23/2000	Elias Wadih El-Sernouk	1,200	250,000	Nothing	Nothing									
						Robert Wadih El-Sernouk	1,200	250,000																					
						Ahmad Afif Mohammad Najib Nhoul	2,400	300,000	Nothing	Nothing																			
						Ali Ahmad Saed	2,400	14,850,000	Nothing	Nothing																			
						Sara Selim dagher	2,400	9,960,000	Nothing	Nothing																			
						Nadim Daher Dagher	2,400	6,600,000	Nothing	Nothing																			
						Ali Ahmad Youssef	2,400	2,250,000	Nothing	Nothing																			
																													Previously Expropriated following decree n. 62/9787 of 5145 m2 and completion number 2306 on 26-10-1962
						Ilman	13	?	14019.00	?																			
Ilman	Between Pegs SO-FT	?	7108.00	?																									
1746	11/29/1999	Ventilation Shaft (Debbye)	Take Possession	54/2005	7/25/2005	Debbeye'	181	630640.00	64.00	630576.00	5,000,000	940	8/17/2004	53/2005	7/5/2005	El-Dhemiyyeh Developmen t	2,400	5,000,000	Nothing	Nothing									
12876	8/8/1998	Khalde Surge Shaft	Take Possession	361/2000	8/23/2000	Aramoun	3644	1110.00	1110.00	0.00	222,000,000	797	3/31/2000	360/2000	8/23/2000	Prince Faysal Majid Erslan	2,400	222,000,000	Nothing	Nothing									
12872	8/8/1998	Khalde Flow Measuremet and Sampling Chamber + Access Road	Take Possession	225/2000	5/20/2000	Al Qobbe	655	1234.00	31.00	1203.00	1,476,125,002	455	2/29/2000	224/2000	5/20/2000	Khayriyah hassan Remlawi	1,200	200,000	Nothing	Nothing									
						Fayez Ali Najem	1,200	200,000																					
						Ali Ibrahim Al-Dghelli Abel Allah	2,400	200,000	Nothing	Nothing																			
																													Plot Unit with Plot 3576 to form a single plot
																													Plot Unit with Plot 3575 to form a single

Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Overall Decrease Compersion in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compersion	Damaged Facilities	Damaged Trees	Comments
																					plot
						Al Qobbe	4153	2284.00	14.00	2270.00		461				Hani Hussein Halal	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3570	1202.00	50.00	1152.00		462				Ali El-Hajj Jamil Makki	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3569	1318.00	26.00	1292.00		463				Amin Abel Allah Al-Jerdi	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3577	1210.00	164.00	1046.00		464				Hashem Hassan Ali El-Shatti	2,400	300,000	Nothing	Nothing	Plot Unit with Plot 3578 to form a single plot
						Al Qobbe	3578	1204.00	123.00	1081.00		465				Hashem Hassan Ali Qasem El-Shatti	2,400	250,000	Nothing	Nothing	Plot Unit with Plot 3577 to form a single plot
						Al Qobbe	3579	1278.00	285.00	993.00		466				Samih Mohammad Daou	2,400	400,000	Nothing	Nothing	
						Al Qobbe	3580	1228.00	275.00	953.00		467				Youssef Mahmoud Thiban	2,400	250,000	Nothing	Nothing	
						Al Qobbe	3581	1202.00	27.00	1175.00		468				Samir Mohammad hijazi	2,400	200,000	Nothing	Nothing	
						Al Qobbe	1713	1256.00	24.00	1232.00		469				Seiman Mohammad Saleh	2,400	200,000	Nothing	Nothing	
						Al Qobbe	1712	1673.00	24.00	1649.00		470				For the Benefit of Plots: 650-1736 and from 1703 until 1706, 1710 & 1713	2,400	200,000	Nothing	Nothing	Private Road
						Al Qobbe	4279	1023.00	60.00	963.00		471				Abed El-Karim Mahmoud Yassin	2,400	200,000	Nothing	Nothing	
						Al Qobbe	4284	1252.00	100.00	1152.00		475				Mohammad Ismail Sheito	2,400	26,500,000	Nothing	Nothing	
						Al Qobbe	3595	1250.00	69.00	1181.00		472				Mohammad Talal Fawzi Al-Sharani	2,400	250,000	Nothing	Nothing	
						Al Qobbe	3596	1202.00	148.00	1054.00		473				Ommiya Mohammad Rashed Mirashli	2,400	250,000	Nothing	Nothing	
						Al Qobbe	3597	1282.00	35.00	1247.00		474				Hani Youssef Abi El-Mona	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3612	1270.00	38.00	1232.00		476				Fadia Daher El-Din El-Kelyani	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3603	1264.00	35.00	1229.00		477				Atef hassan Zaatar	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3607	1302.00	33.00	1269.00		479				Zeina Yehy Fananji	1,200	200,000	Nothing	Nothing	
						Al Qobbe	3608	1498.00	10.00	1488.00		480				Ghina Yehy Fananji	1,200	200,000			
												481				Gebrayel	2,400	200,000	Nothing	Nothing	

Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Overall Decreee Compensation in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compensation	Damaged Facilities	Damaged Trees	Comments
																Emil Selawi					
						Al Qobbe	3590	1613.00	80.00	1533.00		482				Ibrahim Ali Ibrahim	2,400	250,000	Nothing	Nothing	
						Al Qobbe	3617	1260.00	5.00	1255.00		483				Ramzi Labib Zakka	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3616	1214.00	29.00	1185.00		484				Sherif Mohammad Mahou	2,400	200,000	Nothing	Nothing	
						Al Qobbe	3615	1200.00	53.00	1147.00		486				Ibrahim Selim El-Terek	1,200	250,000	Nothing	Nothing	
						Al Qobbe	3614	1224.00	155.00	1069.00		487				Imad Selim El-Terek	1,200	250,000			
						Al Qobbe	3614	1224.00	155.00	1069.00		488				Gibrael Youssef Masri	2,400	300,000	Nothing	Nothing	
						Al Qobbe	3602	1482.00	519.00	963.00		489				Ibrahim Khalil Hamid	2,400	116,775,000	Nothing	Nothing	Section A is expropriated for the end of the tunnel
						Al Qobbe	4127	1096.00	1096.00	0.00		491				Nafisa Abed El-Qader Tabbara	342,858	35,228,660	Nothing	Nothing	
						Al Qobbe	4127	1096.00	1096.00	0.00		492				Ghassan Abed El-Qader Tabbara	685,714	70,457,114			
						Al Qobbe	4127	1096.00	1096.00	0.00		493				Amro Abed El-Qader Tabbara	685,714	70,457,114			
						Al Qobbe	4127	1096.00	1096.00	0.00		494				Walid Abed El-Qader Tabbara	685,714	70,457,114			
						Al Qobbe	4128	1236.00	1236.00	0.00		496				Najib Aref Salid	1,200	139,050,000	Nothing	Nothing	
						Al Qobbe	4128	1236.00	1236.00	0.00		497				Shawki Aref Salid	1,200	139,050,000			
						Al Qobbe	4285	-	-	-		498				Mohammad Ismail Shelto	2,400	250,000			
						Al Qobbe	4280	-	-	-		499				Abed El-Karim Mohammad Yassine	2,400	500,000			
						Al Qobbe	3601	1458.00	1458.00	0.00		500				Jouli Ibrahim Al-haddad	2,400	328,050,000	Nothing	Nothing	
						Aramoun	3354	2901.00	345.00	2556.00		503				Land Owner	2,400	1,437,500	Nothing	Nothing	Private Garden
						Aramoun	3355	2707.00	921.00	1786.00		520				Rashed Rachad Selim Mnah	2,400	207,225,000	Nothing	Nothing	Plot Unit with Plot 3356 to form a single plot
						Aramoun	3356	5287.00	1062.00	4225.00		521				Rashed Rachad Selim Mnah	2,400	238,950,000	Nothing	Nothing	Plot Unit with Plot 3355 to form a single plot
						Aramoun	3357	-	-	-		506				Land Owner	2,400	1,437,500			
						Aramoun	3358	-	-	-		507				Land Owner	2,400	1,437,500			
						Aramoun	3359	-	-	-		508				Land Owner	2,400	1,437,500			

Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Overall Decree Compensation in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compensation	Damaged Facilities	Damaged Trees	Comments
						Aramoun	3360	-	-	-		509				Land Owner	2,400	1,437,500			
						Aramoun	3361	-	-	-		510				Land Owner	2,400	1,437,500			
						Aramoun	3362	-	-	-		511				Land Owner	2,400	1,437,500			
						Aramoun	3363	-	-	-		512				Land Owner	2,400	1,437,500			
						Aramoun	3364	-	-	-		513				Land Owner	2,400	1,437,500			
						Aramoun	3365	-	-	-		514				Land Owner	2,400	1,437,500			
						Aramoun	3366	-	-	-		515				Land Owner	2,400	1,437,500			
						Aramoun	3367	-	-	-		516				Land Owner	2,400	1,437,500			
						Aramoun	3368	-	-	-		517				Land Owner	2,400	1,437,500			
						Aramoun	3369	-	-	-		518				Land Owner	2,400	1,437,500			
						Aramoun	3370	-	-	-		519				Land Owner	2,400	1,437,500			
						Aramoun	1453	-	-	-		522				Souad nouri Khodor Fakhro	2,400	200,000			
						12871	8/8/1998	Roads Along Pipelines	Take Possession	223/2000		5/20/2000				Al Qobbe	661	1477.00	141.00	1336.00	800,000
Al Qobbe	2510	-	-	-	452						Youssef Ahmad Baydoun		2,400	500,000	Nothing	Nothing					
1744	11/29/1999	Khalde Distribution Chamber	Take Possession	37/2003	2/18/2003	Al Qobbe	1379	820.00	820.00	0.00	352,450,000	1757	5/19/2001	36/2003	2/18/2003	Georges Amine Abou Shaer	366,914	53,883,000	Nothing	Nothing	
												1758				Mohammad Rida Bin Moahmmad Sinjabe	304,963	44,785,000			
												1759				Ghaston Esperdion Bredy	304,962	44,785,000			
												1760				Mimo Esperdion Bredy	304,962	44,785,000			
												1761				Rest of Esperdion Bredy inheritants	1,118,199	164,212,000			
1267	9/10/1999	Pipeline Alignment	Take Possession	23/2003	2/18/2003	Kfarshima	100	858.00	84.00	774.00	40,800,000	1705	5/19/2001	21/2003	2/1/2003	Laure Inrahim Hanin	2,400	1,000,000	Nothing	2 L Eucalyptus 3 L Pudding Pipe	
						Hadath	4151	1931.00	169.00	1762.00		1706					2,400	32,000,000	Nothing	3 L Pine	
						Hadath	4164 Private Garden to Plots 803 and From	655.00	125.00	530.00		1708				Owners of Plot 803	2,400	100,000	Nothing	Nothing	
												1709				Owners of Plot 4146	2,400	100,000			
												1710				Owners of Plot 4147	2,400	100,000			

Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Overall Decreeee Compensation in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compension	Damaged Facilities	Damaged Trees	Comments	
							4146 till 4162					1711				Owners of Plot 4148	2,400	100,000				
												1712				Owners of Plot 4149	2,400	100,000				
												1713				Owners of Plot 4150	2,400	100,000				
												1714				Owners of Plot 4151	2,400	100,000				
												1715				Owners of Plot 4152	2,400	100,000				
												1716				Owners of Plot 4153	2,400	100,000				
												1717				Owners of Plot 4154	2,400	100,000				
												1718				Owners of Plot 4155	2,400	100,000				
												1719				Owners of Plot 4156	2,400	100,000				
												1720				Owners of Plot 4157	2,400	100,000				
												1721				Owners of Plot 4158	2,400	100,000				
												1722				Owners of Plot 4159	2,400	100,000				
												1723				Owners of Plot 4160	2,400	100,000				
												1724				Owners of Plot 4161	2,400	100,000				
												1725				Owners of Plot 4162	2,400	100,000				
						Hadath	802	7260.00	561.00	6699.00		1728				Nabil Ojin Akmakji	480	240,000	Nothing	Nothing		
												1729				Samir Dikran Ojin Akmakji	240	120,000				
												1730				Mayri Ojin Akmakji	240	120,000				
												1731				Ojin Ramzi Akmakji	240	120,000				
												1732				Dikran Yarwant Akmakji	600	300,000				
												1733				Raja Yarwant Akmakji	600	300,000				
												1735				Nabil Ojin Akmakji	480	240,000				
												1736				Samir Dikran Ojin Akmakji	240	120,000				
												1737				Mayri Ojin Akmakji	240	120,000				
												1738				Ojin Ramzi Akmakji	240	120,000				
												1739				Dikran Yarwant Akmakji	600	300,000				
												1740				Raja Yarwant Akmakji	600	300,000				
												1742				Nabil Ojin Akmakji	480	240,000				
												1743				Samir Dikran	240	120,000				

Expropriation Decree #	Date	Subject	Status	Take Over Decision #	Take Over Decision Date	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Overall Decree Compensation in LBP	Assessment Decision #	Assessment Decision Date	Deposition Decision #	Deposition Decision Date	Land Owners/occupier /Investors	Shares	Total Compensation	Damaged Facilities	Damaged Trees	Comments					
12874	8/8/1998	Hadath 125 Reservoir	Take Possession	367/2000	8/23/2000											Ojin Akmakji										
												1744				Mayri Ojin Akmakji	240	120,000								
												1745				Ojin Ramzi Akmakji	240	120,000								
												1746				Dikran Yarwant Akmakji	600	300,000								
												1747				Raja Yarwant Akmakji	600	300,000								
												1749				Nabli Ojin Akmakji	480	240,000								
												1750				Samir Dikran Ojin Akmakji	240	120,000								
												1751				Mayri Ojin Akmakji	240	120,000								
												1752				Ojin Ramzi Akmakji	240	120,000								
												1753				Dikran Yarwant Akmakji	600	300,000								
												1754				Raja Yarwant Akmakji	600	300,000								
												1755				Elie Antoine Kateba	2,400	1,200,000								
12874	8/8/1998	Hadath 125 Reservoir	Take Possession	367/2000	8/23/2000	Hadath	3036	2602.00	2602.00	0.00	1,127,550,000	701	3/24/2000	366/2000	8/23/2000	Laure Georges Shqair	800	130,100,000	Nothing	Nothing						
												702				Mary Georges Shqair	800	130,100,000								
												703				Selim Georges Shqair	800	130,100,000								
						Hadath	3037	3082.00	3082.00	0.00		705				Laure Georges Shqair	800	154,100,000	Nothing	Nothing						
												706				Mary Georges Shqair	800	154,100,000								
												707				Selim Georges Shqair	800	154,100,000								
						Hadath	3038	4361.00	2438.00	1923.00		709				Laure Georges Shqair	800	91,650,000	Nothing	Nothing						
												710				Mary Georges Shqair	800	91,650,000								
												711				Selim Georges Shqair	800	91,650,000								

## APPENDIX C: NEW EXPROPRIATIONS (CDR)

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
12875	8/8/1998	Access Road to Joun Adit	Requires Update of Expropriation Lists	Joun	-	?	2023.00	?	344,574	Elias Abou Tohme	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	1188.00	?		Elias Abou Tohme	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	418.00	?		Hani Beydoun	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	295.00	?		Walid El Shami	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	495.00	?		Mikael El Jawish	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	4356.00	?		El-Haj Ahmad El-Hajawi	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	1528.00	?		Ghanem Ahmad El-Shamaa and Corporatres	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	2911.00	?		Saviour Monastery of the Saviour Order	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
				Joun	-	?	1279.00	?		Saviour Monastery of the Saviour Order	2,400	Nothing	Nothing	Former Expropriation for the Joun Road Project
12873	8/8/1998	Access Road to Ouardaniye WTW	Requires Update of Expropriation Lists	Ouardaniye	273	4071.00	26.00	4045.00	1,051,800	Abed El-Halim Mohamad Ali Saydani	2,400	Nothing	Nothing	
				Ouardaniye	272	1701.00	15.00	1686.00		Ibrahim Nicolas Dagher	2,400	Nothing	Nothing	
				Ouardaniye	308	?	388.00	?		All the Residents of the Wardaniye Villages	2,400	Nothing	Nothing	
				Ouardaniye	274	?	833.00	?		Abed El-Halim Mohamad Ali Saydani	2,400	Nothing	Nothing	
				Ouardaniye	280	5058.00	1076.00	3982.00		Youssef Shahine Dagher	1,200	Nothing	Nothing	
				Ouardaniye	255	?	108.00	?		Nicolas Shahine Dagher	1,200			
				Ouardaniye	-	1036.00	160.00	876.00		Nazek Mahmoud Mansour	2,400	Nothing	Nothing	
				Ouardaniye	281	?	86.00	?		?	?	Nothing	Nothing	
				Ouardaniye	268	?	163.00	?		Qasem Mohammad El-Khatib	1,200	Nothing	Nothing	
				Ouardaniye	269	?	212.00	?		Issam Mohammad El-Khatib	1,200			
				Ouardaniye	268	?	163.00	?		Hussein Ali El-Haj	2,400	Nothing	Nothing	
				Ouardaniye	269	?	212.00	?		Hussan Abed El-Hamid Saydani	1,200	Nothing	Nothing	



Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
										Abed El-Fattah Abed El-Hamid Saydani	1,200			
				Ouardaniye	285	?	757.00	?		Hussan Abed El-Hamid Saydani	2,400	Nothing	Nothing	
				Ouardaniye	270	?	184.00	?		Eiz El- Din Fouad Tabarra	533.330	Nothing	Nothing	
										Ahmad Fadi Fouad Tabarra	533.330			
										Ousama Fouad Tabarra	533.330			
										Najwa Fouad Tabarra	266.670			
										Dima Fouad Tabarra	266.670			
										Shaun Fouad Tabarra	266.670			
				Ouardaniye	293	?	70.00	?		Khaled Moustafa Eiz El-Din	800	Nothing	Nothing	
										Nabih Mohammad Hassan Eiz El-Din	800			
										Abed El-Aziz Mahmud Safa	800			
				Ouardaniye	298	?	243.00	?		Issam Anis Ali Hassan	1,800	Nothing	Nothing	
										Mahmud Bachir El-Baba	600			
				Ouardaniye	271	?	249.00	?		Selim Mohammad Shatila	2,400	Nothing	Nothing	
				Ouardaniye	299	?	507.00	?		Anis Sherif Rida	600	Nothing	Nothing	
										Nadim Sherif Rida	600			
										Hani Nemtallah Fadel Allah	600			
										Adnan Nemtallah Fadel Allah	600			
				Ouardaniye	155	?	194.00	?		Mohammad Ali Ramadan	2,400	Nothing	Nothing	
				Ouardaniye	157	?	12.00	?		Zeinab Toufik Taleb	2,400	Nothing	Nothing	
				Ouardaniye	300	?	459.00	?		Rose Anwar Dagher	2,400	Nothing	Nothing	
				Ouardaniye	154	?	288.00	?		Mohammad Hussein Eid	2,400	Nothing	Nothing	
				Ouardaniye	302	?	706.00	?		Ibrahim Mohammad Ali El-Taysh	2,400	Nothing	Nothing	
				Rmelle	70	1336.00	564.00	772.00		Shafiq Saïid El-Kazzi	2,400	Nothing	Nothing	Khaldeh-Zahrani Highway confirmation planning following decree 72/3407
				Rmelle	2342	866.00	9.00	857.00			2,400	Nothing	Nothing	Khaldeh-Zahrani Highway confirmation planning following decree 72/3407
				Rmelle	71	58602.00	3006.00	55596.00		Fadia Anis El-Kazzi	133.333	Nothing	Nothing	Khaldeh-Zahrani Highway
										The rest of Saïid El-Kazzi inheritents	1,066.667			

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments		
										Shafiq Saïid El-Kazzi	1,200			confirmation planning following decree 72/3407		
				Rmeille	784	1405.00	26.00	1379.00		Amal Eid El-Hafiz Saed	233	Nothing	Nothing	Stocks allocation is according to plot statement area		
				Ouardaniye	256	177.00	177.00	0.00		?	?	Nothing	Nothing	this Plot Certificate is not available at the concerned departments as well as not available at the Judge's until 29-9-1995		
1747		Ouardaniye WTW	Requires Issuance of New Expropiation Decree	Ouardaniye	214	7398.00	7398.00	0.00	20,000,000	Ali Mohammad El-Ahmad	2,400	Nothing	nothing			
				Ouardaniye	1811	1439.00	1439.00	0.00		Nada Shekri El-Sherif	2,400	Nothing	nothing			
				Ouardaniye	1869	2143.00	1074.00	1069.00		?	?			Private Road		
				Ouardaniye	1892	322.00	322.00	0.00		?	?	Nothing	Nothing	Private Road		
				Ouardaniye	2024	-	699.00	-		?	?	Nothing	Nothing	Private Road		
				Ouardaniye	209	6056.00	6056.00	0.00		Mary Khalil Dagher	2,400	Nothing	Nothing			
				Ouardaniye	210	8.00	8.00	0.00		Zamzam Hassan Mahmud	2,400	Nothing	Nothing			
				Ouardaniye	211	6.00	6.00	0.00		Ali Daher Barem	2,400	Nothing	Nothing			
				Ouardaniye	212	11028.00	6038.00	4990.00		Najwa Jamil Joujou	1,200	Nothing	Nothing			
								Khayer El-Din Adel Tabarra		600						
								Khayer El-Din Adel Tabarra		600						
				Ouardaniye	215	5.00	5.00	0.00		Mohammad Ibrahim Sha3ban	2,400	Nothing	1 Carob			
				Ouardaniye	216	3181.00	3181.00	0.00		Nazih Mohammad El-Sheikh	1,200	Nothing	Nothing			
				Ouardaniye	217	1670.00	1670.00	0.00		Bassam Dib Jaysiri	1,200					
				Ouardaniye	223	10390.00	3796.00	6594.00		Hassan Qasem Eid	2,400	Nothing	Nothing			
				Ouardaniye	218	6173.00	2074.00	4099.00		Fatima abed El-Rahim Farhat	2,400	Nothing	Nothing			
								Khalil Mahmud Akkari		375						
								Bilal Rafih El-Sabeh		675						
								Hilal Rafih El-Sabeh		675						
				Ouardaniye	205	2186.00	2186.00	0.00		Jilal Rafiq El-Sabeh	675	Akram Mohammad Saïid Zaytouni	600	Nothing	Nothing	
											Nabil Akram Zaytouni	466.667				

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments	
										Nizar Abed El-   Hafiz Saïid	466.667				
				Hayat Abed El-   Hafiz Saïid	223.333										
				Amal Abed El-   Hafiz Saïid	223.333										
				Mohammad Tamer Safwan	400										
				Ouardaniye	206	808.00	808.00	0.00		Lemaan Nehmi Jashi	2,400	Nothing	Nothing		
				Ouardaniye	207	1258.00	1258.00	0.00		Maha Sheker El-Sherif wife	2,400	Nothing	Nothing		
										Mohammad Badawi El-Haj Dib Bedran	-				
				Ouardaniye	208	1475.00	1475.00	0.00		Yehya Mohammad Shifan	2,400	Nothing	Nothing		
				Ouardaniye	1866	837.00	837.00	0.00		Mahmud Mohamad Sheban	1,200	Nothing	Nothing		
										Yousef Mohamad Sheban	1,200				
				Ouardaniye	1865	817.00	817.00	0.00		Nizar Mohamad El-Terek	1,200	Nothing	Nothing		
										Nawal Ahmad Khotab	1,200				
				Ouardaniye	1891	752.00	752.00	0.00		Farah Yassine Faour	2,400	Nothing	Nothing		
				Ouardaniye	1890	901.00	901.00	0.00		Shadeh Mohamad Hmadeh	1,200	Nothing	Nothing		
										Kamel Mohamad Hmadeh	1,200				
				Ouardaniye	2010	901.00	901.00	0.00		Mohamad Hamad Ajouz	2,400	Nothing	Nothing		
				Ouardaniye	2021	771.00	771.00	0.00		Mohamad Hamad Ajouz	2,400	Nothing	1 Large (L) Pear		
				Ouardaniye	2022	841.00	841.00	0.00		Khaled Omar Itani	2,400	Nothing	Nothing		
				Ouardaniye	2023	828.00	828.00	0.00		Mohamad Ahmad Ajouz	2,400	Nothing	1 L Carob		
				Ouardaniye	2043	572.00	572.00	0.00		?	?	Nothing	Nothing		
				Ouardaniye	2042	836.00	836.00	0.00		Zeinab Ali El-Akhadar wife of	2,400	Nothing	22 Small (S)Olive	Plot Unit with Plot 2041 to form a single plot	
										Toufik El-Hanouni	-				
				Ouardaniye	168	870.00	870.00	0.00		Khalil Maroun El-Ghazi	1,200	Nothing	Nothing	Plot Unit with Plots 2116, 2117 and 2118 to form a single plot	
										Mohamad Kheir Toufik Sridar	1,200				
				Ouardaniye	167	4211.00	4211.00	0.00		Kfardib Nizal	2,400	Nothing	Nothing		
				Ouardaniye	161	3539.00	515.00	3024.00		Haytham Mohamad Fardi El-Syoufi	2,400	Nothing	Nothing		
				Ouardaniye	159	2075.00	678.00	1397.00		Mohamad Atef Yassine	2,400	Nothing	Nothing	Plot Unit with Plot 158 to form a single plot	
				Ouardaniye	158	4778.00	4452.00	326.00		Mohamad Atef Yassine	2,400	Nothing	Nothing	Plot Unit with Plot 159 to form a single plot	
				Ouardaniye	156	-	-	-		Hassan Mohamad Fakher El-Din	2,400	Nothing	Nothing		
				Ouardaniye	154	5426.00	913.00	4513.00		Mohamad Hassan Eid	2,400	Nothing	Nothing		

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
				Ouardaniye	2041	789.00	789.00	0.00		Zeinab Ali El-Akhadar	2,400	Generator Room Water Pond Water Well	14 S Guava 7 Medium (M)Guava 2 S Figs 2 S Walnuts 3 S Almond 8 S Orange 3 S Quince 2 S Apricot 2 S Loquat 1 S Peach 7 S Olive	Plot Unit with Plot 2042 to form a single plot
										Toufik El-Hanouni	-			
				Ouardaniye	2118	786.00	786.00	0.00		Khalil Maroun El-Ghazi	1,200	Nothing	Nothing	Plot Unit with plots 2117, 2116 and 168 to form a single plot
										Mohamad Kheir Toufik Sridar	1,200			
				Ouardaniye	2117	790.00	790.00	0.00		Khalil Maroun El-Ghazi	1,200	Nothing	Nothing	Plot Unit with plots 2118, 2116 and 168 to form a single plot
										Mohamad Kheir Toufik Sridar	1,200			
				Ouardaniye	2116	795.00	795.00	0.00		Khalil Maroun El-Ghazi	1,200	Nothing	Nothing	Plot Unit with plots 2117, 2118 and 168 to form a single plot
										Mohamad Kheir Toufik Sridar	1,200			
				Ouardaniye	2127	1131.00	1131.00	0.00		Hassan Ahmad El-Araysi	317.117	Nothing	Nothing	
										Khaled Khalil Mekdashi	1,370.310			
										Maemoun Mahmud Araysi	712.573			
				Ouardaniye	2138	463.00	463.00	0.00		?	?	Nothing	Nothing	Private Road
				Ouardaniye	2137	1243.00	1243.00	0.00		Jamal Ahmad Itani	2,400	Nothing	Nothing	Plot Unit with Plots 2136 and 173 to form a single plot
				Ouardaniye	2136	774.00	774.00	0.00		?	?	Nothing	Nothing	Plot Unit with Plots 2137 and 173 to form a single plot
				Ouardaniye	176	5380.00	5380.00	0.00		Ahmad Badawi Abed El-Rahman	1,200	Nothing	Nothing	
										Khalil Mohamad El-Aliya	1,200			
				Ouardaniye	169	4051.00	4051.00	0.00		Nazih Ahmad Hatoum	400	Nothing	Nothing	
										Nabih Ahmad Hatoum	400			
										Wajih Ahmad Hatoum	400			
										Dania Wafiq El-Sabeh	150			

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
										Nibal Wafiq El-Sabeh	150			
										Bilal Wafiq El-Sabeh	300			
										Hilal Wafiq El-Sabeh	300			
										Jilal Wafiq El-Sabeh	300			
										Wafiq Qasem El-Sabeh	600			
										Salwa Abbas El-Sabeh	600			
				Ouardaniye	195	2038.00	2038.00	0.00		Mohamad Ahmad El-Haj	2,400	Nothing	23 M Fig 24 L Olive 8 L Grape 20 L Almond 1 L Mussel	
				Ouardaniye	194	8466.00	1685.00	6781.00		Haytham Rached Ghandour	2,400	Nothing	Nothing	
				Ouardaniye	193	2252.00	2252.00	0.00		Khadija Hassan Bayram	2,400	Nothing	33 L Olive 6 M Fig 7 S Fig 4 L Grape 4 L Almond 6 L Carob 1 L Hawthorn 1 L Prickly Pear	
				Ouardaniye	189	1334.00	1334.00	0.00		Yousef Shahine Dagher	1,200	Nothing	Nothing	
				Ouardaniye	192	2147.00	2147.00	0.00		Nicolas Shahine Dagher	1,200			
				Ouardaniye	192	2147.00	2147.00	0.00		Naser Afif Abed El-Haq	2,400	Nothing	27 L Olive 7 L Carob 6 M Almonds 6 S Figs 4 L Grape	
				Ouardaniye	190	1494.00	1494.00	0.00		Zein El-Abedin Ali Daher	2,400	Nothing	Nothing	
				Ouardaniye	188	10.00	10.00	0.00		Hana Ibrahim Antoine El-Gherib	2,400	Nothing	Nothing	
				Ouardaniye	186	875.00	875.00	0.00		Yousef Abed El-Qader El-Ghazawi	2,400	Nothing	Nothing	
				Ouardaniye	187	1447.00	1447.00	0.00		Enaam Ahmad Khattab	800	Nothing	Nothing	
				Ouardaniye	185	3403.00	3403.00	0.00		Siham Ahmad Khattab	800			
				Ouardaniye	184	2744.00	2744.00	0.00		Jamal Ahmad Khattab	800			
				Ouardaniye	185	3403.00	3403.00	0.00		Amal Yousef Abou Aoun	600	Nothing	Nothing	
				Ouardaniye	185	3403.00	3403.00	0.00		Wafiq Kassem El-Sabeh	600			
				Ouardaniye	185	3403.00	3403.00	0.00		Malika Zaccchry Jawhari	600			
				Ouardaniye	185	3403.00	3403.00	0.00		Yousef Ali Abou Aoun	600			
				Ouardaniye	184	2744.00	2744.00	0.00		Ibrahim Nicolas Dagher	2,400	Nothing	1 L Carob	Plot Unit with plots 178 and 180 to form a

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
														single plot
				Ouardaniye	183	661.00	661.00	0.00		Yousef Shahine Dagher	1,200	Nothing	Nothing	
				Ouardaniye	182	3251.00	3251.00	0.00		Nicolas Shahine Dagher	1,200			
				Ouardaniye	181	3531.00	3531.00	0.00		Elias Ibrahim El-Harisi	2,400	Nothing	Nothing	
				Ouardaniye	180	10.00	10.00	0.00		Yousef Shahine Dagher	1,200			
				Ouardaniye	179	10.00	10.00	0.00		Nicolas Shahine Dagher	1,200	Nothing	Nothing	
				Ouardaniye	178	7216.00	7216.00	0.00		Ibrahim Nicolas Dagher	2,400			Plot unit with plots 184 and 178 to form a single plot
				Ouardaniye	170	10136.00	2536.00	7600.00		Amin Hassan Moussa	2,400	Nothing	Nothing	
				Ouardaniye	177	2649.00	2649.00	0.00		Ibrahim Nicolas Dagher	2,400			Plot Unit with plots 184 and 180 to form a single plot
				Ouardaniye	174	2282.00	2282.00	0.00		Ramez Ali Eid	1,200	Nothing	Nothing	
				Ouardaniye	173	719.00	719.00	0.00		Mohamad Ali Eid	1,200			
				Ouardaniye	191	3283.00	3283.00	0.00		Morshed Mohamad khalifa Farhat	2,400	Nothing	Nothing	
				Ouardaniye	262	17524.00	2102.00	15422.00		?	?			
12848	8/8/1998	Damour Siphon / Washput	Assessed but waiting on for taking Possession	Debbeye'	176	219664.00	396.00	219268.00		?	?	Nothing	Nothing	
				Debbeye'	177	7465.00	2427.00	5038.00						
										Asaad Gerges El Boustani	342.8571	Nothing	Nothing	Plot Unit with plots 2137 and 2136 to form a single plot
										Mtanous Gerges El Boustani	342.8571			
										Chalab Gerges El Boustani	342.8571			
										Fouad Gerges El Boustani	342.8571			
										Latifa Gerges El Boustani	342.8572			
										Hasiba Gerges El Boustani	342.8572			
										Josette Gerges El Boustani	342.8572	Nothing	Nothing	
										?	?			
												13.05	7 M Eucalyptus 3 L Chewar 1 L Apricot 2 Pudding Pipe 1 L Fig 14 L Orange 2 L Blueberry 2 L Avocado 2 L Pomegrenate	

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
				Damour	1474	749.00	456.00	293 80 = A 213 = B				Nothing	1 L Willow 1 L Eucalyptus 1 L Cypress 22 L Chewar 1 L Orange	
1900	11/29/1999	Access Road (Damour Valley)	Requires issuance of New Expropriation Decree	Debbeye'	3806	105600.00	288.00	105312.00	1,800,000	Samia Alexandre Karam	160	Nothing	Nothing	
										Norma Alexandre Karam	160			
										Tanios Alexandre Karam	160			
										Sami Alexandre Karam	160			
										Charbel Alexandre Karam	160			
										Aykoun Gereges Abi Kenaan	1,200			
										May Habib Abou Merhi	266.666			
										Mona Habib Abou Merhi	266.666			
										Elias Habib Abou Merhi	266.668			
										Marcel Selim Aoun	120			
										Aykat Selim Aoun	120			
										Violet Selim Aoun	120			
										Noha Selim Aoun	120			
										Colette Selim Aoun	120			
				Debbeye'	3805	9800.00	552.00	9248.00		Ghassan Hussein EL-Huseini	160	Nothing	Nothing	Expropriation following decree 69/11805
										Samir Abd El Kader Kreidiyeh	1,420			
										Mahmoud Rashid Kreidiyeh	580			
										Salim Ibrahim Kreidiyeh	120			
				Debbeye'	3342	1145.00	223.00	922.00		Abdel Rahman Ibrahim Kreidiyeh	120	Nothing	Nothing	Expropriation following decree 69/11805
										Mrs. Rose Mary Ban John Mokler	2,400			
				Debbeye'	99	246825.00	1202.00	245623.00		Charles Antoine Kettaneh	1,200	Nothing	Nothing	Assessment previously done following decree 83/416
										Desiree Antoine Kettaneh	1,200			
				Debbeye'	3379	366.00	124.00	126.00		?	?	Nothing	Nothing	Prepared Road to be joined to Plot 3332
				Debbeye'	3332	753.00	753.00	0.00		?	?	Nothing	Nothing	
				Debbeye'	3328	7585.00	292.00	7293.00		El Dalhamiye Club Company	2,400	Nothing	Nothing	Plot Unit with Plot 3328 to form a single plot
										El Rifi s.a.l	-			

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
				Debbeye'	3325	2032.00	113.00	1919.00		El Dalhamiye Country Club s.a.l	2,400	Nothing	Nothing	Plot Unit with Plot 3328 to form a single plot
				Debbeye'	3326	225.00	225.00	0.00		-	-	Nothing	Nothing	Private Road
				Debbeye'	127	100.00	100.00	0.00		Edmon Jerjes Asaad Rizik	1,292.340	Nothing	Nothing	Previously done following decree 90/6939
										Rizik Jerjes Asaad Rizik	738.491			
				Debbeye'	3426	590.00	49.00	541.00		Marie Jerjes Asaad Rizik	369.169	Nothing	Nothing	
										Marie Jerjes Asaad Rizik	2,400			
				Debbeye'	108	4.00	4.00	0.00		Tanios Asaad Rizik	333.333	Nothing	Nothing	Well to Collect Winter Water
										Edmon Asaad Rizik	466.667			
										Rizik Asaad Rizik	266.666			
										Marie Asaad Rizik	133.334			
				Debbeye'	104	39450.00	438.00	39012.00		El Dalhamiye Country Club s.a.l	1,200	Nothing	Nothing	
										Charles Antoine Kettaneh	1,200			
										Desiree Antoine Kettaneh	1,200			
										Elias Hanna Yousef Attar	1,200			
				Debbeye'	3432	895.00	244.00	651.00		Adele Mkhaiber Arrouk	1,200	Nothing	Nothing	
										Elias Hanna Yousef Attars' wife	-			
				Debbeye'	3378	820.00	228.00	592.00		Yousef Assaf Rizik	2,400	Nothing	5 L Olive 2 L Almond 4 L Fig 4 L Arish	previously done following decree 95/6939
				Debbeye'	110	3410.00	176.00	3234.00		Elias Said Malek	2,400	Nothing	6 L Olive 8 L Fig	Previously done following decree 90/6939
				Debbeye'	3431	970.00	144.00	826.00		Mahmoud Ali Ahmad	600	Nothing	Nothing	Previously done following decree 90/6939
										Fakhr Ed Din Ali Ahmad	600			
										Ghassan Ali Ahmad	600			
										Hassan Ali Ahmad	600			
				Debbeye'	3430	1000.00	140.00	860.00		Hanna Ishak Kfardani	2,400	Nothing	Nothing	
				Debbeye'	112	13600.00	96.00	13504.00		Mounir Salim Fatha	1,200	Nothing	Nothing	Previously done following decree 90/6939
										Nazek Mohamad Khalil Yakzan	150			
Hiam Abd El Rahman Fatha	116.6666													
Hoda Abd El Rahman Fatha	116.6666													
Fatima Abd El Rahman Fatha	116.6666													
Mohamad Ramadan Abd El Rahman Fatha	233.3334													



Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
				Debbeye'	119	848.00	170.00	678.00		Moustafa Abd El Rahman Fatha	233.3334			
										Ousman Abd El Rahman Fatha	233.3334			
										Abd El Latif Abd El Rahman Fatha	2,400	Nothing	2 L Cypress 1 L Blueberry 2 L Almond 1 L Juniper	Plan Previously done following decree 90/6939
										Aziz Sarhal Aoun	2,400	Nothing	2 L Carob	Previously done following decree 90/6939
										Aziz Sarhal Aoun	2,400	Nothing	Nothing	Previously done following decree 90/6939
										Khalil Said Aoun	2,400	Nothing	2 L Almond 2 L Fig 3 L Olive	Previously done following decree 90/6939
										Michel Farid El Gharib	1,600	Nothing	Nothing	Assessment previously done following decree 81/4488 completion through resolution 37/ATM/85
										Samih Farid El Gharib	800			
										Said Bin Yousef Sarhal Aoun	1,000	Nothing	Nothing	Previously done following decree 95/6939
										Kamel Bin Said Sarhal Aoun	250			
										Jamil Bin Said Sarhal Aoun	250			
										Aziz Bin Sarhal Aoun	900			
										Abd El Rahim El Haj Yousef El Itani	2,400	Nothing	1 L Carob 6 L Oaks	Previously done following decree 95/6939
										?	?	Nothing	Nothing	Private Roads for Plots 3456 to 3459
										Mousbah Ibrahim El Natour	480	Nothing	Nothing	Previously done following decree 95/6939
										Paulette Georges Dalin wife of Mousbah El Natour	480			
										Riad Mousbah El Natour	480			
										Ayed Mousbah el Natour	480			
										Bilal Mousbah El Natour	480			

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments	
				Debbeye'	152	83480.00	4829.00	78651.00		Sinna Real Estate Company s.a.l	1,200	Nothing	Nothing	Previously done following decree 95/6939	
				Samir Abd El Kader Kreidiyeh	1,200										
				Debbeye'	147	10370.00	988.00	9382.00		Halim Najib Abou Saab	2,400	Nothing	2 L Carob 3 L Fig 2 L Almond 1 L Olive 3 L Bueberry	Previously done following decree 95/6939	
				Debbeye'	148	1690.00	102.00	1588.00		Michel Farid El Gharib	1,600		nothing	1 L Fig 1 L Almond	
				Debbeye'	149	230.00	17.00	213.00		Samih Farid El Gharib	800	Nothing		1 L Juniper	Well to Collect Winter Water
										Halim Najib Abou Saab	1,200				
				Debbeye'	123	17.00	17.00	0.00		Philippe Najib Abou Saab	1,200	Nothing	Nothing	Well to Collect Winter Water stocks are allocated following plot certification Plot Unit with Plots 122 and 124 to form a single plot	
										Sophie Alfizyadis Institution	84				
										Anis Salim Yasine	600				
										Mariyam Sitallah Fizdi	150				
										Ani Bakarat Bakalian	150				
										Rouby Bakarat Bakalian	150				
										Sarkis Bakarat Bakalian	150				
										Anet bassil El Khoury	180				
										Esper Mnassa Salim Ghanem	32				
										Iskandar Jean Alfizyadis	19				
										Sophie Jean Alfizyadis	19				
										Andre Joseph Jean Alfizyadis	19				
										Nicolas Jean Alfizyadis	19				
										Antoine Jean Alfizyadis	19				
										Georges Touma Haji Touma	426				
										Alexandre Touma Haji Touma	342				
										Amenjilla Cliente Logotamtedis	42				
				Debbeye'	3481	13660.00	1621.00	12039.00		Ghassan Fares Loutfi	1,200	Nothing	13 L olive	Previously done following decree 95/6939	
										Saade Michel El Gharib	1,200				
				Debbeye'	169	7100.00	561.00	6539.00		Basima Ali Mizhir	2,400	Nothing	12 L Olive		
				Debbeye'	167	540.00	132.00	408.00		Samir Khalil mizhir	2,400	Nothing	5 L Olive	plot unit with plots 164-165-166 to form a single plot	
				Debbeye'	166	900.00	222.00	678.00		Samir Khalil mizhir	2,400	Nothing	3 L Olive	plot unit with plots 164-165-167 to form a single plot	

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
				Debbeye'	165	360.00	98.00	262.00		Samir Khalil mizhir	2,400	Nothing	6 L Olive	plot unit with plots 164-166-167 to form a single plot
				Debbeye'	122	320.00	54.00	266.00		Sophie Alfizyadis Institution	84	Nothing	1 L Fig	Plot Unit with Plots 123 and 124 to form a single plot stocks are allocated according to Plot Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fzidi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.5			
										Iskandar Jean Alfizyadis	18.9			
										Sophie Jean Alfizyadis	18.9			
										Andre Joseph Jean Alfizyadis	18.9			
										Nicolas Jean Alfizyadis	18.9			
										Antoine Jean Alfizyadis	18.9			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilla Cliente Logotamtedis	42			
				Debbeye'	124	240.00	77.00	163.00		Sophie Alfizyadis Institution	84	Nothing	Nothing	Plot Unit with Plots 122 and 123 to form a single plot stocks are allocated according to Plot Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fzidi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.5			
										Iskandar Jean Alfizyadis	18.9			
										Sophie Jean Alfizyadis	18.9			
										Andre Joseph Jean Alfizyadis	18.9			
										Nicolas Jean Alfizyadis	18.9			
										Antoine Jean Alfizyadis	18.9			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilla Cliente Logotamtedis	42			
				Debbeye'	113	3980.00	330.00	3650.00		Sophie Alfizyadis Institution	84	Nothing	Nothing	Plot Unit with Plots 115 and 114 to form a single plot
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fzidi	150			

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
										Ani Bakarat Bakalian	150			stocks are allocated according to Plot Certificate
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	32			
										Iskandar Jean Alfizyadis	19			
										Sophie Jean Alfizyadis	19			
										Andre Joseph Jean Alfizyadis	19			
										Nicolas Jean Alfizyadis	19			
										Antoine Jean Alfizyadis	19			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilia Cliente Logotamtedis	42			
				Debbeye'	114	200.00	10.00	190.00		Sophie Alfizyadis Institution	84	Nothing	Nothing	Plot Unit with Plots 113 and 115 to form a single plot stocks are allocated according to Plot Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fizdi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.50			
										Iskandar Jean Alfizyadis	18.90			
										Sophie Jean Alfizyadis	18.90			
										Andre Joseph Jean Alfizyadis	18.90			
										Nicolas Jean Alfizyadis	18.90			
										Antoine Jean Alfizyadis	18.90			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilia Cliente Logotamtedis	42			
				Debbeye'	115	644.00	157.00	487.00		Sophie Alfizyadis Institution	84	Nothing	Nothing	Plot Unit with Plots 113 and 114 to form single plot stocks are allocated according to Plot Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fizdi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.50			
				Iskandar Jean Alfizyadis	18.90									

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
										Sophie Jean Alfizyadis	18.90			
										Andre Joseph Jean Alfizyadis	18.90			
										Nicolas Jean Alfizyadis	18.90			
										Antoine Jean Alfizyadis	18.90			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilia Cliente Logotamtedis	42			
				Debbeye'	153	39526.00	7764.00	31762.00		Sophie Alfizyadis Institution	84	Nothing	Nothing	Plot Unit with Plot 171 to form a single plot stocks are allocated according to Plot Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fzidi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet basil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.50			
										Iskandar Jean Alfizyadis	18.90			
										Sophie Jean Alfizyadis	18.90			
										Andre Joseph Jean Alfizyadis	18.90			
										Nicolas Jean Alfizyadis	18.90			
										Antoine Jean Alfizyadis	18.90			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilia Cliente Logotamtedis	42			
				Debbeye'	164	400.00	111.00	289.00		Samir Khalil mizhir	2,400	Nothing	8 L Olive	Plot Unit with Plots 165/166/167 to form a single plot
				Debbeye'	163	350.00	104.00	246.00		Georges Nabil Aoun	2,400	Nothing	7 L Olive	
				Debbeye'	162	250.00	69.00	181.00		Fouad Nabil Aoun	2,400	Nothing	5 L Olive	
				Debbeye'	161	370.00	95.00	275.00		Basima Ali Mizhir	2,400	Nothing	6 L Olive	
				Debbeye'	3327	23270.00	1368.00	21902.00		Al Rifiyya Company	2,400	Nothing	Nothing	Moufraz from Plot 128
				Debbeye'	160	170.00	69.00	101.00		Mikhael Tanios Shaaya	2,400	Nothing	3 L Olive	Plot Unit with Plot 159 to form a single plot
				Debbeye'	159	530.00	144.00	386.00		Mikhael Tanios Shaaya	2,400	Nothing	7 L Olive	Plot Unit with Plot 160 to form a single plot
				Debbeye'	3410	170.00	170.00	0.00		?	?	Nothing	Nothing	Moufraz from Plot 128 The Actual

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
														area of the Plot differs from the one mentioned on the official paper
				Debbeye'	171	5040.00	30.00	5010.00		Sophie Alfizyadis Institution	84			Plot Unit with Plot 153 to form a single plot stocks are allocated according to Plor Certificate
										Anis Salim Yasmine	600			
										Mariyam Sitallah Fizzi	150			
										Ani Bakarat Bakalian	150			
										Rouby Bakarat Bakalian	150			
										Sarkis Bakarat Bakalian	150			
										Anet bassil El Khoury	180			
										Esper Mnassa Salim Ghanem	31.50			
										Iskandar Jean Alfizyadis	18.90			
										Sophie Jean Alfizyadis	18.90			
										Andre Joseph Jean Alfizyadis	18.90			
										Nicolas Jean Alfizyadis	18.90			
										Antoine Jean Alfizyadis	18.90			
										Georges Touma Haji Touma	426			
										Alexandre Touma Haji Touma	342			
										Amenjilia Cliente Logotamtedis	42			
				Debbeye'	3409	470.00	15.00	455.00		?	2,400	Nothing	Nothing	
				Debbeye'	3455	25445.00	22.00	25423.00		?	2,400	Nothing	Nothing	
				Debbeye'	3811	4800.00	4643.00	157.00		?	2,400	Nothing	Nothing	Private Road for Plots 3342 expropriation following decree 69/11805 completion following decree 70/33
				Debbeye'	4101	14676.00	58.00	14618.00		?	2,400	Nothing	Nothing	Expropriation following decree 69/11805 3805 and 3508
				Debbeye'	4152	950.00	120.00	830.00		Mrs. Rose Mary Ban John Mokler	2,400	Nothing	Nothing	Expropriation following decree 69/11805 completion following decree 70/73

Expropriation Decree #	Date	Subject	Status	Cadastral Location	Plot #	Plot Area in (m²)	Expropriated Area	Remaining Plot Area in (m²)	Estimated Budget(USD)	Land Owners/occupier/Investors	Shares	Damaged Facilities	Damaged Trees	Comments
1745	11/29/1999	Ventilation Shaft (Meshref)	Needs new Decree	Meshref	762	110000.00	64.00	109936.00	20,000	El Mechref Village Public lands	2,400	Nothing	Nothing	Expropriated section of this plot of 84 m² for the contruction of medium voltage line conductor according to decree 13909 on 21-2-1970 and completion on the expropriated section
N/A		Hadath 90 Reservoir	Needs new Decree	Baabda	3925	809.00	809.00	0.00	4,864,500	Hilmi Alo Kobaissy				
					3926	836.00	836.00	0.00		Hilmi Alo Kobaissy				
					3927	976.00	976.00	0.00		Hilmi Alo Kobaissy				
					3928	1024.00	1024.00	0.00		Hilmi Alo Kobaissy				
					3929	845.00	845.00	0.00		Khaled Ibrahim Abd El Fattah				
					3930	1074.00	1074.00	0.00		Ali Amin Hammoud				
					3931	867.00	867.00	0.00		Eva Mohamad Daoud				
					3932	839.00	839.00	0.00		Jawdat Ibrahim Hammoud				
					3948	810.00	810.00	0.00		Eva Mohamad Daoud				
					3949	821.00	821.00	0.00		Jawdat Ibrahim Hammoud				
					3950	828.00	828.00	0.00		Eva Mohamad Daoud				
N/A		Hazmieh 90 Reservoir	Needs new Decree	Baaba	664	7307.00	7307.00	0.00	3,653,500	Abdallah Rimon Rizk				

## **APPENDIX D: NEW EXPROPRIATIONS (BMLWA)**



SUBJECT	STATUS	CADASTRAL LOCATION	PLOT #	PLOT AREA IN (M²)	EXPROPRIATED AREA	REMAINING PLOT AREA IN (M²)	ESTIMATED BUDGET (USD)	LAND OWNERS/OCCUPIER/INVESTORS	DAMAGED FACILITIES	DAMAGED TREES	COMMENTS
Aaramoun Sud Bas	In Progress	Naameh	956	2154.00	2154.00	0.00		Laila Kamel Sabah	Nothing		Expropriated by CDR
Aaramoun Sud Haut	In Progress	Aaramoun	4532	557.00	557.00	0.00	417,750.00	?	Nothing		Private Property
			4529	1085.00	1085.00	0.00		Ministry of Energy and Water			Expropriated by CDR / Old existing reservoir
Baabda	In Progress	Baabda	1667	2869.00	2869.00	0.00	2,869,000.00	Yousef Joseph Elie Khayyat	Nothing		Private Property
								Lidia Elie Khayyat			
								Mia Elie Khayyat			
								Mona Elie Khayyat			
								Victoria Elie Khayyat			
Bsaba	In Progress	Altate	1015	43539.00	2000.00	41539.00	1,500,000.00	Kamil Nadim Mrad	Nothing		Private Property
Choueifet Bas	In Progress	Amroussieh	600	848.00	848.00	0.00	636,000.00	Wajih Shafiq El Jurdi	Nothing		Private Property
Damour	In Progress	Damour	2710	130000.00	2000.00	128000.00	1,000,000.00	Ministry of Education	Nothing		Municipality
Hazmieh - Hadath	In Progress	Baabda	417	1219.00	1219.00	0.00	1,219,000.00	Andrew Georges Tarazi	Nothing		Private Property
								Caroline Anne Joseph Antony Tarazi			
Kfarshima Bas	In Progress	Kfarshima	322	605.00	605.00	0.00	453,750.00	Majed Abdallah El Hoss	Nothing		Private Property
								Tarif Naji El Hoss			
								jaber Abdallah El Hoss			
								Omar Abdallah El Hoss			
								Abdallah Majed El Hoss			
								Zeina Majed El Hoss			
								Lama Majed El Hoss			
								Mia Naji El Hoss			
								Rana Naji El Hoss			
								Nada Naji El Hoss			
Kfarshima Haut	In Progress	Kfarshima	1601	1056.00	1056.00	0.00		Check Official gazette no. 273	Nothing		Being Constructed (CDR)
Khalde Bas	In Progress	Qobbe	3946	2003.00	2003.00	0.00	1,502,250.00	Mounir Mohamad El Jibaili	Nothing		Private Property
								Hussein Mohamad El Jibaili			
Khalde Haut	In Progress	Aaramoun	1359	>5000	2000.00	> 3000	1,500,000.00	Joseph Willam Ousaily	Nothing		High voltage pylon
								Mona Millam Ousaily wife of Paul Yared			
Naameh Nord Bas	In Progress	Naameh	410	700.00	700.00	0.00	586,500.00	Public land for the inhabitants of Naame Village	Nothing		Municipality Property
			392	473	473	0		Mohamad Ali Khodor El Fil			
								Adnan Khodor El Fil			
								Samiha Khodor El Fil			
								Jamila Jhodor El Fil			

SUBJECT	STATUS	CADASTRAL LOCATION	PLOT #	PLOT AREA IN (M²)	EXPROPRIATED AREA	REMAINING PLOT AREA IN (M²)	ESTIMATED BUDGET (USD)	LAND OWNERS/OCCUPIER/INVESTORS	DAMAGED FACILITIES	DAMAGED TREES	COMMENTS
Naameh Nord Haut	In Progress	Naameh	265	985912.00	2000.00	983912.00	1,500,000.00	St. Jewarjious Convent	Nothing		St. Georges Convent property
Oumara	In Progress	Oumara	578	5188.00	5188.00	0.00	3,891,000.00	May Sami Sidawi	Nothing		Private Property
								Nassouh Said El Hakim			
								Hussein Yousef Abu Tarye			
								Lidia Nadim Hamadeh			
								Imad Nadim El Hakim			
								Naji Nadim El Hakim			
								Dima Nadim El Hakim			
								Lina Nadim El Hakim			
								Akad Georges El Dirzi			
Qobbe Bas	In Progress	Oumara	364	2125.00	2125.00	0.00	1,146,500.00	Maha Fouad Saab			Private Property, studied by CDR
								May Fouad Saab			
								Nabil Mounib Saab			
								Bayan Mounib Saab			
								Hala Mounib Saab			
								Inheritants of Kassem Hussein Saab			
			370	168.00	168.00	0.00					Private Property, studied by CDR
Qobbe Haut	In Progress	Qobbe	4529	1892.00	1892.00	0.00	1,419,000.00	Jihad Ajaj Haidar			Existing Well, Private Property
								Radwan Ajaj Haidar			

## APPENDIX E: PUBLIC PARTICIPATION – MINUTES OF MEETING

<b>Location:</b> Lebanese University-Hadath Campus			
<b>Subject:</b> Public Participation Meeting			
<b>Starting Time:</b> 10:20 am		<b>Ending Time:</b> 11:40 am	
<b>Date:</b> 12/05/2010			
<b>Reporter:</b> Basma Shamas			
Attendee	Title	Organization	Coordinates
Fadi Bou Ali	Representative	Association for Forests, Development and Conservation	03-965232
Maemoun Saed	Engineer	Mechref Construction Project	05-600001
Sister Antoinette Al Awit	School Chairperson	Carmel St. Joseph School, Mechref	05-601171
Mrs. Khoury	Representative	Carmel St. Joseph School, Mechref	05-601171
Joseph Abdel Ahad	Former General Manager	Directory General for Urban Planning	03-728397
Nicolas Dagher	Moktar	Al Jmeiliyeh	03-210806
Ismail Makki	Representative	Council for Development and Reconstruction	03-655650
Moufid Dehny	Representative	Ministry of Energy and Water	03-288743
Elie Farhat	Representative	Kfarchima Municipality	05-430603
Wahib Kehdi	Representative	Kfarchima Municipality	05-430603
Mutassem el Fadel	Representative	The World Bank	03-228338
Farid Karam	Representative	Ministry of Public Health	

Ramez Kayal	President	ELARD	
Rachad Ghanem	Project Manager	ELARD	
Basma Shamas		ELARD	
Hanadi Musharafieh	Environmental Expert	ELARD	
Rana Ghattas	Quality Management Representative	ELARD	

SR. NO.	ACTION/ISSUE	RESPONSIBILITY	OBSERVATIONS	STATUS
1	Mr. Abou Ali and Mr. Moufid asked about the impact of the water abstraction and resulting reduced water flow on the last section of the Awali River (around 3 to 4km) and how will the river ecosystem downstream and at the estuary be affected?	CDR	Mr. Makki explained that the tunnel will use the water that is provided to the existing hydroelectric facility, where only 3 m <sup>3</sup> /sec of this water (out of an average flow of 25m <sup>3</sup> /sec) will be diverted into the tunnel and the remaining will be used for power generation and then back to that section of the river. So only a small percentage of the total flow will be used which will not induce a major effect on the adjacent lands downstream. Mr. Moufid requested a study to be done on that part to assess the impacts even if they are expected to be small.	
2	Will the city of Saida be receiving water from the Project? (Question raised by Mr. Saed and Mr. Bou Ali)	CDR	No answer	
3	In what phase is the project now? (Question raised by Mr. Saed)	CDR	<p>The answer was a discussion about the history of the project since 1987.</p> <p>The project is in its late stages; after the EIA is done it should be presented to the Ministry of Environment for approval.</p> <p>This participation is very important to be included in the EIA and for the concerns to be raised and solved, for the project to be approved.</p>	
4	On what have you based your decision when you designed the tunnel route? (Question raised by Mr. Saed along with Sister Antoinette Al Awit)	CDR	The CDR based their decision on maps, aerial photos, filed work and the gravity component to transfer water through the tunnel.	
5	Sister Antoinette Al Awit wants documents (detailed geologic study, etc) to assure her that the project is safe and won't have any negative effect on the schools' structures and on the safety of the students. If these will not be provided she (the Carmel St. Joseph	CDR	Mr. Makki promised that he will visit her school and provide her with all the needed reports so she can ask her consultant.	

SR. NO.	ACTION/ISSUE	RESPONSIBILITY	OBSERVATIONS	STATUS
	School) will not allow the tunnel to pass under the school.  She is not against the project; she just has to make sure that it is safe as she is holding the responsibility of around 1000 students along with teachers and nuns at the convent.			
6	If we want to drill a well later on would you allow us (Ministry of Energy and Water) to do so? (Question raised by Mrs. Khoury)	CDR	<p>Once the project is done there will be no need for anyone to drill a well.</p> <p>She said then you are forbidding us from one of our rights as owners of the land.</p> <p>This is a decision for the Ministry of Energy and Water if there is no need for a well then they will not approve it.</p>	
7	Who will control and supervise the work? (Question raised by Mrs. Khoury)	CDR	<p>There will be companies supervising the work, and municipalities will have their role too to represent people of each village.</p> <p>Ms. Saed said if no municipality was present in the meeting then how would they supervise or even protect people's rights.</p>	

## APPENDIX F: MINUTES OF MEETING (2<sup>ND</sup> PUBLIC PARTICIPATION)

The Public Participation was scheduled at 10:00 am

The presentation started at 10:15 am allowing extra time for the participants to arrive.

List of attendees is given in table below:

NAME	PROFESSION	COMPANY	PHONE NUMBER
Rashad Ghanem	Lecturer	Elard	71-688630
Basma Shamas		Elard	70-870065
Ismail Makke	Head of the Department of Agriculture and Environment	CDR	03-665650
Mutassem el Fadel	Environmental Consultant	World Bank	03-226330
Randa Nemer	Advisor to the Minister	Ministry of Energy and Water	03-240553
Mme Khoury		Carmel St Joseph School –Mechref	05- 601171/2
			03-412676
Representative		Carmel St Joseph School –Mechref	05- 601171/2
			03-412676
Joseph Nemer		Shiah Municipality	01-544999
Firas Arakji	Engineer	Sukomi	03-396001
Dr. Gebran karam		KREDO	01-204959
Michel Mhanna	Engineer	Mechref Municipality	03-346586
Hassan khawandi	Engineer	Ministry of Public Works and Transportation	03-717332
Antoinette Sleiman	Engineer	Litani River Authority	03-696963
Elie Farhat		Kfarshima Municipality	05-430603
Wahib Kaade	Police	Kfarshima Municipality	05-430603
Pierre Abi Rached	Civil Engineer. CEO	Baabda Municipality - P.A.R Consultant	03-227435
Fred Mitri	Civil engineer	P.A.R. Consultant	70-576644
Mohammad Khodor kawbar		Sibline Municipality	70-965696
Walid Kawbar	Engineer	Sibline Municipality	03-430381
Nashaat hamieh	Civil Engineer	Barja Municipality	03-502781
			07-623586
Rola El Sheikh		Ministry of environment	01-976555
Grace Rashid		Ministry of environment	01-976555
Adel Yacoub		Ministry of environment	01-976555
Ali Mohamad el harake	Engineer	Haret Hreik Municipality	01-276170/2
Habib El Rayess	Architect	Ministry of Public Works and Transportation	03-341166
Hussein Mansour	Civil Engineer	Borj El Braine Municipality	03-366835
Hokel Barbarian		Hazmieh Municipality	03-755503
Riad Victor El Osta	Architect	Wadi Shahrour El Sofla Municipality	03-328463
Abd El Rahman Ghaziri	Consultant	Beirut and Mount Lebanon Water Authority	03-714607
Roni Edwar Rouaidy	Interior Designer	Dekweneh Municipality	03-480590
Nasser Nasrallah		President of Friends of Ibrahim Abd el Al Organization	03-843001
George El kadi		Beirut and Mount Lebanon Water Authority	03-708320
Abdo Matar		Naame – Haret El Naame Municipality	03-888929

The Presentation started at 10:15 am and ended at 10:35 am and was followed by a one hour of questions and discussions.

The following questions were addressed:

- 1- This project was addressed in the 70's and faced many obstacles especially political ones, one of the obstacles is the fact that this project is taking the water to Beirut without feeding the areas where the tunnel will pass. (Eng. Nashaat Hamieh - Barja Municipality)

A1 - Ismail Makke (CDR) answered that the tunnel has openings all along to allow future connections to water networks and supply the areas along the tunnel.

- 2- If the 3m<sup>3</sup>/s was allocated in the 70's, is this amount considering the increase in water need from then till now, and is this amount enough to feed Beirut and the areas around the tunnel.

A2 - The 3 m<sup>3</sup>/s can meet Beirut's needs, as for the needs of the areas surrounding the tunnel the Awali project if one part of the water project in Lebanon, the Bisri dam will shortly follow the Awali project and both projects will meet the requirements of Beirut and the other areas. The time difference between the 2 projects is one year so we might face a shortage problem for one year only.

- 3- Is the Tunnel designed for 3m<sup>3</sup>/s? (Eng. Pierre Abi Rashed – P.A.R Consultants/Baabda Municipality)

A3 - The tunnel is designed for 9 m<sup>3</sup>/s.

- 4- When will the Awali and The Bisri project start? (Ministry of Environment)

A4 - The implementation of the Awali Project will start in April – May 2011

Bisri Dam will follow shortly

- 5- Is Any Part of the tunnel passing on public roads? (Hassan Khawandi – Ministry of public works and transportation)

A5 - The Tunnel will be underground (under private lands) whereas the twin pipelines will pass under roads

- 6- The tunnel of Nahr Ibrahim took 8 years of work although it needed 4 years, what is the expected delay time for this project? (Mme Khoury – Carmel St Joseph School-Mechref)

A6 - The problem of Nahr Ibrahim Tunnel was the method of drilling because the drilling was in different types of rocks.

For the Awali project the drilling will take place in one type of rocks using TBM (Tunnel Boring Machine). Minor problem that may occur because of underground unexpected issues are the only things that might delay the project, but hopefully it will end within its targeted time.

- 7- If we go back to the tunnel profile at what depth from the surface the tunnel will take place and by how much sand it will be overlain? (Pierre Abi Rashed – P.A.R Consultant/Baabda Municipality)

A7- The tunnel will be drilled in rocky lands at a depth ranging from 20 to 190 m. the lowest depth will be in the valleys of Wadi abu yabes and Damour River where there will be some gravel/sand.



- 8- We are hearing a lot these days that the Qaraoun Lake is polluted and part of the water coming to the awali tunnel will be from Qaraoun, so would this water be drinkable? (Elie Farhat - Kfarshima Municipality)

A8 - If we suppose that nothing is being done to treat the water of the Litani river and it all arrived to the Qaraoun Lake untreated, the water that will be taken from the lake for the Awali tunnel will be mixed with water from Ain El Zarka, the water passing under the Jizzine Tunnel and the water of Bisri lake, so if the water started with a 100% pollution it will reach the tunnel with 10% pollution, and then the water will be treated in the Ouardaniye WTW, thus the water will be clear and drinkable.

Furthermore, there is an ongoing plan to treat the water of the Litani River, this plan is implemented by a set of Water Treatment Plants that was built or is being built in Baalbak, Timnine, Zahle, Job Jinnine, Saghbine and Qaraoun, some of these started working and others will start soon.

- 9- Who will follow up on the project while it is being executed and afterwards? The problem is that the studies are always very good but no one follows up afterwards. What about the other areas outside Beirut? What about the Naame Landfill? And what is the effect of the tunnel on the lands that it is passing under? (Mme Khoury – Carmel St Joseph School-Mechref)

A9 - The status of the Naame Landfill is a part of the national plan for solid waste.

As for the Awali project, the ministry of environment had some strict rules regarding the sludge and mud that will be produced from the works, so these will be sent to the Naame landfill as it is the only place available.

There is no effect on the lands that the tunnel is passing under, because the tunnel is really deep.

As a proof all countries have subways that are much shallower and do not affect the lands, so a tunnel that deep should not have any effect. Another proof is that tunnels were dug long time ago for the litany project and nothing went wrong till now.

- 10- Mr. Nasser Nasrallah (president of Friends of Ibrahim Abd El Al Organization):  
The Awali and Bisri projects are related. The fact that the Awali project took into consideration that more water will be conducted through it is a guarantee that the Bisri dam will be executed.

Both projects are crucial to provide water to Beirut and the surrounding areas through openings along the tunnel for future connections.

Kanan Lake is also a good source to feed the areas of Iqlim el Kharoub and this project will be raised later on.

As for the Qaraoun Lake, a plan was set to treat and prevent its pollution. The following water treatment plants are part of this plan:

- Qaraoun station started working

- Saghbine and Jibb Jinnine stations will start working this year, and Jib Jinnine covers the areas from Aammiq to Ain el Zibde.
- Areas from Ghazze to North Baaloul and Areas along Rashaya will be also connected to the treatment plant.
- Kob Elias, El Marj, Houch el harime, Bar Elias. Anjar and Majdel Anjar will be also connected to el Marj Station.
- Zahle and its surroundins will have a treatment plant as well as Bednayel, Shmistar and Riyyak.

We can also note that during the summer, Qaraoun lake is not polluted because farmers build small sand dams along the Litany River to divert its water for irrigation purposes, so the polluted water of the litany will not reach the lake, leaving it clear and unpolluted. The problem occurs in the winter were the rain destroys the small dams and bring the water to the lake.

As for the follow up of the projects, Mr Nasrallah advised to increase our awareness and participation, like what we are doing in this meeting, so we can push the ministries and all the concerned responsible to act.

11- Are the 3 m<sup>3</sup>/s of water that will be used for this project guaranteed all over the year? (Mr. Abd El Rahman Ghaziri – Beirut and Mount Lebanon Water Authority)

A11- The critical time that the water is needed for is from April till October and the Qaraoun Lake was always able to meet its full capacity of 220 million m<sup>3</sup> during this period. The actual usage of the Qaraoun is of 60 million m<sup>3</sup>, and it will reach 120 million m<sup>3</sup> once project 800 starts operating.

So the water supply of the Awali project will always be guaranteed.

There is a future plan that consists of using the Qaraoun water for Agriculture and drinking a lot more than for generating electricity.

12- On what basis the capacity of the phase 2 reservoirs was set? Was it set in the 70's also or did it take into consideration the future needs (Pierre Abi Rashed – P.A.R Consultant/Baabda Municipality)

A12 - The time scope of the plans is 2030.

The 9m<sup>3</sup>/s that were planned for future use for the tunnel and the capacity of the reservoirs can meet the increasing demand for water for a sufficient time period even exceeding the year2030.

13- Will you use explosives in the drilling process? Did you do a survey to the tunnel depth to check the type of material that will be faced? The presentation mentioned around 88 tons of sludge daily, will the Naame Landfill be able to accept this amount and what is the alternative plan? (Mr. Adel Yacoub – Ministry of Environment)

A13 - For the overall project there will be no use of explosives, these will only be used at the beginning of the tunnel to open an entrance for the TBM Machine.

Surveys were done for the tunnel depth.

The materials that will result from the drilling will be reused in the project, the remaining sludge or mud will be disposed in the Naame landfill.

Naame landfill is receiving daily 2700 ton of solid waste from Beirut and Mount Lebanon, so the 80 or 100 tons of sludge will not have a major effect on the landfill capacity. Once the landfill is closed (after 2 to 3 years) the sludge will move to the alternative developed for it.

Mr. Nasrallah interfered and gave a comparison between Dbayeh and the Awali project:

In Dbayeh the water is more turbid because it comes from Jeita so it causes sedimentation in Nahr El Kalb. But in Awali the sediments are already deposited in Qaraoun and the only other place where the water becomes turbid is water coming from Ain el zarka to markaba after the first rain. So water reaching the treatment plant is not that turbid.

**14- What is the time frame of the project?**

A14 - The project should start in April/ May 2011 and should take 3-4 years to be completed.

**15- A suggestion from Eng. Antoinette Sleiman (Litani Water Authority) to use the water that will get out of the treatment plant and the excess of the water in the tunnel to produce energy.**

**16- Are We Going to take from the Water of the Damour river were we have 2 ventilation shafts?**

A16 - The tunnel will just pass by the Damour River without using any of its water.

**17- What is the Tunnel Composed off?**

A 17 - It will consist of reinforced concrete covered by stainless steel for the treated water to pass in.

One of the obstacles that delayed the project was to agree whether to do a concrete tunnel or pipelines, and the result was a combination, a tunnel to khalde and pipelines to distribute water from khalde to the reservoirs.

The tunnel is less costly then the pipelines.

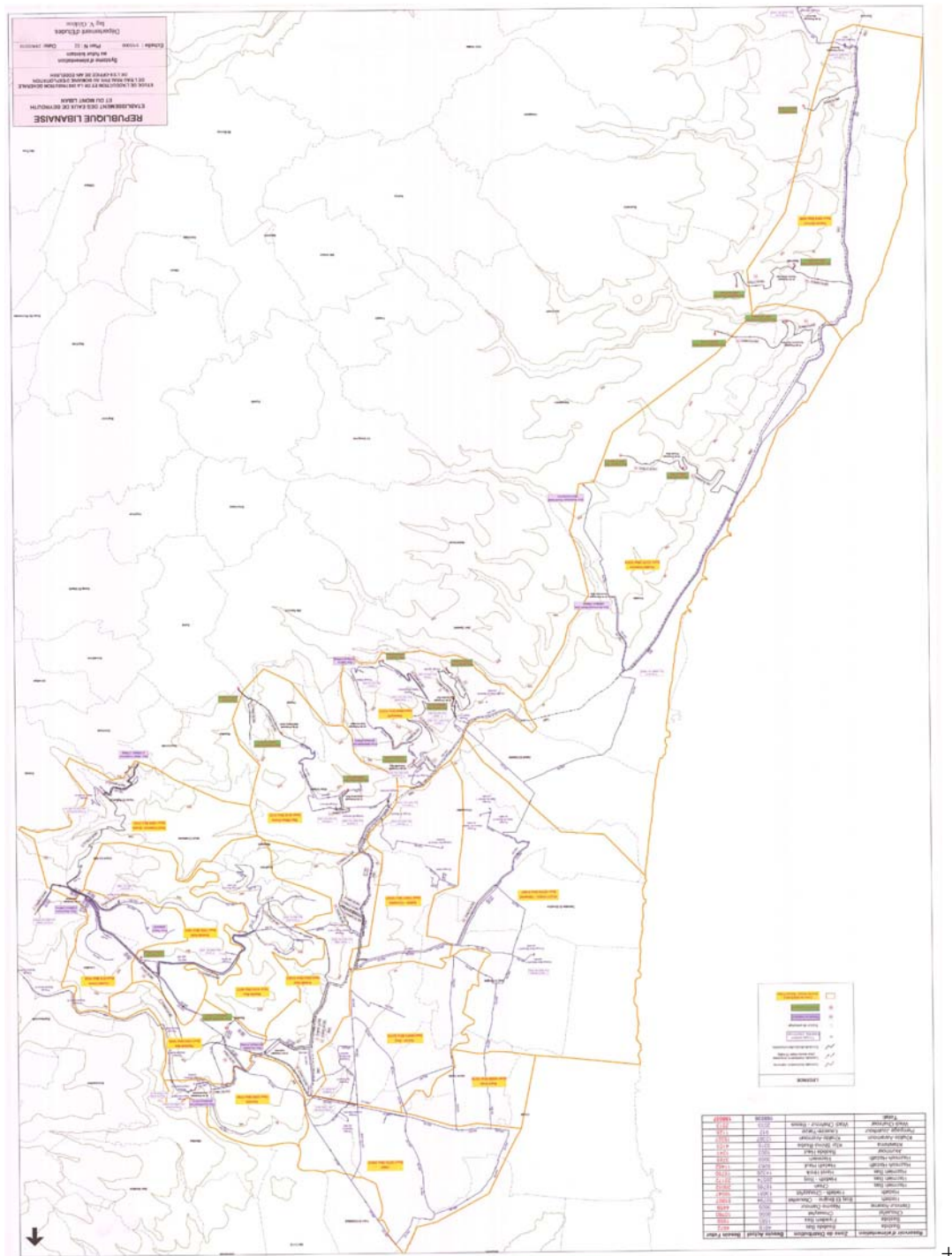
**18- Wouldn't it cost less if the WTW was done near Beirut?**

A18 - May be It will cost a bit less but this way we would be depriving the areas where the tunnel passes from fresh water and this was a major problem during the study of the project.

**19- How does the expropriation law work?**

A19 - A legal session formed of a judge and real estate experts will be held for each area that should be expropriated that will take into consideration all the facts related to this area and its surrounding and will issue a decision regarding the price of the area to be expropriated in accordance with the Lebanese expropriation law.

## APPENDIX G: MAP OF SECOND COMPONENT



**COUNCIL FOR DEVELOPMENT & RECONSTRUCTION**  
**BEIRUT - LEBANON**

No. : 4032/1

Beirut, 03/08/2010

To Hedi Larbi  
Director Middle East Department  
Middle East and North Africa Region  
The World Bank

Subject : Lebanon-Greater Beirut Water Supply Project Environmental and Social Management  
Plan and Resettlement Action Plan. Expropriations Issues.

Dear Mr. Larbi

In the context of the Greater Beirut Water Supply project currently under preparation in cooperation with the World Bank, we are pleased to provide you with the following clarifications relating to prior actions taken independently by the CDR for the purpose of preparing this project.

As you are aware, we received several World Bank identification missions to Lebanon between 1997 and 1998, with a view to prepare the Awali Beirut Water Conveyer Project and the Greater Beirut Water Supply and Wastewater Projects. World Bank involvement in both of these projects was however abandoned and the wastewater collection and treatment components of the proposed Greater Beirut Water Supply and Wastewater Project have since been financed and implemented by other donors, namely the European Investment Bank.

The government of Lebanon undertook land acquisitions for the purpose of both of the above mentioned projects covering the period between 1998 and 2000. We confirm that the World Bank was not involved in any of these expropriations.

Records of the expropriations and their claims are filed with the CDR, and can be accessed as necessary by the World Bank.

We can also confirm that there are no pending appeals or otherwise outstanding claims associated with the expropriations and that they were all carried out in full compliance with Lebanese Law.

Previous issued expropriation decrees that were not completed, will be reissued in full compliance with procedures established in connection with the current Greater Beirut Water Supply Project.

Best Regards,

Council for Development  
and Reconstruction

President  
Nabil A. El Jisr

KANJ/Expropriations letter



COUNCIL FOR DEVELOPMENT & RECONSTRUCTION  
BEIRUT- LEBANON

No. : 4031/1

Beirut, 03/08/2010

To Hedi Larbi  
Director Middle East Department  
Middle East and North Africa Region  
The World Bank

Subject : Lebanon-Greater Beirut Water Supply Project Environmental and Social Management  
Plan and Resettlement Action Plan. Farmer Case.

Dear Mr. Larbi

In the context of the Greater Beirut Water Supply Project we are pleased to provide the following clarifications regarding a family of farmers working and residing temporarily at a green house located within the treatment plant proposed site at Ouardaniye, that will be affected by land acquisition under the project.

As has been confirmed by the owner of the land and the agricultural business on the site, Mr.Majed Khodor TERRO, the farmer family voluntary took up occupation on the land while being familiar with the status of the land being under an expropriation decree, and know that they will have to be relocated.

We would like to inform you that in accordance with article 22 of the Lebanese Expropriation law No. 58/91, described below, the Expropriation Commission will assess the compensation awarded to the affected landowner based not only on the value of the land, but also taking into consideration other ongoing affected activities, including in this case the agricultural business and the workers. This can be done without going into detail about the workers status or situation otherwise.

The owner will then in turn provide resettlement assistance to the caretakers and he has confirmed to us that he will be offered alternative employment in the same condition, at the another location provided by him.

Best Regards,

Council for Development  
and Reconstruction

President  
Nabil A. El Jisr



KANJ/Farmer letter