



Please note that this report is also available on the internet at CDR's home page: [www.cdr.gov.jm](http://www.cdr.gov.jm)

<b>Message from the President</b>	2
<b>Introduction</b>	3
<b>General Overview of the sectors</b>	4
<b>Physical Infrastructure</b>	
Electricity	10
Post and Telecommunications	18
Transportation	20
<b>Social Infrastructure</b>	
Education	36
Public Health	46
Social and Economic development	54
Land Use and Environment	62
<b>Basic services</b>	
Potable Water supply	80
Waste water	96
Solid waste	106
<b>Productive sectors and other sectors</b>	
Agriculture and Irrigation	112
Sovereign Services	122
<b>Financing the reconstruction program</b>	124



## Message from the President

The year 2016 has marked the end of the presidential vacancy, and paved the way for the constitutional institutions to perform their normal duties.

Following the election of President Michel Aoun, and right before the end of the year, a “restoring the confidence” government headed by H.E. Saad Hariri was formed.

Prior to that, the government was moving at a slow pace, and was unable to face the enormous challenges in all the domains and in particular at the economic and development levels.

Despite this fact, and regardless of the difficulties arising from the inability to ratify public budgets, and to secure required funds for expropriation necessary for some vital projects, the Council for Development and Reconstruction continued to implement its programs and projects in the various regions and sectors. In this context, the progress report for year 2016 highlights the most substantial achievements at the implementation, financing, and planning levels.

The close link between CDR and the Council of Ministers drives us to determine that the election of the president of the republic and the formation of a new government will have a significant impact on activating the works.

There is no doubt that the new government will place public investment programs on top of its priority list, as part of a comprehensive economic vision that takes into account the status of public finance and mechanisms for facing challenges resulting from the Syrian refugee displacement crisis, as well as from the challenges related to the development in all of the regions.

The willingness of the international community to help Lebanon offers a great opportunity, as well as a chance for the initiation of partnership between the public and the private sectors.

Hoping that in the coming years, the Lebanese will unify their efforts to strengthen the momentum witnessed in 2016 to place the country on the path of stability and sustainable development.

## Introduction

This report presents an overview of the CDR's activities during 2016. It contains significant achievements implemented from 1992 to 2016 and states the developments that took place during the year 2016 including the major sectors' projects that are being executed and under preparation.

Each sector includes two tables:

- A table with the major Contracts Awarded in 2016.
- A table with the Contracts in Preparation and are expected to be launched during the year 2017 and after.

This report deals essentially with CDR work. For completeness of information, reference is made to activities executed by other Ministries and public bodies. The tables, however, include information related to activities only implemented by CDR.

CDR

## General Overview of the Sectors

The activities of CDR cover various economic sectors. However, the extent of these activities varies from sector to sector in accordance with the Government's directives and Lebanon's free enterprise economic system. The role of the State is limited to the support and promotion of the private sector. CDR works in conjunction with the various ministries concerned by implementing investment projects and providing them with technical assistance.

Operation and maintenance of completed infrastructure projects remains the responsibility of the relevant ministries. However, CDR manages and implements operation and maintenance services that may be requested by the Government.

CDR is active in the following four main sector groups:

1-Physical infrastructure: Electricity, telecommunications and transportation;

2- Social infrastructure: Education, public health, social and economical development, land use and environment;

3-Basic services: Water supply, wastewater, solid waste management;

4-Productive and other sectors: Agriculture, irrigation, sovereignty services, tourism and others;

The total value of contracts signed by CDR between 1992 and the end of 2016 was about US \$ 14,044.16 million. About US \$ 8,243.24 million of the projects were completed, while works valued at about US \$ 5,800.92 million is underway. These contracts are distributed among sectors according to the following ratios:

Sector	%
Electricity	11
Transportation	24
Water supply and Wastewater	17
Telecommunications and Post	6
Solid waste	20
Education	9
Public Health	3
Other sectors	10

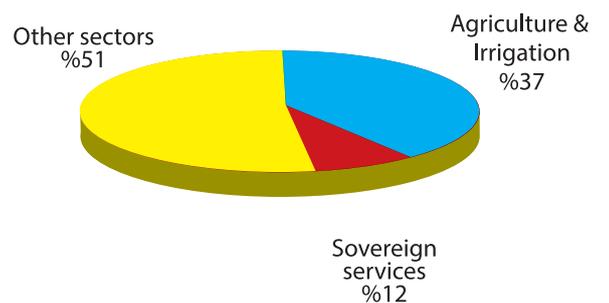
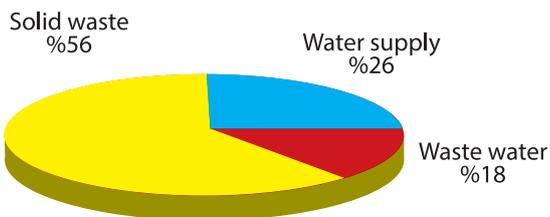
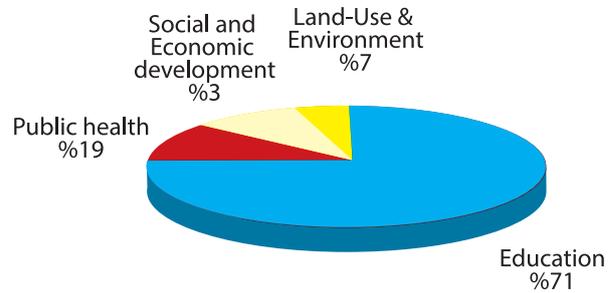
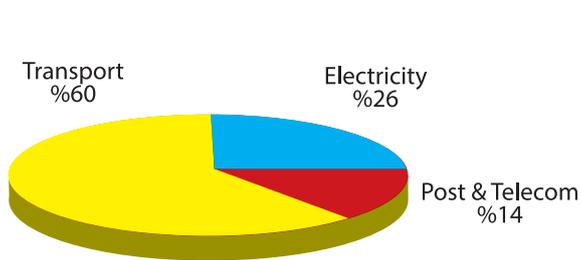
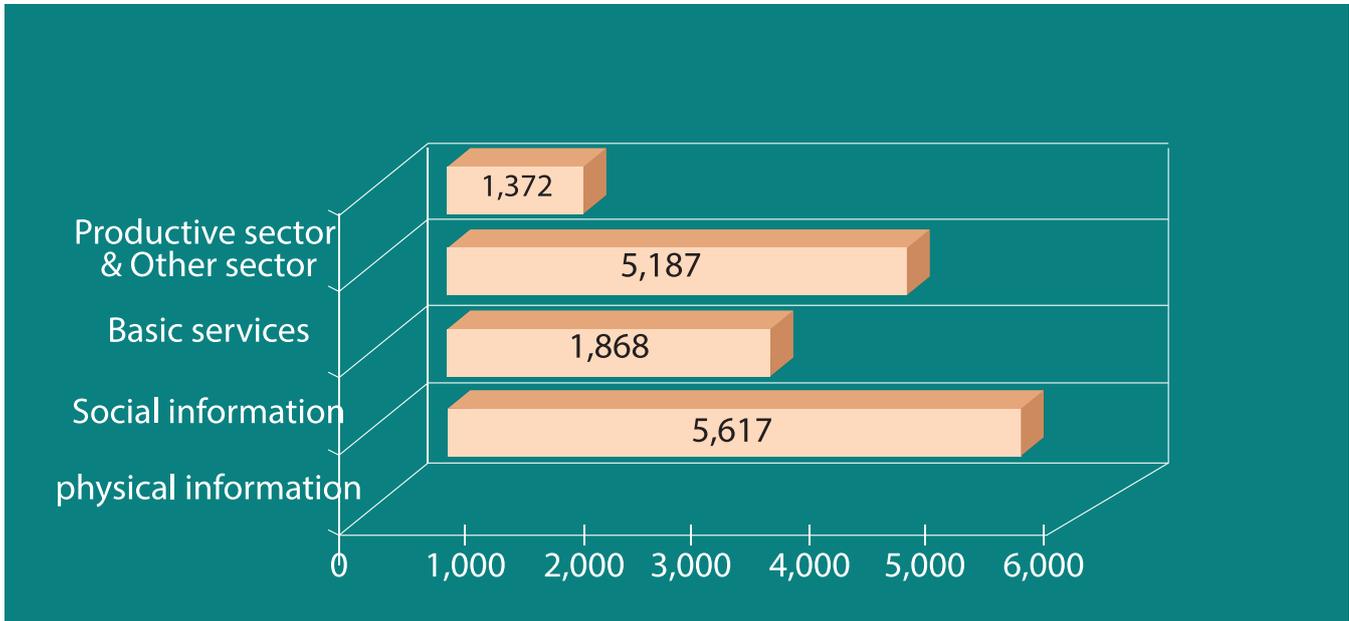
The charts that follow provide an overview of the distribution of contracts over the main sectoral groups, as well as the distribution of contracts over the specific sectors that make up these sectoral groups.

**Total value of contracts awarded from the 31st of December 1992 till the 31st of December 2016 in millions of dollars**

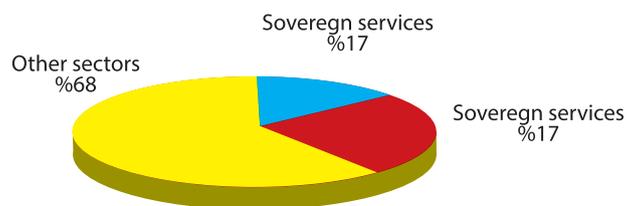
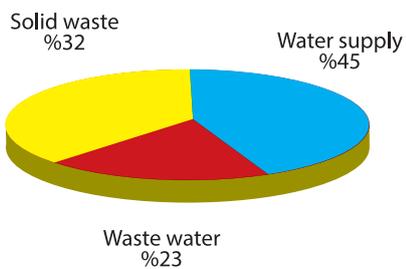
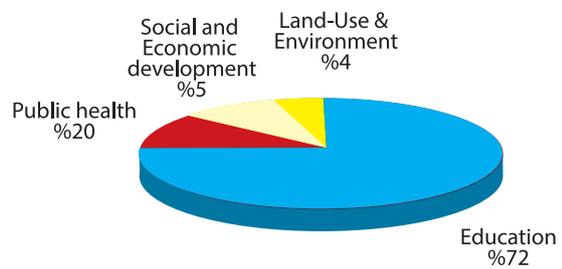
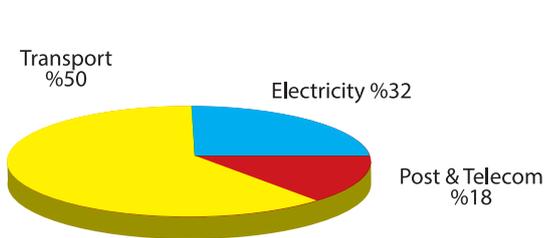
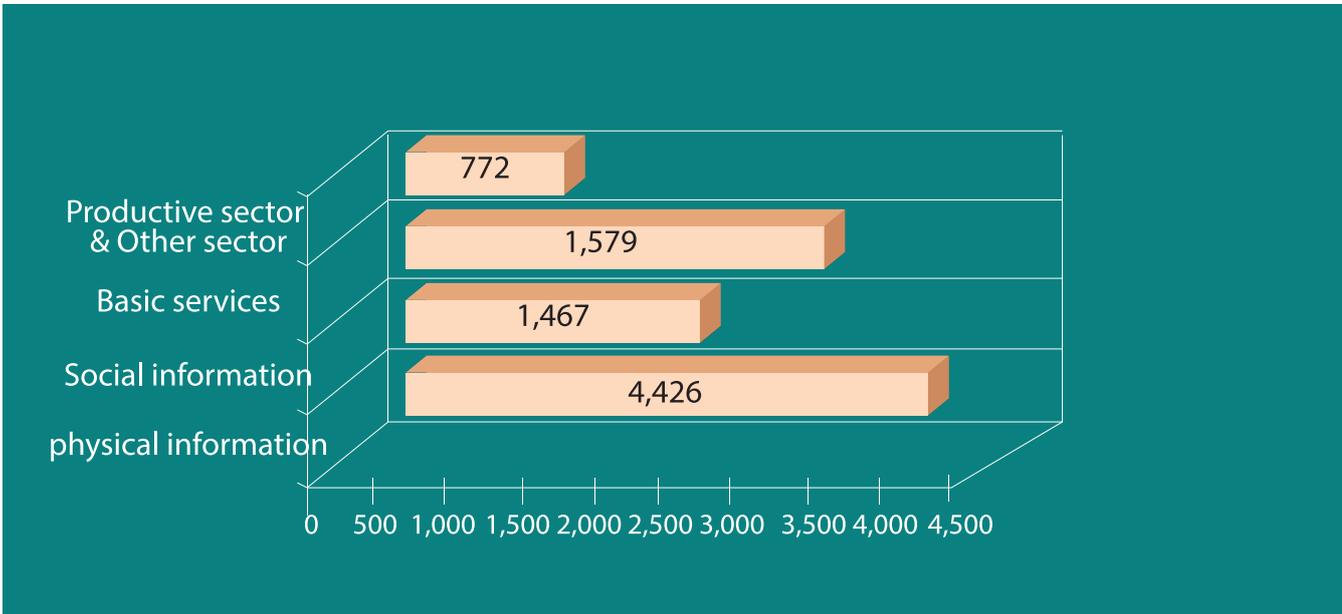
Sectors	Total Contracts (U.S. dollars)	Contracts In progress (U.S. dollars)	Contracts Completed (U.S. dollars)	Foreign funding (U.S. dollars)
<b>Physical Infrastructure</b>				
Electricity	1,479.22	46.69	1,432.53	1,287.55
Telecommunications, Posts	798.77	0.00	798.77	33.26
Transportation	3,338.80	1,144.44	2,194.36	1,133.15
<b>Social Infrastructure</b>				
Education	1,320.74	265.69	1,055.05	569.92
Public health	355.99	67.80	288.19	228.28
Environment and Regional Planning	124.05	66.80	57.25	101.22
Social and economical affairs	66.79	0.15	66.64	24.41
<b>Basic Services</b>				
Water Supply	1,354.69	642.94	711.75	914.26
Wastewater	953.99	598.59	355.40	483.08
Solid Waste	2,878.76	2,367.34	511.42	33.60
<b>Productive sectors and other sectors</b>				
Agriculture and Irrigation	512.72	398.95	113.77	396.40
Sovereign services	168.19	35.99	132.20	13.69
Other Sectors	691.45	165.54	525.91	268.60
<b>Grand Total</b>	<b>14,044.16</b>	<b>5,800.92</b>	<b>8,243.24</b>	<b>5,487.42</b>

**Note:** In case an addendum is signed and is part of a completed project, the value of the completed project will be moved to the section of projects in progress.

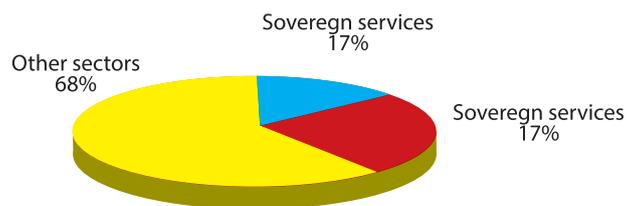
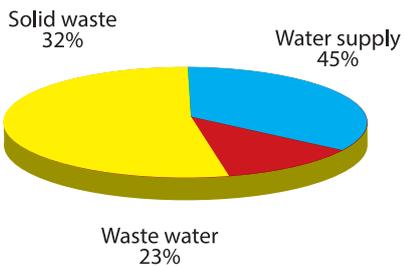
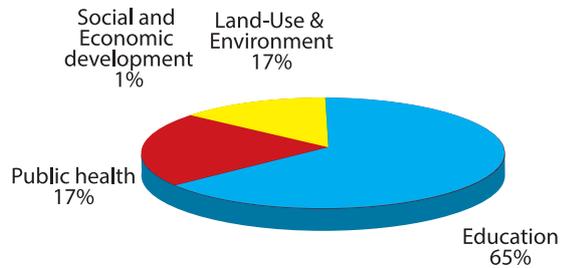
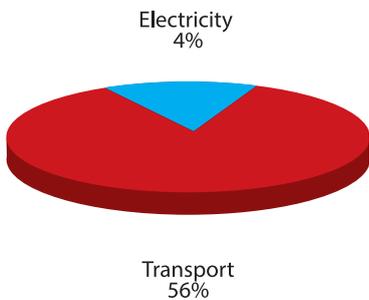
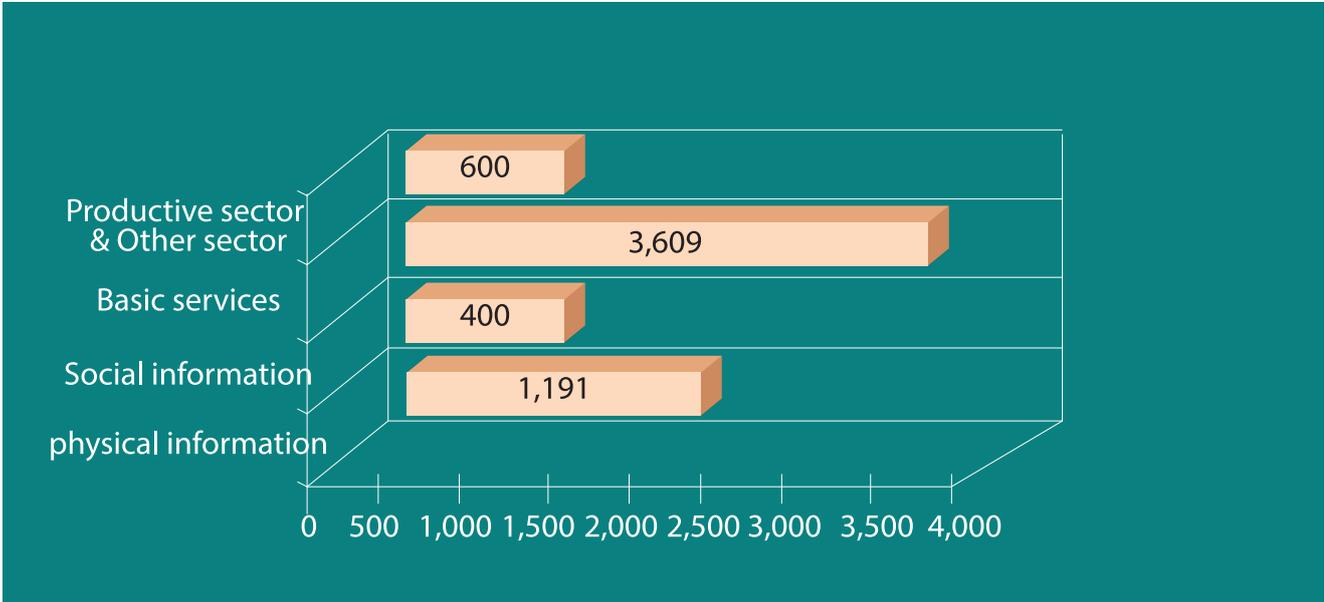
### Contracts awarded \$14,044.16 million Distribution by sector



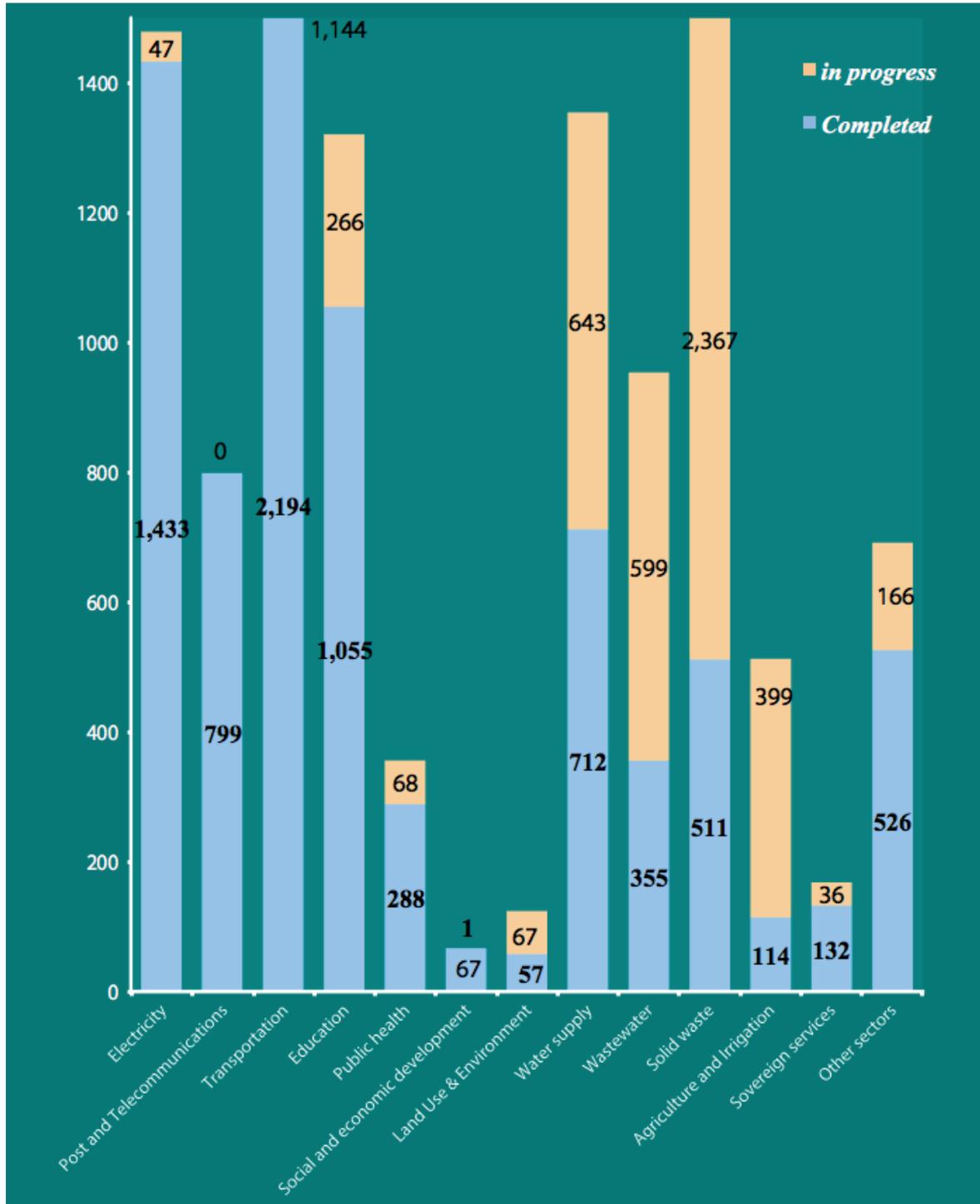
## Contracts completed \$8,243.24 millions Disdribution by sector



### Contracts in progress \$5,800.92 million Distribution by sector



### Contracts awarded \$ 14,044.16 millions (completed & in progress) Distributed by sector



# Electricity

## I. Electricity Sector Overview

The subject of securing electrical energy supplies from renewable and non-renewable sources today represents a strategic priority and a key driver for achieving sustainable development in any community or in any nation.

This trend is clearly reflected in the strategies adopted by countries seeking to develop their energy sector, and in their continuing calls to expand the scope of use in their energy mix, not only as a feasible solution to meet the growing demand for energy, but also as a strategic option geared at the eradication of poverty and the improvement of opportunities for accessing water, food, health and education services, not to say the least, in the contribution to economic development.

Experts, academics and workers in this sector have always called on executives and decision-makers to take a strategic choice to generate enough energy so as to establish a lasting source that takes into account the need to protect the environment from consuming non-renewable fossil fuels, and to open up the way for upgrading social aspects, ecological balance, and economic efficiency.

Since the Lebanese economy is linked to a key variable represented in the traditional way of producing energies, its development stands against the challenges of energy availability. This trend confines the orientation choice towards fossil fuel resource management and the establishment of a sustainable formula for the supply and development, accompanied with a low carbon emission policy. A stake we must adopt for re-positioning within the new global economic order with the aim of moving forward with a long-term strategy to develop key economic sectors to reach economic sustainability.

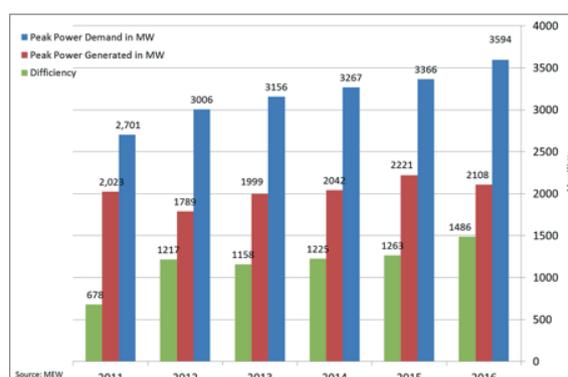
The expenditure by the Lebanese Government of not less than thirteen billion dollars to import fossil fuel material for EDL from 2005 until 2013, has pointed to the enormous subsidy allocated for the sector by the state, which illustrates how challenging reforms have become for the Lebanese government to face in the foreseeable future. Especially after the covenant it took upon

itself to carry out the required reforms in order to transform the sector from a burden on the treasury and its economy to an effective sustainable nerve that would render a positive impact over the national income growth and consequently on the economy.

For those who went along and followed well the course of events of the energy sector in Lebanon, will clearly see that the financial and the legislative realities, and the inability to implement the laws has led to the worsening of the many chronic problems that have hampered the core business and threatened the sectors and inflicted harsh damage to the national economy. The sector was made impossible to be tackled, unless a well rooted gradual reform policy is adopted that would be capable of lifting all the aspects of the energy sectors including renewable energy and energy conservation. A comprehensive strategy for an energy sector system with all its details can constitute a mandatory continuous national policy. If supplemented with a realistic interim programmed policy, it would expedite in the preparation, assemblage, auditing and documentation of an energy database that would help decisions to be built upon. Such policy can eventually lead to the preparation and ratification of modern laws that can guarantee to achieve the goals of the comprehensive strategy.

## The Current Condition of the Sector

The electricity sector in Lebanon has entered a critical phase in terms of the production capacity deficit. The imperative issue requires reconsideration of the priorities in order to prevent further deterioration in the first phase, bridging the deficit in the second, and anchoring the required stability at the end.



In accordance with the Ministry of Energy and Water, the demand on electrical energy reached 21,6669GWh in year 2016 (inclusive of the Syrian refugees demand), which can be approximated at an annual average of 2,474MW of power demand, which is equivalent to 3,534MW of peak power demand at a load factor of 70%.

The electrical energy produced and purchased in year 2016 reached 13,459GWh which accounts for an annual average of 1,536MW of produced and purchased power or the equivalent of an annual peak of 2,194MW of power. The current gap extended to 1,340MW represents 38% at peak power demand, which translates to an average of 9 hours of daily rationing.

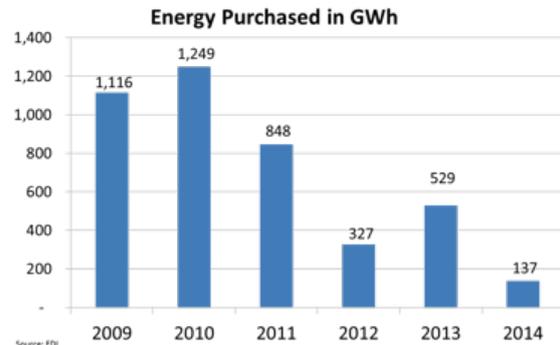
Currently, the main effective peak capacity does not exceed 2,221MW whereas the demand has surpassed 3,600MW in 2016. Power generation in Lebanon is concentrated mainly on thermal energy production. Hydropower produced from plants does not exceed 4.5% from the total generation capacity in the country.

### Power Supply from External Sources

Electric power is drawn from Syria to Lebanon through two main connection networks. The first network links Deir Nbouh plant in the north with the Tartous plant in Syria through two overhead lines of 120 megawatt capacity working on 220 kV of electrical pressure. The second network has a capacity of 80 megawatts through a single overhead line working on 66 KV linking Aanjar substation plant with the Dimas plant in Syria. Lebanon has been drawing electrical power from Syria for a long time now. In year 2000, Lebanon drew a peak 1418 million kilowatt-hour of electrical energy. It stabilized, at a later stage, at a yearly average of approximately 800 million kilowatt-hours, only 8% of the total power production or the equivalent of 90 megawatts of continuous power capacity throughout the year.

Power drawing from Syria started to drop in year 2011. It dropped from 848 Million kilowatt-hours to reach 137 Million kilowatt-hours in year 2014. As for the Eight Arab connection network, and the electric energy purchase agreement from Egypt, the construction works and installations of the new Ksara HV substation have been completed. Efforts have succeeded in September 2009 to operate the new 400KV overhead lines, and terminate the new link with the Dimas transmission plant in Syria.

In year 2010, Lebanon benefited from approximately 120 megawatts of additional electrical capacity on the grid at an average feed of 21 hours



per day, but the transfer was halted in year 2011. The new grid connection capacity can currently carry up to 300 megawatts of power. Lebanon is currently seeking to increase the import capacity from the countries of the region to cover for the remaining 180 megawatts.

### The Main Problems of the Sector

1)The existence of high operational expenses are due to the following reasons:

- The two combined cycle power plants in Zahrani and Deir Ammar, as well as the two open cycle power plants in Sour and Baalback operate on Gas Oil (Diesel) rather than natural gas.
- The Zouk and Jiyeh thermal power plants operate with low efficiency, which necessitate periodical overhauling activities.
- The need to operate Sour and Baalback thermal power plants outside peak times.

2)The existence of rationing and the increase in power failures are due to the following reasons:

- Insufficiency of current power generation to meet all the needs, a fact that led to the spread of the local private generation phenomenon.
- Low public investments since at least 15 years (not in the rehabilitation and maintenance of the plants nor in the construction of new ones).
- The incompleteness of the 220 kV transmission networks.
- The presence of the “bottle necks” on distribution networks and the increase of local breakdowns in crowded areas on peak times during summer and winter peaks.
- Loss of flexibility of electricity links between the old and the new grid.
- The absence of the usage of electronic accounting programs that study and organize the energy flow to ensure the supply and reduce the technical losses such as GIS.
- Deficiency in periodic maintenance operations by technical expertise for the main power plants, the substations, and the transmission network.

- High percentage of technical losses because of the incompleteness of the 220kV distribution grid, which varies from one area to another, exceeding in some areas the 15% average, to reach the 20% line in areas like the Bekaa.

- The problems in the distribution network include:

- The existence of old rusty steel distribution poles.

- The inexistence of standby systems.

- The inexistence of efficient monitoring of the meters.

- The inability to prevent theft aggressions.

- The inability to carry out required maintenance preventive measures.

- The inability to match the billing preparation measures.

- Collection and payment monitoring.

- The ill issuance and control of bill settlements.

- The loss of network components in some regions.

- Significant shortage of required equipment tools and machinery necessary to improve and accelerate the needed interventions mainly due to the great financial deficit that EDL is experiencing.

3) The decline in financial returns of EDL are due to following reasons:

- The global increase in oil prices has aggravated EDL's budget and increased the debt and caused a financial shortage, which became an increasing burden and a source of concern for the national treasury.

- The tariff structure hasn't been reconsidered since almost 15 years now. A transparent policy that decides whether electric energy is sold as a commodity or delivered as a service needs to be adopted.

- Continuous aggressions and illegal connections on the network.

- Incomplete bill collections.

#### 4) The main institutional problems in the management of EDL are as a result of:

- An insufficient authority for the Board of Directors for taking adequate decisions.

- Absence of clear criteria to evaluate the performance of EDL.

- Lack in technical training and difficulty in recruiting new qualified personnel.

- Unavailability of reliable and transparent reports (statistics, finance, criteria, performance, etc.) represented, the least to say, in the inadequate account auditing since 2001.

- A huge deficiency in human resources represented by a present body of only 1902 employees when 5027 are needed; a vacancy for 3125 positions. The current body also loses 120 to 150 workers (8%) per annum due to retirement.

#### The Vision for the Future

In order to set in motion an efficient and sustainable sector, future visions to restructure the sector cannot be implemented unless the action plans include reform programs that would work on the short, medium and long terms in parallel. The reforms must encompass all the technical, financial and institutional aspects that would put in place an end to the financial deficit and ensure the auto-financing for future investments, as well as securing the good service at reasonable prices. On 21/6/2010, the Lebanese Government has ratified the policy statement in this regard for the power sector that aims at securing the financial balance and the sector stability.

#### II. Main Accomplishments (1992 – 2016)

Main projects implemented by CDR for EDL during the 1992 – 2016 periods can be summarized as follows:

##### 1) Generation

- Construction of two combined-cycle power plants in Deir Ammar and Zahrani with a capacity of 435 MW for each plant at a cost of US \$ 575 million, achieved in 1999.

- Rehabilitation of thermal and hydraulic plants at a cost of US \$ 109 million, achieved in 1998.

- Construction of two open-cycle power plants in Sour and Baalback with a capacity of 70 MW for each plant at a cost of US \$ 61 million, achieved in 1996.

- The initiation of supply of a 120MW of electrical power from Egypt to the new HV transmission plant in Ksara through the Eight Arab connection network.

##### 2) Transmission

The construction of the 220 kV network which included the installation of 339 km of overhead lines. Overhead lines that have been completely constructed are: Deir Nbouh to Ksara line, Ksara to Aaramoun line, Aaramoun to Zahrani and Sour line, and the Bahsas to Bsalim line passing through Halat.

- The construction of 220 kV substations in downtown Beirut, Aaramoun, Mkalles, El Horsh, Ras Beirut, Halat, Ksara, Bsalim, and Sour between 1999 and 2001.

- The construction of 61 km of underground buried cables for the 220 kV network in the North and in Beirut in 1999.

- The restructuring of the 150kV and 66 kV transmission networks in 1997.

- The construction of 400 kV network and substation in Ksara allowing for the power exchange between the countries of the region.

- Work on completing the 1900 meter run of the Mansourieh line, essentially after the conclusion of the report that was prepared by the Minister of Health on 5/11/2010, which concluded in the inexistence of any significant health risks attributed to the exposures of non-ionized electrical and magnetic fields.

- The completion of the 66KV line in Beit Mellat, in the area of Al-Ayoun and Fneidek in Akkar, has allowed the Beit Mellat substation, which was completed in February 2011, to be placed in operation. The 66KV line was completed in year 2012 right after the Kuwaiti funds and the bidding process were settled. The project was designed to raise the transmission and distribution power capacity of the region from 10 to 40 MW.

### 3)Distribution

- Rehabilitation of the distribution networks in 1997 at a cost of US \$ 112 million.

### 4)The Technical Assistance Projects for the Electricity Sector Reform Plan:

- Right after an international tender was conducted during year 2007, three consulting service contracts were awarded that aimed at granting technical assistance within the framework of the electricity sector reform plan as follows:

- In relation to the Ministry of Energy and Water: Enhance the capacities of the Ministry of Energy and Water to implement the proposed reform actions in the sector policy statement. The main tasks assigned to the consultant were to assist the Ministry in the preparation of a national sector policy and fuel oil strategy. Part of the tasks was to review the proposals related to the supply of liquefied natural gas (LNG) to the Zahrani plant, and evaluate the proposals aimed at attracting private investments and reviewing previous studies regarding the establishment of the Electricity Sector Regulation Authority. Works are expected to be completed in September 2009.

Having secured the funds from the World Bank, CDR, in this respect, and in coordination with the Ministry of Energy and Water, entered into a contract with Poten & Partners in October 2011, a well-known consultancy specialized in strategic studies for building Liquefied Natural Gas facilities, in an effort to help select the best technology and site location for a suggested port aiming at securing the required Natural Gas quantities at the best possible price.

In April 2012, the Consultant completed all of the required tasks and submitted all the relevant reports, which contained:

- 1)A summary about existing worldwide LNG markets.
- 2)Lebanon's LNG demand up until year 2030.
- 3)A summary about the main LNG suppliers.
- 4)A detailed preliminary study for designing an LNG port after carrying out site assessments to 3 locations (Deir Ammar power plant, Zahrani power plant, and the Selaata area).
- 5)Three reports related to the Preliminary Environmental Impact Assessments of the 3 sites.
- 6)One report concerning the existing legal current conditions and the legal frames that should govern this sector.
- 7)The necessary capacity building for the specialists at CDR and at the Ministry of Water and Energy.
- 8)The preparation of the "EOI" (Expression of Interest) Terms of Reference for companies interested in bidding to build and operate a sea port for importing LNG including the purchase and operation of the Floating Station Regasification unit (FSRU) and the building of the sea port for receiving LNG through harboring the ships for emptying its loads. The goal of this TOR is to prepare a short list of qualified companies for invitations for bidding.

In completion to what was required, and in cooperation with the Ministry of Energy and Water, CDR entered into contract, through local funding, with the same consultant in October 2012, to perform the second phase of these strategic studies.

The consultant completed the required tasks in August 2013 and submitted the following reports:

- 1)Terms of Reference for the selection of consultants willing to conduct the Environmental Impact Assessments in support for the development of the Floating Station Regasification Unit to regasify LNG.

- 2) Term of Reference for the selection of the developer of the FSRU.
- 3) Help in selecting 4 companies capable of importing LNG to Lebanon.
- 4) Help to evaluate companies' bids for the development of the FSRU.
- 5) A report covering the training works required for the staff of the local institutions.

•As for EDL: The improvement of the operational and financial performance of EDL, where the main duties of the consultant will be the preparation of a plan for improving the efficiency of power generation plants and for assisting in the implementation procedures. Reorganizing the supply duties of EDL, establishing the priorities for reducing technical and non-technical losses, providing assistance to complete current projects, organizing an inventory of assets and survey of audited financial reports and preparing the tender documents for the financial audit contract covering 2005 and 2006 are also included in the tasks. Consultancy services are expected to be completed in May 2009.

•As for the Higher Council for Privatization: To provide the necessary support for the Higher Council for Privatization for incorporating EDL in conformity with the Electricity Sector Regulation Law and the Ministry's plan for restructuring the sector. The tasks are to propose the organizational structures for companies that will emanate from EDL, including the detailed description of the proposed positions and the procedures to be followed; along with the preparation the preliminary work plans for these companies. It is also required to organize the inventory of assets and determine the capital levels and the share structure of these companies.

Right at the finish line of the first phase of the contract, CDR, entered into a contract with Booz and Co. to undertake another complementing study to the first phase in order to provide the Higher Council for Privatization with the required support in corporatizing EDL. The contract was signed in cooperation with the Ministry of Energy and Water and under finance from the World Bank. Booz and Co completed the studies by the end of May 2012 and submitted the reports related to the detailed implementation procedures to execute the plan.

It should be noted that the estimated total cost of the technical assistance contracts are of approximately US \$ 6.5 million, distributed in the following manner:

US \$5 Million from the World Bank grant, about US \$1 million from the French Development Agency grant, and US \$ 500,000 from local funds to cover for the local tax expenses.

The designated consultants are to submit their reports gradually in due time in accordance with their terms of references, where the revisions by the concerned institutions are expected to constitute an opportunity for a close coordination amongst the involved parties that will facilitate the decision making process regarding the electricity sector reforms.

5) The Comprehensive Master Plan for the Generation and Transmission of Power: Electricité de France (EDF), which was placed in charge of drafting the Master Plan from a grant financed by the French government, has submitted a draft report regarding power generation. Based on the discussions with concerned officials over the remarks, EDF issued the second version of the report in June 2008.

### III. Progress of works in 2016 - contracts awarded before 2016

-The electrical transmission network expansion project: all works related to the expansion project of the electrical transmission network have been completed as specified above, except for the works regarding the installation of cables on poles in Mansourieh – Ain Saadé – Ain Najm, due to the objections expressed by local residents of the area. Efforts are currently being made to resolve the issue. Completion of the works is expected to be sorted out in 2017, if all goes well.

-National Control and Dispatch center: works started during the month of July 2006. The project is funded by the Arab Fund for Economic and Social Development and its overall cost is evaluated at approximately US \$ 25 million. After repeated halts, due to several reasons, works of the center were re-launched in year 2010. Phase one of the project, which comprised 63%, was undertaken by CDR. The specialists were relocated to the new center and commenced on the operation of the advanced control programs in 15 major substations that linked Mkalleh, Ain Mraisseh, Mssaileh, Gharbieh, Onesco, and Ras Beirut substations. The executed works are now estimated at 92%. They include all the works of the center, the connections with the major substations and with the power plants as well as the local testing and commissioning in all the major

substations. The delays in connecting the center with the rest of the substations go back to the incompleteness of the Mansourieh link which incorporates the fiber optic lines that run in parallel with the high tension lines. This in turn hinders the completion of the final testing and commissioning of some of the microwave lines. In addition, the need for securing some of the leased lines is currently being coordinated upon amongst EDL and the local concerned administrations.

The National Control Center currently monitors and controls 56 major substations and lies in wait for 15 others until connection problems are resolved.

-Rehabilitation and Expansion of Transmission and Distribution Networks in the Liberated regions:

The works for rehabilitation and expansion of the high tension 66KV transmission line and the 20KV/15 kV transmission distribution network in the liberated regions were awarded; however, the contract wasn't signed. The funding from the Iranian protocol was canceled. The total cost of the project was estimated at about \$ 25 million (US Dollars). CDR is currently seeking to secure alternative financing.

#### IV. Main Projects Under Preparation (2017 – 2018)

Generation sector:

o The rehabilitation of Zouk and Jiyyeh power plants:

The installed and actual capacities of the Zouk

EDL is currently conducting the rehabilitation feasibility study for the Zouk power plant.

CDR is currently contracting with EDF to conduct a feasibility study, financed by the Arab Fund for Economic and Social Development, for the soil treatment and the removing the asbestos material in the Jiyyeh power plant, in preparation for the complete dismantling of the plant.

The Arab Fund for Economic and Social Development expressed its readiness to finance the rehabilitation of all the four units of the Zouk power plant in accordance with a 5 to 6 year work plan schedule. Once fulfilled, the rehabilitation and the erection of the new power plant in Jiyyeh are expected to raise the effective capacity of both plants to 1000 MW. Contract award for the rehabilitation of the Zouk power plant is expected to be granted in year 2018.

o Construction of New Generation Plants: Based on the first outcomes of the master plan conducted by EDF, various proposed options to construct new power plants are overlaid. The Ministry of Energy and Water awarded a contract for the erection of a new power plant in Deir Ammar, and another for the erection of new generation units in Zouk and Jieh power plants.

o CDR signed a contract with the consulting group "Mott Macdonald /Pan Arab Consulting Engineering/ Clyde and Co LLP" to help the Ministry of Energy and Water in November 21, 2013, to assist the Ministry of Energy and Water in preparing required feasibility studies for the addition

	Unit number	Installed Capacity in MW	Actual capacity in MW		Unit number	Installed Capacity in MW	Actual capacity in MW
<b>Jiyyeh plant</b>	1	62	52	<b>Zouk plant</b>	1	145	90
	2	62	38		2	145	-
	3	69	58		3	145	92
	4	69	57		4	172	110
	5	69	54		-	-	-
	Total	331	259		Total	607	292

and Jiyyeh power plant units are as follows:

The total installed capacity of both Zouk and Jiyyeh power plants are 938 MW, whereas the average effective operational capacity is 551 MW.

of 1500MW of electric power capacity generation through Public Private Partnership schemes. The consultant completed the first phase tasks in July, 2014, and the second phase tasks in June

of year 2015.

o Power transfer from Steamers: the contract between the Ministry of Energy and Water and one of the Turkish companies is expected to continue during year 2015. The two steamers secure close to 270MW of power in Zouk and Jieh power plants.

**Transmission sector:**

o Construction of substations in various regions: Amongst the current priorities are the five substations that have been determined to treat the suffocations witnessed on the transmission networks, mainly at: The Southern Suburbs (Dahieh), Bahsas (Tripoli), Marina (Dbayeh),

and Ashrafieh.

**Technical Assistance and Sectoral Studies:**

o The Master Plan Study for Distribution in Beirut and its Suburbs:

Following EDL's request from CDR to seek funding for the Master Plan study for the Power Distribution in the Greater Beirut area, the French Agency for Development (AFD) has expressed its willingness to finance the study through a grant. The consultant EDF, who prepared the Master Plan of 1998, is expected to be nominated to carry out the works, which are anticipated to be finalized in 2017.



**Eight Countries Interconnection Network -Ksara Station**



**Orhan Bey Ship for Power Generation**



**Power Plant Zahrani**

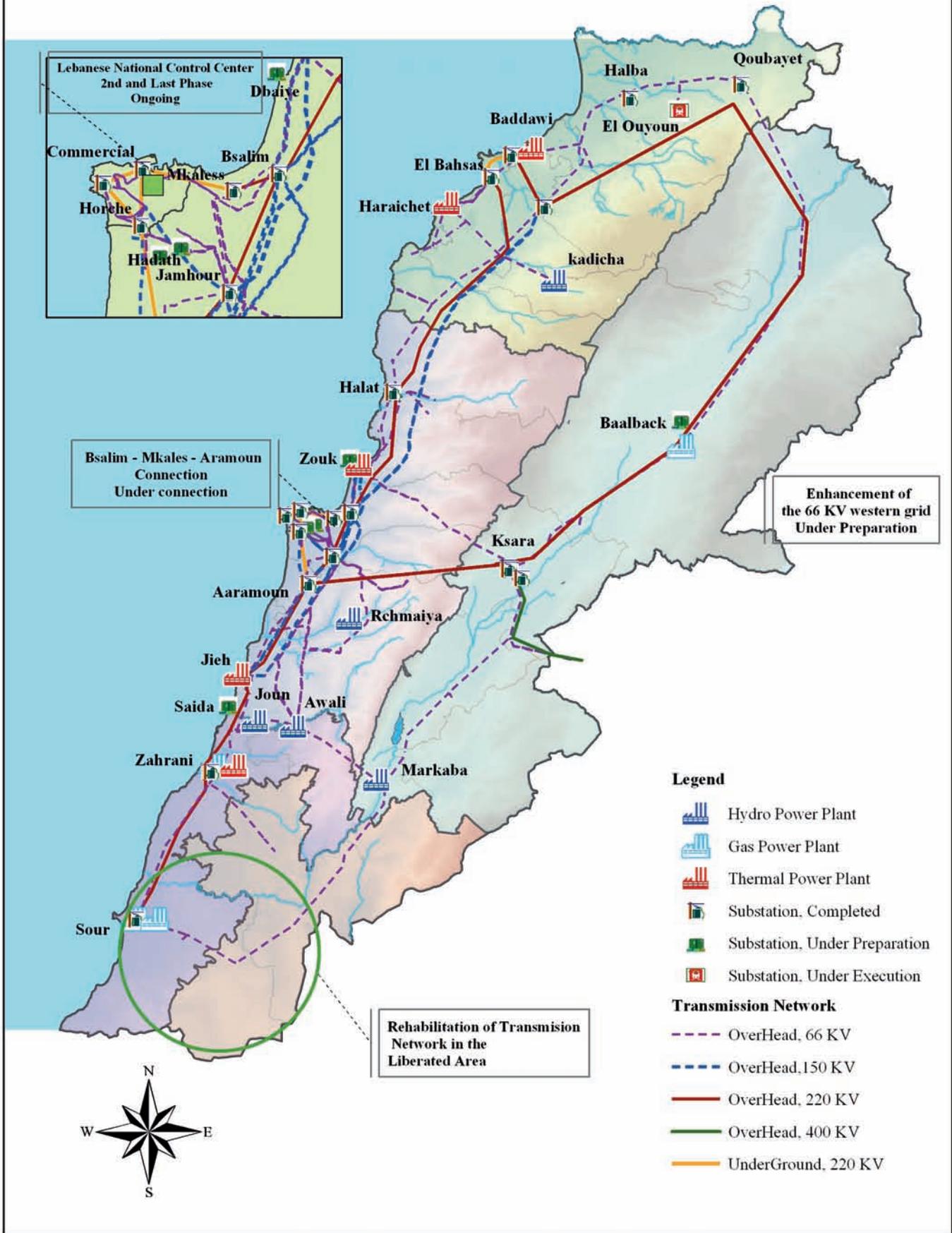


**FatimaGul Ship for Power Generation**



**Power Plant Deir Amar**

# Electricity Completed, Ongoing & Under Preparation Projects



## Post and Telecommunications

A group of contracts was awarded to foreign and local firms for the rehabilitation of the Public Switched Telephone Network (PSTN) to increase its capacity to 1,730,000 lines, i.e. the equivalent of one line for every three persons. The total cost of these contracts, which were completed at the end of 2002, amounted to about US\$ 775 million.

At the same time, a mobile telephone system (GSM) was introduced through concessions awarded to two competing operators. The two operators undertook the necessary investments and the government collects now revenue from this operation.

The government has repossessed the two mobile telephone systems, the PSTN and the GSM systems. However, several projects relating to the development of this sector are still required to render it competitive and capable of handling modern technologies, particularly in the fields of information exchange, state of the art networks and the internet.

### Achievements during the period 1992 - 2016

Installation of telephone exchanges (switching contracts): The related contracts and contract amendments (about US\$ 145 million) provide for the installation of 313 telephone exchanges with a total capacity of 1,142,000 lines in all regions of Lebanon. These were completed at the end of 2001. Three telephone exchanges for international calls and eight telephone exchanges for national calls have also been installed. The exchanges provide Caller Identification Presentation (CLIP), voice messaging services and 13376 Integrated Line Services Digital Network (ISDN) lines.

Three contract amendments were signed to increase the total capacity of the exchanges by 48,000 additional lines (US\$ 8.8 million) and to provide 17,100 additional ISDN lines and four new exchanges, which were installed at the end of 2002. Thus, the total number of telephone lines reached 1,190,000 and the total number of digital (ISDN) lines amounted to 30,476.

Modernization of telephone exchange programs and equipment: The telephone exchange pro-

grams and equipment have been recently updated to comply with technical developments in the telecommunications sector and to add many new services for subscribers and exchanges. The cost of these works amounted to about US \$ 25 million. The project covered all main and branch exchanges, including those designated for international telecommunications.

Rehabilitation and extension of the Public Switched Telephone Network (PSTN): This project covered the rehabilitation and extension of the Public Switched Telephone Network (PSTN), at a total cost of US\$ 550 million, for improving communications among all regions of Lebanon. It included the preparation of the studies for plans and installation of the local telephone network. The first lot of PSTN contracts covered the following components:

- Installation of 971,600 primary pairs (connection from exchanges to local distributors);
- Rehabilitation of 123 telephone exchange buildings and construction of 185 new buildings in all Lebanese regions;
- Installation of the Wireless Local Loop system. This system is suitable for rural areas where the cost of telephone line installation is high;
- Installation of advanced digital transmission systems to interconnect all Lebanese regions.

The second set of contracts was implemented in two phases by the Ministry of Telecommunications. The first phase, known as OSP-1 (Outside Plant-1) covered the installation of 200,000 lines, while the second phase, known as OSP-2 (Outside Plant-2), covered the installation of 600,000 lines in rural areas.

The first group of PSTN contracts was completed at the end of 2002, while the works of the second phase were completed at the end of 2003.

The leased lines project was also completed at the end of 2002 by the Ministry of Telecommunications at a cost of US\$ 10 million. The project aimed to provide leased telephone lines to corporate clients.

Installation of public telephone booths: The CDR supervised the installation of 4000 public telephone booths distributed in all Lebanese re-

gions. These works were installed by Ministry of Telecommunications (MOT) and completed by the end of 2005.

International telecommunications: Several projects for improving international telecommunications have been completed. The most important of these include:

- Installation of two submarine fiber optic cables: The first connects Tartous (Syria) with Tripoli, Beirut, Saida (Lebanon) and Alexandria (Egypt) with a capacity to handle 9,000 simultaneous calls; while the second connects Lebanon, Cyprus, Crete and France and can handle 7,560 simultaneous calls. The total cost of the project was about US\$ 12 million;

- Installation of a fiber optic and wireless connection between Beirut and Damascus with a capacity of 189 simultaneous telephone calls at a cost of about US\$ 1.34 million;

- Installation of ground earth satellite stations in Arbanieh and Jouret el Ballout at a cost of about US\$ 4 million and US\$ 5 million, respectively.

**Several other contracts have also been completed:**

- Installation of a control and management system for transmission and switching equipment (US\$ 577,000);

- Restructuring of the telecommunications sector, re-organization of the administration and preparation of studies for creating marketing services and commercial agencies (US\$ 7 million).

**Posts**

**Projects in Progress**

Postal services: A contract was signed in mid 1998 with a Canadian consortium for the operation of the postal services (mail distribution, counter services, express mail, philatelic services, etc.) in all regions of Lebanon. The consortium was responsible for rehabilitating and equipping all post office buildings, street and property numbering and mail box installation. The cost of this project was approximately US\$ 50 million. Since the contract is in the form of a concession (BOT) no cost was borne by the Lebanese Government.

## Roads – Land Transportation

### 1- Overview of the land transportation sector

In the aftermath of the Lebanese war, reconstruction projects and plans emerged successively: The Urgent Rehabilitation Program of 1991 adopted by the Lebanese Government, the “Horizon 2000” program of 1993, the five-year Economic Development Plan of 1999, and the Development Program of 2003. As a consequence of the reconstruction era, the land transportation sector has witnessed, since 1992 to date, vast renovation and rehabilitation works on the existing Lebanese roads in addition to the construction of new roads. Between 1992 and 2016, the aggregate value of executed projects totaled around US\$ 2.474.04 million, of which projects worth US\$ 1.363.89 million completed up until the end of 2016 and US\$ 1.110.16 million projects that are still active to date.

Recognizing the need to develop a sustainable land transport sector, the Council for Development and Reconstruction (CDR) developed a vast array of road infrastructure projects to help achieving safe, secure and sustainable land transport system across all Lebanese regions, including inter alia the following:

- Coastal road project;
- Beirut-Syrian border road project;
- Penetrator roads connected with Beirut ring road project;
- Urban Transport Development Project (UTDP) for Greater Beirut and Mount Lebanon;
- Renovation and upgrading of Beirut road network;
- Renovation and upgrading of Beirut suburbs road network;
- Renovation and upgrading of main and secondary roads in Lebanese regions;
- Construction of new main and secondary roads in Lebanese regions.

The CDR completed parts of the above-mentioned projects, and other parts are still underway. The CDR works on securing the technical and financial needs to award the remaining contracts and complete these projects.

### 2-Main projects achieved (1992 – 2016)

The CDR focused on the activation of the two main axes in Lebanon: the coastal road and the Beirut-Syrian border road. In this context, sev-

eral projects were completed and the remaining projects are underway on these axes to guarantee an efficient, fast and safe transportation system.

In the context of the coastal road, many contracts were executed, mainly:

- Completion of the study to implement the International Road Agreement in Lebanon.
- Rehabilitation of Sour-Naqoura road.
- Execution of works on Deir Aamar – Abdeh roads (with addendum No.1).
- Expansion and rehabilitation of the road stretching from Abdeh to Homs-Aboudieh bifurcation.
- Execution of the Abdeh-Qobbet el Choumra road within the framework of northern coastal road works extending to the Syrian borders.
- Execution of the Homs-Arida highway within the framework of northern coastal road works extending to the Syrian borders.
- Completion of the rapid northern coastal road: Chekka-Tripoli-Al Bahsas section.
- Renovation Tabarja-Chekka highway.
- Renovation of the coastal road extending from Dora to Tabarja.
- Improvement of Nahr el Kalb intersection.
- Improvement of the coastal highway in the Nahr el Kalb region.
- Rehabilitation of northern Beirut entrance, the lane extending from Dora to Tabarja.
- Repair of landslide at Adma interchange on the northern coastal highway between Tabarja and Nahr el Kalb.
- Execution of works at Nahr el Kalb Interchange (with addendums, 1, 2 and 3).

South highway, Saida sea front section.

- South highway, sections of Zahrani, Sour, Cana crossing, Phase 1: Zahrani-Babilieh
- South highway, sections of Zahrani-Sour-Cana crossing, Phase 2: Babilieh-Abou el Aswad.
- Installation of street lighting and execution of road traffic safety works for Phase 3 of South Highway, Zahrani-Sour-Cana crossing between Abou El Aswad interchange and Burj Rahhal intersection; and completion of unfinished street lighting and road traffic safety works of Phase 2 on this highway, extending from Babilieh interchange to Abou el Aswad interchange.
- Execution of phase 4 road works on the South Highway Zahrani-Sour-Cana crossing between Litani Bridge and Burj Rahhal main road.
- Reconstruction of Al Masbah bridge and the bridge located near the Ministry of Displaced on top of South-Beirut highway in Damour.
- Execution of phase 5 road works on the Saida

seafront, including construction of a bridge in Sinniq region, connecting the coastal road with the South highway.

In the context of Beirut-Syrian border road:  
A number of contracts were executed, mainly:

- Execution of works complementing the project aimed at providing road traffic safety installations and material on the border road extending from Lebanon to Syria in Masnaa Region.
- Execution of Sofar Bridge reconstruction project and a section of the highway that was destroyed during July 2006 Israeli attacks.
- Renovation and asphaltting of the Damascus road, Hazmieh-Saoufar section.
- Renovation and asphaltting of the Mdeirej-Masnaa road.
- Execution of Sofar Bridge reconstruction project and a section of the highway that was destroyed during July 2006 Israeli attacks (including addendum No.1).
- Completion of unfinished works within the framework of Sofar Bridge reconstruction project and a section of the highway damaged by the July 2006 Israeli attacks (including addendum No.1).
- Beautification works at the internal Bhamdoun road as part of the project intended to expand and rehabilitate the current Damascus road (Hazmieh-Sofar Section) (With addendums No.1 and 2).
- Works to expand and rehabilitate the current Damascus road – Section 3 – Aley-Sofar (with addendums 1 and 2).
- Execution of works to expand and rehabilitate the Hazmieh-Jamhour road – Phase 1 and 2 (Execution of Camille Chamoun Boulevard – As-Sayad roundabout (104 km) with addendums 1-5).
- Supply of road safety tools and equipment at the Lebanese-Syrian border in the region of Masnaa.
- Execution of works complementing the project intended to supply road safety tools and equipment at the Lebanese-Syrian border in the region of Masnaa.
- Completion of the expansion and renovation of Rayak-Baalbek section (from Douris to Baalbek with Baalbek entrance from Tell Aammam intersection to Rayak) as part of the project intended to rehabilitate the Chtaura-Rayak-Baalbek Syrian border road.
- Renovation of Camille Chamoun Boulevard between Chevrolet intersection and Galerie Seaman overpass.
- Renovation and expansion of Taadod-Rayak road, within the project of Chtaura-Riyak-Baal-

bek-Northern Lebanese border, parts 1 and 2.

- Within the framework of Chtaura-Baalbek- Syrian border road (El Kaa): execution of remaining road works for the renovation of Baalbek east entrance.

The problem of transportation in urban areas is worsening, especially within Greater Beirut and its surroundings, where private cars constitute the main transport means, which will necessitate, if no public transportation is developed, the creation of additional spaces for roads and car parks in addition to adopting a developed system to manage traffic.

To face this challenge, the CDR conceived the Urban Transport Development Project (UTDP) in Greater Beirut and Mount Lebanon.

Urban Transport Development Project for Greater Beirut and Mount Lebanon:

This project aims at facilitating the traffic flow within the Greater Beirut area and is composed of three components:

- Improvement of main traffic axes, including the construction of bridges and tunnels at 19 intersections and the execution of related site works along main roads.
- Installation of 220 traffic lights and 30 traffic-monitoring cameras, traffic signs, road markings, and creation of a monitoring and management center for traffic circulation, and improving the pedestrian walkways.
- Parking management program with parking meters for 5000 cars.

In the context of the Urban Transport Development Project for Greater Beirut and Mount Lebanon, the following projects were executed:

- Dora bridge
- Antelias bridge
- Mathaf intersection
- Bchamoun-Aramoun
- Hayek bridge
- Organization and launching of an awareness campaign
- Traffic police training
- Installation of traffic lights and traffic- closed-circuit television (CCTV) cameras (addendum number 1) (civil works and installations)
- Installation of road-side Park meters.
- Supply of computers and other equipment to the Lebanese Traffic Management Center.
- Providing training to a number of Internal Security Forces officers and police on how to manage traffic and handle traffic congestion scientifically

and professionally.

- Procurement of motorcycles to the Internal Security Forces (Groups 1 and 2).
- Procurement of wireless devices for the Internal Security Forces.
- Rehabilitation of the Dekwaneh square roundabout and its subsidiary roads.
- The underpass project on the intersection of Bechara El Khoury with the Independence Avenue.
- Moucharafieh Bridge (the overpass works on the Chatila – Kafaat Boulevard – Chiyah-Moucharafieh intersection).
- Project intended to find a solution to the problem of low altitude under the Beirut River Bridge on the Dora-Qarantina Highway, and under the bridge leading to Bourj Hamoud over the Emile Lahoud and Beirut River Highway.

Beirut entrances connected to the Ring Highway:

The ring highway encircling Beirut and the series of penetrators connected to this highway is anticipated to reduce traffic congestion at the capital access points and facilitate traffic between the North and the South. Detailed plans of the penetrator road network were divided into 3 sections:

- Beirut Northern access point
- Beirut Central access point
- Beirut Southern access point

The main completed projects include:

- Execution of the underpass beneath the Mar Mikhael intersection, In the context of the Urban Transport Development project;
- The Antelias bridge, In the context of the Urban Transport Development project;
- The underpass beneath the Tayouneh roundabout, In the context of the Urban Transport Development project;
- Provision of furniture to the Traffic Management Center;
- Provision of computers and other devices to the Lebanese Traffic Management Center;
- The underpass and the overpath on the intersection between the airport road and Chiyah boulevard;
- Tiro road;
- Adlieh connector;
- Haret Hreik-Airport connector;
- Hazmieh-Airport connector (between Camille Chamoun Boulevard and Haret Hreik intersection)

- Cocody-Cola 1 and 2, in addition to Cocody interchange;
- Khaldeh-Cocody road;
- Chatila roundabout;
- Chatila-Kafa'at road parallel to Nahr Beirut (PN3);
- Adlieh-Damascus road (A1) extending to as-Sayad interchange;
- Execution of bridge and tunnel works at the Mkalles roundabout (with addendums 1 and 2);
- Reconsideration of the study pertaining to Charles Helou interchange connecting the Beirut-Tripoli highway "Beirut Port-Nahr el Mot" section with Charles Helou Boulevard next to the Lebanese Emigrant Statute, which is ratified by Decree No. 9308, dated 08/10/1996.
- Execution of the project intended to expand a section of the Beirut-Tripoli Highway, extending from Qarantina Bridge to Charles Helou Station for Travel and Land Transport.

In the context of the Metn expressway:

- Landslides repairs on the Metn Highway Jouret El-Ballout – Baabdat section;
- Site works for wastewater evacuation in Mar Chaaya to avoid causing damage to the Metn expressway in the area of Mar Chaaya-Aatchaneh intersection.
- Grubbing of the Bqaile'-Sannine road within the Upper Mountains Road Project "مشروع طريق القمم" (with addendums 1 and 2);
- Roumieh – Beit Mery interchange and Kanabet Broumana bridge works (with addendums 1-2-3).

#### **Rehabilitation of roads in Beirut suburbs:**

Among the main completed contracts:

Northern suburbs: works on the Bourj Hammoud, Jdeideh and Zalka road sections, roads parallel to Nahr el Mot and Nahr Antelias, roads extending over Dbayeh section, Nahr Beirut-Dora road and the road that replaced the railway track inside Bourj Hamoud. Rehabilitation works of Sin el Fil road and Saloumi-Naba'a-Nahr el Mot road. Southern suburbs: works completed to date are: road networks located within the range of Chiyah Boulevard and adjacent streets axis, Choueifat-Khaldeh road, Haret Hreik storm water drainage tunnel, as well as the sections of Mreijeh, Kassis, Ghobeiri, Haret Hreik, Borj el Brajneh, Furn el Chebbak and Ain el Remmaneh. Also, the rehabilitation works of Jamous roads and their associated public services were completed. Rehabilitation of primary and secondary roads network and creation of main and secondary roads in the Lebanese regions: Major contracts completed include:

- Execution of site works at Gebrayel passageway, Rahbeh's entrance and passageway, and Birkayel's passageway and an internal road in Fnaideq;
- Rehabilitation of the road of Beit el Faqs-Qarsita-Sahet Nemrine;
- Two gyratories in Hadeth el Joubbe and Hasroun and the Diman road (Qadisha roundabout);
- Ehden gyratory works – Phase 2;
- Rehabilitation of Nahr Ibrahim-El Adra road;
- Execution of remaining works of Chnaniir-Dlebta project;
- Halba-Bireh-Qobbayat road, including two bridges in Qoubbayat;
- Road Connectors works in Bcharre;
- Upgrading and expansion of al-Madfoun-Kfifan road;
- Upgrading and expansion of Zgharta-Ras Kifa road;
- Ayto-Ehden road;
- Rehabilitation of Aardat-Mejdalya road;
- Grubbing and construction of the road of Daael - Basatin al Ossi - Beit Chlala – Tannourine El Tahta;
- Ehden gyratory – Phase I;
- Ras Kifa-Ayto road;
- Kfar Harra-Bire;
- Chadra-Mqaible;
- Andaket-Kounieh;
- Akroum-Kfartoun;
- Aardat-Mejdalya;
- Execution and asphaltting of Beit Mery road;
- The new road extending between Jounieh-Bkerke-Harissa;
- Ghazir-Kfour-Fatqa connector;
- Jeita-Aintoura roundabout connector;
- Ajaltoun interchange;
- Rehabilitation of the road extending from Dbayeh to Antelias and Rabieh-Naccache connector;
- Deek el Mehdi & Naccache - Rabieh intersection;
- Beit el Heith – Qartaba project (Phase I extending from Beit el Heith to Sawaneh – 5km + Addendums 1,2,3,4 + Section II);
- Execution of works to rehabilitate the two wastewater treatment plants in Jbaa, Aintourin, implemented as part of Ehden gyratory project;
- Rehabilitation of Joun-Zaarouriye-Zaitouniye road (with addendums 1 and 2);
- Bteghrine Zaarour connector;
- Jouret el Balout –Deir Mar Chaaya connector and Deir Mar Chaaya –Aatchaneh, Baabdat Connector and Deir Mar Chaaya Baabdat connector;
- Works at Gebrayel passageway, Rahbeh passageway and entrance, Berqayel passageway and an internal road in Fnaideq;

- Execution of remaining works of the project intended to grub the road extending from Mrah el Sreij-Bakhoun- Taran to Hazmieh Bridge;
- Becharre gyratory (with addendum 1);
- Al Bahsas – Kousba road (with addendum 1).
- Rehabilitation of Beit el Faqs-Qarsita-Sahet Nemrin road;
- Rehabilitation of Jeita-Ouyoun el Siman road;
- Grubbing of the Monjez-Aboudieh road (13 km);
- Execution of the works of the project intended to grub the Dae'el-Bejdarfel road within Ba-troun-Dae'el road (with addendums 1 and 2);
- Rehabilitation of Saadiyat-Ain el Hor road;

In the context of Sir El Dannieh-Jbab el Homor-Hermel road project:

- Execution of Jbab el Homor-Hermel road;

It is worth mentioning that this report outlines the projects that have been referred to the CDR by the Construction Projects Council "مجلس تنفيذ المشاريع الإنشائية" and the Construction Projects Council for Greater Beirut "مجلس تنفيذ المشاريع"، i.e:

In the context of Transport Development in Greater Beirut:

- Rehabilitation, asphaltting and lighting of Kuwait Street and its forks.

In the context of Rehabilitation and Improvement of International Roads project and the Coastal Road project:

- South highway Jiyeh-Zahrani section (Phase 1);
- South highway project, Saida coastal road (phase 2);
- South highway project, Saida coastal road (phase 3);
- Deir Zahrani-Nabatiye road and Deir Zahrani-Azze Romine road;
- South highway section of Rmeileh intersection and Sinniq connector;
- Construction of Jadra entry and exit points;
- Construction of Qalamoun and Balamand entry and exit points, with pedestrian walkways in Qalamoun and Na'emeh;
- Lighting installations on South highway Jiyeh-Zahrani-Abou el Aswad section;
- Lighting installations on South highway Jiyeh-Awali and Sinniq-Zahrani section;
- Road circulation signage and protection barriers on South highway Jiyeh-Zahrani section;
- Execution phase 4 works at the South Highway Zahrani-Sour section-Kana diversion between Litani bridge and Bourj Rahal main road.

Within Beirut-Damascus road (Masnaa) project:

- Hadath -Masnaa highway, execution of Sofar-Mdairej connector;
- Aley access points project;
- Reconsideration of plans and land acquisitions pertaining to Sections 1, 2, 3, and 4 of the project on the planning and upgrading of the road extending from Zouk Mosbeh – Mairouba- Kfardebian – to Tibeh (Baalbek), reconciliation contract.
- Execution of the project aimed at completing the Hazmieh connector-Rehabilitation of the old Damascus road in Hazmieh.

### 3-Work progress during 2016 in contracts awarded before 2016

The following projects are underway:

In the context of the coastal road project

- Completion of necessary works for the Sour-Naqoura project.
- Execution of section 1 works of phase 5 extending from Abassiye to Cana intersection (from 25+900 to 30+300) as part of the south highway, Zahrani section, Sour-Cana Bifurcation.
- Execution of Tripoli west ring road (Mina-Bedawi section) + Addendum 1.

In the context of Beirut- Damascus Road (Masnaa) Project:

- Execution of the Arab Highway Project: Mdeirej-Jisr el Namliyah-Chtaura-Taanyel section, Phase 1 (Jisr el Namliyah (Bouarej)-Chtaura-Taanyel section) + Addendums 1,2 and 3.
- Execution of the Taanyel-Masnaa section of the Arab highway + Addendums 1 and 2.
- Baalchmay-Sofar section (6.5 km).
- Execution of the works of part II of the various construction projects at the Masnaa border point (with Addendum 1);
- Execution of the necessary geotechnical surveys to study the landslide in Jdita, Bouarej, Mraijet, Rmatieh in the outskirts of the Arab highway project (Mdairej-Taanyel section);

In the context of the Chtaura-Baalbek-Syrian Border (Qaa) Project:

- Rehabilitation of Karak – Hamra Plaza – Ablah – Taadod – Rayak road + Addendum 1.

In the context of the Metn Express Highway Project:

- Execution of the works of the second phase of the planning of Roumieh – Beit Mery road.
- Execution of Mar Chaaya – Aatchaneh – Ain Alaq connector.

In the context of miscellaneous roads across the Lebanese regions:

- Execution of road works in Hbarieh-Chebaa and Zaghla-Chouaya-Chebaa (with Addendums 1, 2 and 3).

- Expansion and renovation of Amchit-Maifouq road (with addendums 1, 2 and 3).

- Execution of the works of new roads connectors linked with Aamchit – Maifouq road Project.

- Execution of Beit Ayoub-Fnaideq road.

In the context of Sir El Dannieh- Jbab el Homor-Hermel road Project:

- Sir El Dannieh-Jbab el Homor road;

- Execution of Sir El Dannieh-Bqarsouna-Qarsita road.

In the context of Qadisha Roundabout Project:

- Execution of the works of phase 2 of the Hadath el Jubba and Hasroun gyratories and Diman road Project.

### 4-Main contracts awarded during 2016

In the context of the Urban Transport Development Project in Greater Beirut

- Addendum 4 for the project intended to install traffic lights & traffic monitoring cameras and build the traffic management building.

In the context of the coastal road

- Completion and supervision of the necessary works of the Sour-Naqoura project.

- Addendum 1 for the execution of the works of the west highway of Tripoli.

In the context of the Arab highway

- Addendums 1 and 2 for the Arab highway project: Mdairei – Jisr el Namliyah – Chtaura – Taanyel section – Phase I

- Necessary Geotechnical surveys to study the potential landslide in the second phase section of the Arab highway project/Mdairej-Chtaura-Taanyel (Lot A) stretching between Mdairej and Namliyah.

- Addendum 1 for the execution of the works of the second part of the various construction projects at the Masnaa border center.

- Preparation of detailed studies related to landslide repair works in Jdita, Bouarej, Mraijet, Rmatieh and provision of technical support during the execution of these works.

In the context of Hbarieh – Chebaa & Zaghla – Chouaya – Chebaa projects

- Addendum 2 to the contract intended to execute the works of the second optional section of the two projects of Hbarieh – Chebaa and Zaghla – Chouaya – Chebaa roads.

In the context of the Karak – Rayak road execution project

- Addendum 1 to the contract related to the rehabilitation the Karak – Hamra Plaza – Ablah – Taadod (Rayak) road.

In the context of the Jounieh – Bkerki – Harissa

road project

-Rehabilitation and expansion of Daroun – Harissa road and supervision of works

In the context of the Upper Mountains Road project

-Addendum 3 to the contract related to the grubbing of the Bqaile'-Sannine road.

In the context of the Sir El Dannieh- Jbab el Homor- Hermel road Project

-Addendums 2, 3 and 4 to the contract related to the execution of additional works as part of the Sir El Dannieh-Bqarsouna-Qarsita road project

In the context of the Batroun-Tannourine express road project

-Addendum 3 to the grubbing of the road of Bqaileh-Sannine project.

In the context of roads rehabilitation project in Lebanon

-Conducting a comprehensive survey of the status of roads in the Lebanese regions stretching over 600 kms, identifying classification criteria and coding and classifying each road status according to IRAP SRS

#### 5-Main projects under preparation for 2017-2019

- Tripoli East Highway project (Al Bahsas-Beddawi);
- Completion of the South highway;
- Mdeirej (Hamana)-Jisr el Namliye (Bouerij) section located on Beirut-Damascus road (Masnaa);
- Construction of a road between Jamhour and Baalchmay (12.7 km) (Arab highway);
- Construction of Hadath-Dekwaneh road (6.2 km) (Beirut ring road);
- Ain Alaq-Bteghrine road within Metn expressway project;
- Galerie Semaan overpass;
- Tunnel and bridge next to the Ministry of Resources;
- Sir road project;
- Jounieh – Bkerke – Harissa road;
- Bqerqasha gyratory;
- Cedars road;
- Ghazir-Jdeidet Ghazir road;
- Expansion and rehabilitation of Mairouba - Nahr el Dahab - Jouret el Termos – Hadchat - Yahchouch road;
- Haret Sakhr – Daroun road;
- Main intersections on Jeita – Faraya road (Jeita-Sheile-Balloune-Daraya-Ajaltoun);
- Rehabilitation of Jbeil – Anaya road;
- Completion of Bir el Heith-Qartaba road;
- Arab Highway, Beddawi-Abboudieh section.



Amchit - Mayfouk Road



Hasroun - Al Deeman Road

## Major contracts awarded during 2016

Project	Approximate amount (USD)	Source of funding	Expected start date	Expected execution date
In the context of the the Urban Transport Development Project in Greater Beirut				
Addendum 4 for the project intended to install traffic lights & traffic monitoring cameras and build the traffic management building	36,134 + 259.098.91 Surplus	World Bank	August 2016	August 2017
In the context of the coastal road				
Completion and supervision of the necessary works of the Sour-Naoura project	/26,388,648/	Program Law	September 2016	August 2018
Addendum 1 for work execution on the west highway of Tripoli	/13,401,014/	CDR EIB LP	December 2016	December 2018
In the context of the Arab highway				
Addendums 1 and 2 for the Arab highway project: Mdairei – Jisr el Namlieh – Chtaura – Taanayel section – Phase I	/53,788,410/	CDR LP OFID SAUDI SFD	December 2016	December 2018
Necessary Geotechnical surveys to study the potential landslide in the second phase section of the Arab highway project/Mdairej-Chtaura-Taanayel (Lot A) stretching between Mdairej and Namlieh	/442,880/	The Republic of Lebanon	March 2016	August 2017
Addendum 1 for the execution of the works of the second part of the various construction projects at the Masnaa border center	/1,226,174/	LP	October 2016	June 2017
Preparation of detailed studies related to landslide repair works in Jdita, Bouarej, Mrajjet, Rmatieh and provision of technical support during the execution of these works	/61,644/	CDR	August 2016	November 2016
In the context of Hbarieh – Chebaa & Zaghla – Chouaya – Chebaa projects				
Addendum 2 to the contract intended to execute the works of the second optional section of the two projects of Hbarieh – Chebaa and Zaghla – Chouaya – Chebaa roads	/1,696,467/	The Republic of Lebanon	March 2016	March 2018

In the context of Karak – Rayak road execution project				
Addendum 1 to the contract related to the rehabilitation the Karak – Hamra Plaza – Ablah – Taadod (Rayak) road	/2,076.720 / Surplus after funding adjustment	The Republic of Lebanon+ Loan from the Kuwait Fund for Economic and Social Development	February 2016	August 2018
In the context of Jounieh – Bkerki – Harissa road project				
Rehabilitation and expansion of Daroun – Harissa road and supervision of works	/7,241,811.50/	CDR	September 2016	August 2018
In the context of the Upper mountains Road project				
Addendum 3 to the contract related to the grubbing of the Bqaile'-Sannine road	/106,516/	The Republic of Lebanon	December 2016	December 2018
In the context of Sir El Dannieh- Jbab el Homor- Hermel road Project				
Addendums 3 ,2 and 4 to the contract related to the execution of additional works as part of the Sir El Dannieh-Bqarsouna-Qarsita road project	/12,440,019/	The Republic of Lebanon	Consecutively: January 2016 April 2016 August 2016	December 2017
In the context of Batroun-Tannourine express road project				
Addendum 3 to the grubbing of the road of Bqaileh-Sannine project	/6,081/ Surplus	CDR SAUDI SFD	July 2016	October 2016
In the context of roads rehabilitation project in Lebanon				
Conducting a comprehensive survey of the status of roads in the Lebanese regions stretching over 600 kms, identifying classification criteria and coding and classifying each road status according to IRAP SRS	/394,654/	The Republic of Lebanon	September 2016	June 2017

## Major projects in progress 2017 - 2018

Project	Approximate amount (USD)	Source of funding	Expected start date	Expected execution date
East ring road of Tripoli (extending from Al Bohsas to Beddawi)	100,000,000	Islamic Development Bank	September 2017	September 2021
Completion of South highway (until Tyre entrance)	35,000,000	Islamic Development Bank	October 2017	October 2019
Mdeirej (Hamana)-Jisr el Namliye (Bouerij) on Beirut-Damascus road (Masnaa)	45,000,000	Saudi Fund for Development	January 2018	February 2021
Construction of a road between Jamhour and Baalchmay (12.7 km) (Arab highway)	300,000,000	Proposed to the World Bank	December 2018	December 2020
Construction of Hadath-Dekwaneh road (6.2 km) (Beirut ring road)	250,000,000	Proposed to the World Bank	December 2018	December 2021
Galerie Semaan overpass	10,000,000	World Bank	December 2018	December 2020
Sir road project	30,000,000	Islamic Development Bank	April 2018	April 2020
Ain Alaq-Bteghrine road-Metn expressway project	55,000,000	Ministry of Public Works' Program Law 2001/326	July 2018	July 2019
Safety and landslide repairs in Byaqout	3,500,000	Public Budget reserves	June 2018	June 2019
Completion of Bir el Heith – Qartaba road	20,000,000	Islamic Development Bank	June 2018	June 2020
Bqerqasha gyratory	10,000,000	Islamic Development Bank	January 2018	January 2020
Cedars road	15,000,000	Ministry of Public Works' Program Law 2001/326	January 2018	January 2020
Ghazir-Jdeidet Ghazir road	6,000,000	Ministry of Public Works' Program Law 2001/326	January 2018	January 2020

Expansion and renovation of Mayrouba-Nahr el Dahab-Jouret el Termos-Hadchat-Yahchouch road	20,000,000	Ministry of Public Works' Program Law 2001/326	January 2018	January 2020
Renovation of Haret Sakhr-Daroun road	6,000,000	Proposed to the Saudi Fund for Development	March 2018	March 2020
Main intersections on Jeita - Faraya road (Jeita-Sheile-Balloune-Daraya-Ajaltoun)	12,000,000	Proposed to the Saudi Fund for Development	March 2018	March 2020
Rehabilitation of Jbeil-Aanaya road	12,000,000	Proposed to the Saudi Fund for Development	March 2018	March 2020
Arab Highway Beddawi-Abboudieh section	270,000,000	Local funding Program Law 246	April 2018	December 2021

## Roads - Maritime Transport

### 1-Sector Overview

The Beirut Port Authority and the Tripoli Port Authority supervised the large execution contracts awarded for the development of the Port of Beirut and the Port of Tripoli, with a total value of around US \$175 million, funded by foreign funds. Most of the works under these contracts have been concluded. Going forward, the Lebanese Government orientation in this sector will be channeled towards the development and expansion of the port of Tripoli to become a maritime transport hub for transit to Iraq.

### 2-Main achievements for 1992 - 2016

Rehabilitation and Expansion of the Port of Beirut:

This project comprised the dredging and rehabilitation of Basins 1, 2 and 3, in addition to the completion of Basin 4 works to be used as a container terminal, alongside the completion of the breakwater execution. The contract was awarded to the Entre Canales/Cubiertas joint venture, and works started in early 1997. The Beirut Port Authority received a technical assistance from the Marseille Port Authority with regard to overall supervision of the studies, while Dar al Handasah (Shaer and Partners) was commissioned to supervise the execution of works. The project value reached US\$91.1 million, partially funded by a loan from the European Investment Bank (Euro 45 million), while the remaining part of funds was covered by the Beirut Port Authority out of the Port's revenues.

At a later stage, the Beirut Port Authority awarded a contract for the execution of the first phase of Basin 5. The quay that will be constructed in this phase is 600m long and 15m deep and will be used as a container terminal. The total cost of this project is estimated at US \$50 million, auto-financed by the Port revenues.

After procuring and installing basic equipment at the port container terminal, and therefore preparing the necessary requirements for the terminal to become operational, the Beirut Port Authority (The Temporary Administration for the Operation and Exploitation of the Port of Beirut) released a call for tenders in mid-2004 to subcontract the management and operation of the terminal.

In August 2004, a contract was signed with the

winning bidder (a joint venture between the British MERSEY (MDHC) and the American (IMA). The company started its actual operation at the Port of Beirut on 14/12/2004 under the name of Beirut Port International Management and the volume of work is expected to exceed 500 thousand TEU in 2005.

Rehabilitation and Modernization of the Port of Tripoli:

In order to ensure maritime navigation safety, works started in the autumn of 1997 in the depth of the commercial basin and the port's access channel to dredge their sediment and debris. Additionally, the wrecks of five vessels sunken in the port's basin were removed and the basin was dredged to a depth of 10m, with a US\$ 2 million cost.

The Lebanese Government commissioned the French consulting firm SOGREAH to prepare a master plan for the development of the Port of Tripoli (funded by the Financial French-Lebanese Protocol). The preparation of this master plan is completed. It comprises the following:

- The Increase of the depth of the access channel from 10 to 13 meters.

- The construction of a 600m long quay extending from the existing port towards the Abu Ali river

- The construction of a detached breakwater (1000 meters) and completion of the construction of the northern breakwater near Abu Ali River.

As a first step, works started in 2001 to deepen the basin and the access channel, with an approximate cost of US\$ 20 million.

The Port of Tripoli Development Project:

In order to prepare the Master Plan for the development of the Port of Tripoli, the Marseille Port Administration conducted a feasibility study for the expansion of this port, with a EUR 45 million loan from the European Investment Bank. These works have been divided into two groups:

Group 1: Comprises works to expand the temporary road for the existing main breakwater and extend the current main and secondary breakwaters. Group 1 works were awarded in April 2004 to Jan de Nul/Hydromar merger, with an approximate budget of US\$ 23 million. Additionally, the supervision of these works was subcontracted and funded by the revenues of the Port of Tripoli. The execution of this group was concluded.

Group 2: Comprises works to construct a new 600m long quay, as well as works to excavate and deepen the port basin to accommodate ships requiring up to 15 meters of depth. The works of Group 2 and the supervision of these works were completed by the China Harbour Engineering Company, funded out of the revenues of the Port of Tripoli, after an agreement was reached between the contractor and the Port of Tripoli.

Preparation of the necessary studies and the tender document related to the project aimed at filling marine areas that will accommodate an economic zone in the Port of Tripoli.

Transformation of the Commercial Port in Tyre into a Tourist Destination:

The feasibility study related to the transformation of the commercial port of Tyre into a tourist destination was completed.

Tourist Port in Jounieh:

A feasibility study and an Environmental Impact Assessment related to the construction of a tourist port in Jounieh were completed.

## 2. Work Progress in 2016 in contracts awarded before 2016

The project aimed at filling marine areas that will accommodate an economic zone next to the Port of Tripoli continues.

## 3- Main projects under preparation in the horizon of 2017 - 2019

Tourist port in Tyre:

Following the completion of the feasibility study related to the transformation of the Commercial Port of Tyre into a tourist destination. The file was submitted to the Ministry of Public Works and Transport which outsourced the first phase of the works.

Tourist port in Jounieh

Following the completion of a feasibility study and an Environmental Impact Assessment related to the construction of a tourist port in Jounieh, the detailed studies of this project are expected to be outsourced to lay the ground for its implementation.

The new Commercial Port of the city of Sidon

The CDR is working on the feasibility study related to phase II of the new commercial port of the City of Sidon.



Beit Miree - Roumieh Road



Rayaq - Ablah Road

## Roads - Air Transport

### Overview of the Air Transport Sector

The Rafic Hariri International Airport Master Plan aimed at increasing the Airport's handling capacity to 6 million passengers yearly, as a first phase, and thereafter increasing the capacity gradually to reach 16 million passengers yearly by 2035.

### 1- Main achievements during 1992 - 2016

Rafic Hariri International Airport (referred to in this report as the "Airport")

The first phase of the project comprised the construction of a new passenger terminal and two new runways: a new runway at the east of the existing runway, and a new west runway protruding into the sea, built on land reclaimed, in order to route the aircrafts away from the skies of the capital Beirut. Consequently, the Airport is now able to handle around thirty planes simultaneously, stationed either at the embarkation gates or in the tarmacs.

Works started in 1994 and were concluded to date; some additional works are underway. Works of the first phase of the passenger terminal are completed and the terminal has been operational since 1998. The implementation of the second phase of the passenger terminal increased the passenger capacity to 6 million per year. At the end of January 2000, works at other facilities were subcontracted, including two additional luggage conveying systems; these works were concluded on June 30, 2000. The west runway has been operational since 2001.

The works concluded in other parts of the Airport are as follow:

- Airport Radar Building: works concluded in September 1996.
- Civil Aviation Safety Center: works concluded in October 1996.
- Civil Aviation Maintenance building: works concluded in June 1997.
- Rescue and Firefighting Training building: works concluded in July 1997.
- Ground Firefighting Services building: works concluded in July 1997.
- Automated Mail Processing Center: works concluded in November 1997.
- Power Generation building: works concluded in

December 1997.

-Infrastructure for passenger terminal and utilities buildings (electricity, water, main and internal roads), which were put in service in the beginning of 1998. The west loop leading to passenger terminal was concluded in February 2000.

-Two main water reservoirs and water towers are now fully operational.

-Additional buildings and airport guard and security buildings were delivered to the Airport administration.

-Two tunnels in Ouzai, under the west runway were opened to traffic in December 1997.

-The Ouzai-Khaldeh interchange at Costa Brava was opened to traffic in December 1997. Khaldeh interchange was open to traffic in September 1999 and the link with old Saida road was completed in December 1999.

-The Ouzai road embankment works were concluded in 2000.

-Car parking and aircraft fueling facilities were completed on the basis of a concession contract (Build Operate Transfer). Moreover, various contracts for consultancy services or supply of aeronautical equipment have been awarded (funded by the Lebanese-French Financial Protocol).

-Consultancy services for the modernization of the Lebanese Civil Aviation Authority.

-Training equipment for the Civil Aviation Safety Center (four contracts).

-Meteorological equipment (contracts for Phases 1 and 2).

-Construction of a VIP pavilion in March 2002.

-Another VIP lounge (General Aviation) to be delivered soon.

-Landscaping works at the VIP pavilion.

-Periodic routine air inspection of air navigation aiding devices (maintenance and operation).

-Consultancy services in the arbitration case related to Airport rehabilitation and modernization.

-Project intended to improve maritime protection and build a dock for boats of the maritime rescue station at the new western runway of the Airport.

-Supply of an air navigation information system with appendixes 1, 2 and 3.

-Operation and maintenance services at the new Airport building and ancillary facilities with appendixes 1 and B, in addition to oversight tasks.

-Oversight services over the rehabilitation of the Airport radar control and surveillance system.

-Geophysical surveys of the new eastern runway area.

- Works to upgrade the circular Airport fencing.
- Operation and maintenance services at the new Airport building and ancillary facilities with appendixes D, E, F, G, in addition to oversight tasks.
- Periodic Routine air inspection of air navigation aiding devices with appendixes 1/2/3/4 and 5.
- Oversight over the operation and maintenance of the Airport facilities and equipment until 30/6/2010.
- Oversight over unfinished works of the projects related to the execution of civil works at the VIP pavilion – General Aviation (GA) and appendixes.
- Preparation of technical and economic feasibility studies and detailed designs that fall under the Airport Modernization Program.
- Oversight over the project on the rehabilitation of the Airport radar control and surveillance systems.
- Oversight over the operation and maintenance of the Airport facilities and equipment.
- Financial and engineering assessment of the VIP pavilion civil works project.
- Rehabilitation of the asphalt pavement of the taxiway (M) in the section parallel to the Airport general aviation area.
- Tender document to subcontract the complementary works of the geophysical surveys of the eastern runway.
- Rehabilitation of the control and surveillance systems of the Airport Radar (Annex No.1).
- Oversight over the project on the rehabilitation of the control and surveillance systems of the Airport Radar.
- Oversight over the operation and maintenance of Airport facilities and equipment.
- Operation and maintenance of the new Airport building and ancillary facilities (Appendix C).
- Preparation of a comprehensive tender document to subcontract the operation and maintenance of the Airport facilities and equipment.
- Preparation of a tender document to subcontract works of the Project related to the Lighting Control and Monitoring System (LCMS) of the Airport runways and taxiways.
- Unfinished works of the projects related to the execution of civil works at the VIP pavilion – General Aviation (GA) and appendixes.
- Rehabilitation and modernization of Airport Data Exchange Center (AMSS).
- Embankment works for the Ghadir culvert within the vicinity of the Airport through open-air digging.
- Operation and maintenance of the Airport buildings and facilities – Reconciliation Contract.
- Shifting the lighting supply of the western runway /35 from the old inverter to the uninterrupt-

able power generator (UPS) of the maritime runway 16/34.

-Project related to the introduction of additional information services at the Airport Data Exchange Center (AMSS).

-Project related to the Lighting Control and Monitoring System (LCMS) of the Airport runways and taxiways.

-Replacement of the old system of the medium voltage network of the Rafic Hariri International Airport.

## **2-Main contracts awarded in 2016**

-Rehabilitation of the al Manara lighthouse in Beirut.

-Renovation of the cooling systems in the passengers building at the Rafic Hariri International Airport.

-Procurement and installation of water filtering system for the Rafic Hariri International Airport cooling system

## **3-Work progress in 2016 in contracts signed before 2016**

The implementation of the following projects is underway:

-The execution of works for the rehabilitation of the aircraft tarmacs, the water evacuation channel and the electricity network of the shipping building and the hangar of the Trans Mediterranean Airways (T.M.A), alongside oversight over such works.

-Continuation of the operation and maintenance of the Airport new building and ancillary facilities (appendix G), alongside oversight over such works.

## **4-Main projects under preparation in the horizon of 2017-2019**

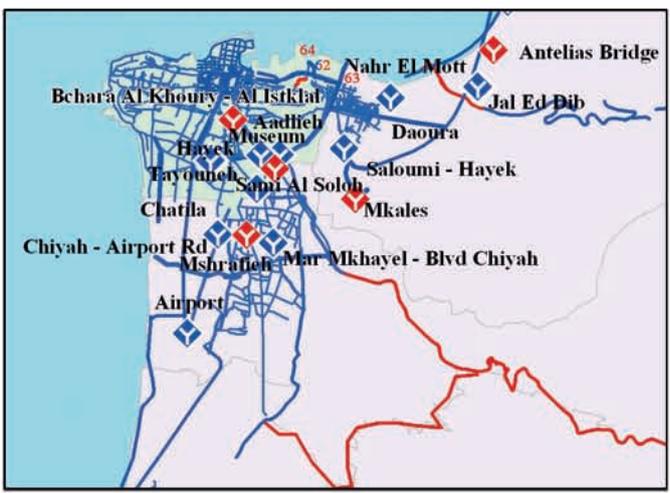
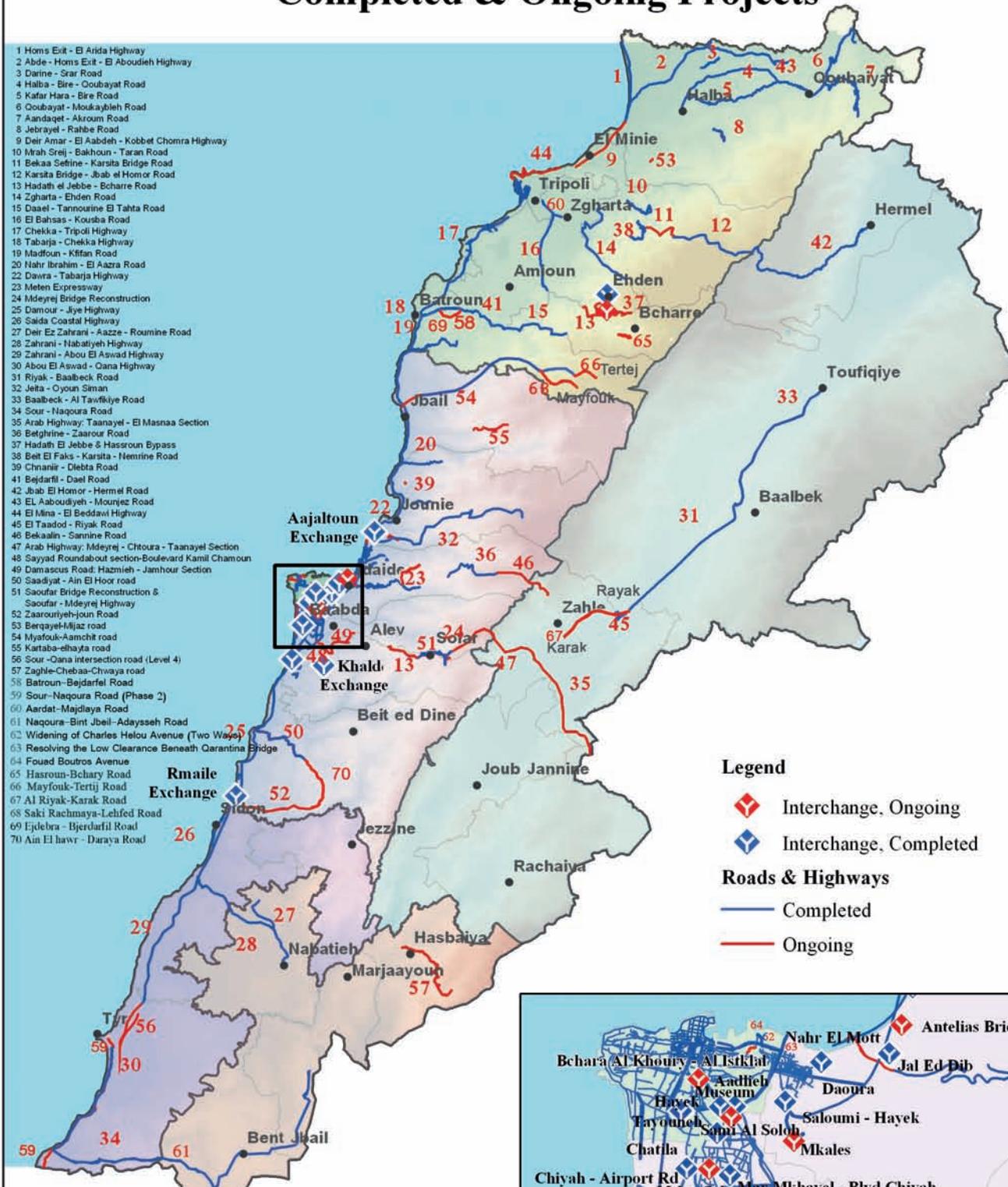
Preparations for the following contracts are underway:

-Execution of the civil works for the rehabilitation of the Rafic Hariri International Airport runways and taxiways.

-The CDR will start the review of the Rafic Hariri International Airport Master Plan, based on last years' developments, and in collaboration with the Ministry of Public Works and Transport.

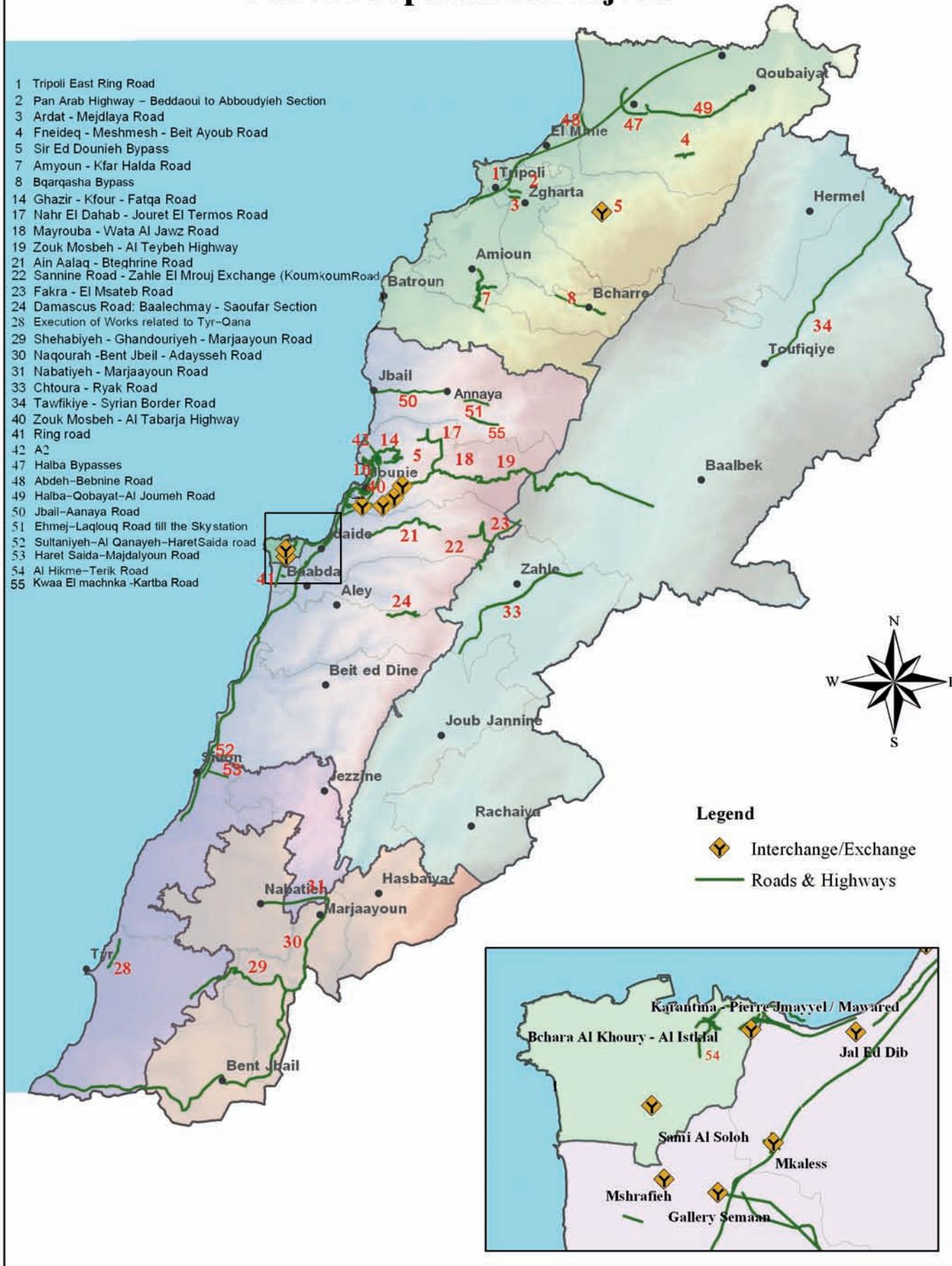
# Roads & Highways Completed & Ongoing Projects

- 1 Homs Exit - El Arida Highway
- 2 Abde - Homs Exit - El Aboudeh Highway
- 3 Dairne - Star Road
- 4 Halba - Bire - Ooubayat Road
- 5 Kafar Hara - Bire Road
- 6 Ooubayat - Moukaybleh Road
- 7 Aandaqet - Akroum Road
- 8 Jebrayel - Rahbe Road
- 9 Deir Amar - El Aabdeh - Kobbet Chomra Highway
- 10 Iwrah Sreij - Bakhoun - Taran Road
- 11 Bekaa Sefrine - Karsita Bridge Road
- 12 Karsita Bridge - Jbab el Homor Road
- 13 Hadath el Jebbe - Bcharre Road
- 14 Zgharta - Ehdun Road
- 15 Daael - Tannousine El Tahta Road
- 16 El Bahsas - Kousba Road
- 17 Chekka - Tripoli Highway
- 18 Tabarja - Chekka Highway
- 19 Madfoun - Kifan Road
- 20 Nahr Ibrahim - El Aazra Road
- 21 Dawra - Tabarja Highway
- 22 Meten Expressway
- 24 Mdeyrej Bridge Reconstruction
- 25 Damour - Jye Highway
- 26 Salda Coastal Highway
- 27 Deir Ez Zahran - Aazze - Roumine Road
- 28 Zahran - Nabatiyeh Highway
- 29 Zahran - Abou El Aswad Highway
- 30 Abou El Aswad - Qana Highway
- 31 Riyak - Baalbeck Road
- 32 Jelta - Oyouan Siman
- 33 Baalbeck - Al Tawfikye Road
- 34 Sour - Naqoura Road
- 35 Arab Highway; Taanayel - El Masnaa Section
- 36 Belghine - Zaarouf Road
- 37 Hadath El Jebbe & Hassroun Bypass
- 38 Beit El Faks - Karsita - Nemrine Road
- 39 Chnanir - Dleba Road
- 41 Bejdarfil - Dael Road
- 42 Jbab El Homor - Hermel Road
- 43 EL Aaboudeyeh - Mounjez Road
- 44 El Mina - El Beddawi Highway
- 45 El Taadod - Riyak Road
- 46 Bekaa'in - Sannine Road
- 47 Arab Highway; Mdeyrej - Chitoura - Taanayel Section
- 48 Sayyad Roundabout section-Boulevard Kamil Chamoun
- 49 Damascus Road; Hazmieh - Jamhour Section
- 50 Saadiyat - Ain El Hour road
- 51 Saoufar Bridge Reconstruction & Saoufar - Mdeyrej Highway
- 52 Zaarouyeh-joun Road
- 53 Bergayeh-Mijaz road
- 54 Myafouk-Aamchit road
- 55 Kartaba-elhayta road
- 56 Sour - Qana intersection road (Level 4)
- 57 Zaqlie-Chebaa-Chvaya road
- 58 Batroun - Bejdarfil Road
- 59 Sour - Naqoura Road (Phase 2)
- 60 Aardat - Majdaya Road
- 61 Naqoura - Bint Jbeil - Adaysseh Road
- 62 Widening of Charles Helou Avenue (Two Way)
- 63 Resolving the Low Clearance Beneath Qarantina Bridge
- 64 Fouad Boutros Avenue
- 65 Hasroun-Bchary Road
- 66 Mayfonk-Tertij Road
- 67 Al Riyak-Karak Road
- 68 Saki Rachmaya-Lehfed Road
- 69 Ejlebra - Bjerdarfil Road
- 70 Ain El hawr - Daraya Road



# Roads & Highways Under Preparation Projects

- 1 Tripoli East Ring Road
- 2 Pan Arab Highway – Beddaoui to Abboudyieh Section
- 3 Ardat - Mejdlaya Road
- 4 Fneideq - Meshmesh - Beit Ayoub Road
- 5 Sir Ed Dounieh Bypass
- 7 Amyoun - Kfar Halda Road
- 8 Bqarqasha Bypass
- 14 Ghazir - Kfour - Fatqa Road
- 17 Nahr El Dahab - Jouret El Termos Road
- 18 Mayrouba - Wata Al Jawz Road
- 19 Zouk Mosbeh - Al Teybeh Highway
- 21 Ain Aalaq - Bteghrine Road
- 22 Sannine Road - Zahle El Mrouj Exchange (Koumkoum Road)
- 23 Fakra - El Msateb Road
- 24 Damascus Road: Baalechmay - Saoufar Section
- 28 Execution of Works related to Tyr-Qana
- 29 Shehabyeh - Ghandouriyeh - Marjaayoun Road
- 30 Naqourah - Bent Jbeil - Adaysseh Road
- 31 Nabatiyeh - Marjaayoun Road
- 33 Chtoura - Ryak Road
- 34 Tawfikiye - Syrian Border Road
- 40 Zouk Mosbeh - Al Tabarja Highway
- 41 Ring road
- 42 A2
- 47 Halba Bypasses
- 48 Abdeh-Bebnine Road
- 49 Halba-Qobayat-Al Joumeh Road
- 50 Jbail-Aanaya Road
- 51 Ehmej-Laqlouq Road till the Sky station
- 52 Sultaniyeh-Al Qanayeh-Haret Saïda road
- 53 Haret Saïda-Majdalyoun Road
- 54 Al Hikme-Terik Road
- 55 Kwaa El machnka -Kartba Road



## Education and Higher Education

The Lebanese government's education and higher education plan aims to "provide a seat in primary school for every Lebanese school-aged child", in line with the Dakar Framework for Action: "Education for All". After the Ministry of Education and Higher Education (MEHE) laid the foundations for the education sector reforms, the plan was expanded beyond the quantitative or qualitative dimension of "school seats" to a broader vision of education based on the principals of quality education, equal opportunity, and contribution to social integration and economic development.

Following the July 2006 war, MEHE conducted a study to assess the war's impact on the education sector in collaboration with the World Bank and the UNESCO. Subsequently, an education reform process was launched, with the "National Education Strategy for Lebanon" as a cornerstone. The Lebanese Association for Educational Studies (LAES) completed the said strategy by end of 2006 and presented it to the Council of Ministers for adoption in the beginning of 2008. Thereafter, a larger and broader action plan for the Ministry was set out with a view to promoting compulsory good quality education until the age of 15.

### The Educational Strategy is based on:

- Equal opportunity education;
- Quality education oriented towards building a knowledge society;
- Education that contributes to social integration;
- Education that contributes to economic development;
- Modernizing the Ministry and shifting it to strategic management.

### Main problems within the sector:

- Public education is not providing equal opportunities for every student in enrollment, school attendance and success.
- Low education quality needs improvement in order to contribute to the building of the knowledge society.

### A vision for the future

Promoting equal access to quality education in Lebanon that contributes to building a knowledge society, social integration and economic development.

### Achievements in education (1992-2016)

The Syrian crisis in Lebanon is more than a crisis of displaced. The influx of around 1.5 million Syrian displaced, to a country with a population that does not exceed 4.5 million, has placed a huge strain on the socio-economic situation which led the UN agencies and development partners, to help Lebanon mainly in its Education sector, in partnership with the Ministry of Education and Higher Education (MEHE). An Education Strategy was elaborated under the title "Reaching All Children with Education in Lebanon (R.A.C.E)". The overall objective of R.A.C.E is to ensure that vulnerable school-aged children (3-18 years), affected by the Syria crisis, are able to access quality formal and non-formal public and private education facilities in safe environments. The program has three pillars:

Pillar I: Improved access to education opportunities

Pillar II: Improved quality of education services

Pillar III: Strengthened capacity of the education system

The Program targeted 413,000 students per year in 250 vulnerable communities with a total budget of US\$ 592,39 million for a period of three years as of 2014. To-date, MEHE received a small part of the required funding, which has not been totally disbursed yet.

•In 1992, the CDR started a comprehensive rehabilitation operation for all public schools in Lebanon. Moreover, the CDR supplied these schools with most of their furniture and equipment. Starting 1996, the CDR reconstructed and equipped 25 public schools destroyed by the war, after it secured the necessary funds. Between 1997 and 2000, the CDR also rehabilitated two teacher training institutions.

•In 1997, in order to increase public schools capacity, the CDR was charged with the rehabilitation and expansion of a group of public schools, with funds allocated by the Lebanon's Compulsory Education Act (Law 686/98).

•In 2001, the CDR commissioned studies for nearly 90 public schools. The works commissioned as of the year 2002 are all completed, and the CDR supplied the furniture and equipment for a large number of these schools. It is noteworthy that for most of these schools funding was secured by grants and loans in addition to MEHE appropriations under the aforementioned Law (686/98). The sources of the funding were the Islamic Development Bank, The World Bank, the Saudi Fund for Development, the Arab Fund for Economic and Social Development and the

South Korean government.

- The rehabilitation of schools damaged during the July 2006 war was financed by several donor countries such as Qatar, Iran, UAE, and by individuals, private sector institutions, and national and international organizations.

- The CDR completed the infrastructure and the concrete slabs to install 37 prefabricated schools donated by the Turkish Government to 18 villages in 9 districts, mostly for in lieu of schools severely damaged or destroyed during the July 2006 war.

- The CDR constructed a new building for MEHE, gathering all its directorates and divisions in one location. This new building is modern and enables MEHE to keep abreast of latest technology and IT advancements. After the delivery of the new building to MEHE, the CDR awarded a maintenance and operation contract that is renewed, when necessary.

- The total aggregate value of contracts signed by the CDR in the education sector between 1992 and the end of 2016 amounted to US\$ 365, 24 million: US\$ 179, 70 million from foreign sources. The value of executed projects is US\$ 322, 50 million.

#### **Work Progress in 2016 in contracts signed before 2016:**

In 2016, additional works were completed in several schools such as Al Mina Public School, Sariine schools, Fakiha, and Antelias Public School, funded by a loan from the Islamic Development Bank.

#### **Main contracts signed in 2016**

The aggregate value of contracts signed by the CDR in the Education Sector totaled US\$ 1.15 million in 2016.

A supervision contract was signed with respect to the works at School (No. 21 + 2) in Beirut financed by the Kuwait Fund for Arab Economic Development (KFAED). This contract however was not executed due to a problem related to the real property. Also four contracts were signed to conduct studies for projects aiming at rehabilitating and equipping a number of public schools with a KFAED grant.

The remainder of the sum of US\$ 1.15 million, focused mainly on additional site works or price adjustments of previously signed contracts, based on comparative tables.

Furthermore, the operation and maintenance contract pertaining to the new MEHE building, renewed for two additional years (7/2014-7/2016) is still in effect. The value of the contract is US\$ 2.81 million inclusive of the supervision cost.

#### **Main projects under preparation (2017-2019)**

Lebanon received financial assistance to support the education sector after the Syrian displacement such as:

- A grant from KFAED of US\$ 4.8 million for the rehabilitation of a number of public schools, to be implemented by the CDR. Studies were commissioned and works execution is scheduled for next year.

- A grant from the World Bank of US\$ 32 million offered directly to the Ministry of Education to provide education services to displaced and resident children.

Projects implemented by other funding sources are still underway, such as the Dahieh schools funded by the Kingdom of Saudi Arabia. Also fundraising projects are underway to collect funds for the execution of site works at schools for which studies were commissioned through a local fund.

#### **Major Challenges of The higher education**

The higher education sector faces serious quality problems:

- The spaces for social mix in education in Lebanon have shrunk considerably during the last few years at the level of university student composition and university teachers linkages;

- The contribution of higher education to geographical mobility is limited;

- The contribution of higher education to vertical social mobility is limited especially at the Lebanese University;

- The labor market of higher education graduates suffers from serious quantity and quality crisis;

- Higher education and technical and vocational education in Lebanon face serious challenges in keeping pace with the global labor market and in building a competitive workforce;

- The Lebanese University faces several problems in handling its affairs.

Achievements in Higher education (1992-2016)

- The CDR rehabilitated the Faculty of Sciences at the Campuses of the Lebanese University in Hadath (1995), Fanar (1996), the National Museum (1995), the National Conservatory branches in Beirut Central District and Achrafieh (1995) and Sin El Fil (1995) and the UNESCO palace (1998). In addition, the Higher Institute of Technology at the Lebanese University and the Faculty of Engineering at Saint Joseph University were provided with the scientific material and equipment needed.

- The Rafic Hariri University Campus in Hadath

was constructed, furnished and equipped. The Campus is composed of nine faculties affiliated with the Lebanese University in addition to the Faculty of Sciences (previously rehabilitated), the Industrial Research Institute (IRI) and the annexed buildings dedicated to various facilities servicing the campus. The nine faculties are: Public Health, Medical Sciences, Law and Political Sciences, Pharmacy, Journalism, Literature and Human Sciences and Faculty of Engineering and Fine Arts. In 2004, all buildings and constructions at the Hadath Campus were completed and delivered except for the external site works. The funding of the project was granted by the AFSED and the Islamic Bank in different proportions, in addition to the appropriations set out in the Lebanese University Program Law.

- In the context of this project, a three-year contract was awarded for the operation and maintenance of the Hadath University Campus, at a total cost of US\$ 26,4 million. The CDR also outsourced the supervision of the operation and maintenance of the University Campus.

- The CDR prepared a Request for Proposal for the procurement of equipment for the laboratories of the Faculty of Science at the Lebanese University. After the US\$ 5 million loan agreement has been concluded with the Islamic Bank for Development, a call for tenders was released in 2006 and part of the equipment was purchased. Another call for tenders to procure the remaining part was released in 2007.

The CDR also procured IT equipment for the Lebanese University students sections, through an Arab Fund grant.

- The Unified Campus of the Lebanese University in North Lebanon: To date, the site works of three out of eight faculties were commissioned: the Faculty of Engineering and the Faculty of Fine Arts (November 2006) and the Faculty of Sciences (December 2012). The remaining faculties that need to be constructed to complete the campus are: The Faculty of Social Sciences, Faculty of Law and Political Sciences, Faculty of Economics and Business Administration, Faculty of Arts, and Faculty of Public Health, in addition to the central library, conference center, hospitality center, administration building, central car park, southern car park and sports complex. The value of the works of the Faculty of Engineering and the Faculty of Fine Arts amounted to US\$ 50.16 million, funded by a Kuwait Fund Loan. The completion of the construction of the two faculties was scheduled for 2013, but works

completion was delayed due to a financial crisis faced by the contractor. As a result, the project implementation was extended until the end of 2017. The aggregate value of the contract related to the Faculty of Sciences totaled US\$ 38.37 million, with a partial funding from the Saudi Fund. While works were scheduled for completion in the beginning of 2015, the contract was extended until the end of 2017.

- The architectural studies for the construction of the Institute for Applied Sciences and the Teachers Training College in Bir Hassan were outsourced. After conducting negotiations with the French Development Agency (AFD), Lebanon received a EUR 21 million loan coupled with a EUR 700,000 grant to finance the project. The Parliament ratified the loan by Law (15) issued on 16/02/2016.

- The aggregate value of the contracts signed by the CDR in the sector of higher education and culture between 1992 and the end of 2016 totaled US\$ 620.72 million of which US\$ 252.96 million were foreign-sourced funding. The value of the completed projects amounts to US\$ 448.93 million.

#### **Work progress in 2016 in contracts signed before 2016**

Due to the persistence of the financial problems of the company contracted out to build the Institute of fine Art and the Faculty of Engineering in the North University Campus, CDR assigned a sub-contractor, and the project is expected to be completed by the end of 2017.

On the other hand, the CDR's board of directors approved three addendums to the contract related to the works of the Faculty of Sciences in the North of Lebanon, and also approved to extend the contract duration till February 2017.

#### **Main projects under preparation (2017-2019)**

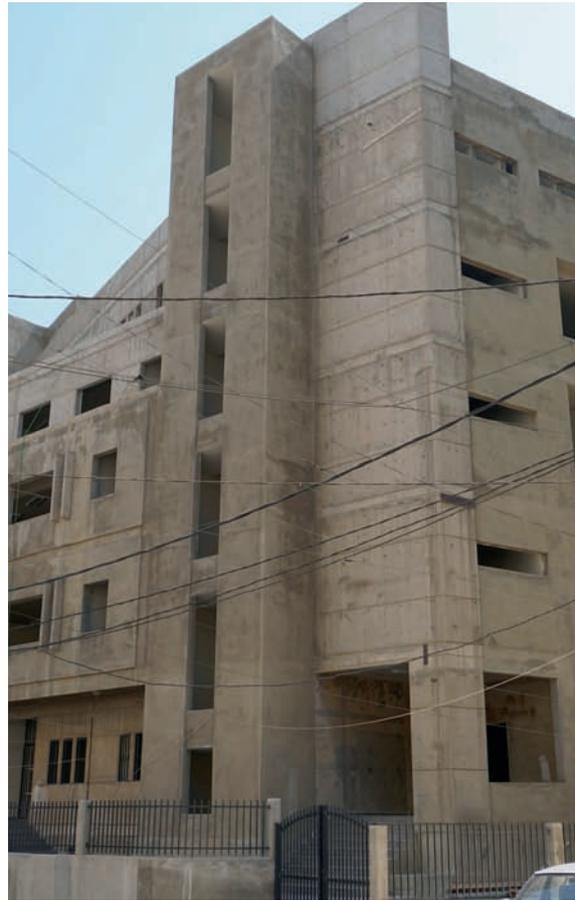
Following the completion of studies and preparation of tender documents related to the Faculty of Public Health in the North of Lebanon and the Faculty of Public Health in Fanar, the works, furniture and equipment contracts are expected to be commissioned, the soonest, under a loan granted by the Islamic Bank.

Also fundraising should be initiated to finance the final phase of the North Unified University Campus.

The architectural studies, designs and tender documents related to the construction of the Institute of Applied Sciences and the Teachers Training College in Bir Hassan, with funds from the French Development Agency, were all completed, and therefore the project's tender and studies, as well as the training sessions for institutes teachers are all expected to be launched next year.



**Administrative Building - Vegetable Market - Tripoli**



**Public School - Mina 3 - Tripoli**



**Public School - Mina 3 - Tripoli**



**Engineering Building - Arts  
Lebanese University - Tripoli**



**Pilot Public School - Tripoli**



**Public School - Antelias**

## Culture and Higher Education Main contracts signed in 2016

Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
million US\$	Source of Funding	Date expected to initiate work	Expected completion	06/02/2016
Appendix No.1 to the contract related to the operation and maintenance of Rafic Hariri University Campus –Hadath	8,247,408	Local	06/05/2016	06/12/2016
Contract for the supervision of operation and maintenance services at the Rafic Hariri University Campus - Hadath	437,757	Local	06/05/2016	06/05/2017
Contract for the operation and maintenance services at the Rafic Hariri University Campus - Hadath	23,410,918	Local	29/12/2016	31/12/2019
Appendix No.2 + 1 to the contract related to the works at the Faculty of Sciences at Michel Suleiman University Campus – Tripoli	1,703,555	Saudi Fund for Development	02/12/2016	06/04/2017
Total	33,799,638			

## Culture and Higher Education Main contracts under preparation in the horizon of 2017-2019

Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
million US\$	Source of Funding	Date expected to initiate work	Expected completion	06/02/2016
Execution of works of the Faculty of Public Health and part of the common areas of the Unified University Building – University Complex in Tripoli	27,500,000	Islamic Development Bank	October 2017	October 2020
Purchase of laboratory equipment for the Faculty of Engineering and the Faculty of Architecture at the University Campus in Tripoli	6,000,000	Islamic Development Bank	October 2017	April 2018
Construction of Public Health Faculty in Fanar Complex	25,400,000	Islamic Development Bank	December 2017	December 2020
Construction of the Institute for Applied Sciences and the Teachers Training College in Bir Hassan	19,500,000	French Development Agency	February 2018	August 2021
Total	58,900,000			

## Youth and Sports Main contracts signed in 2016

Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
million US\$	Source of Funding	Date expected to initiate work	Expected completion	06/02/2016
Development of an Initial Environmental Examination of a new municipal playfield and parking slots in Mazaraa	19,745	Local	April 2016	October 2016
Preparation of studies and tender documents for the rehabilitation and maintenance of Camille Chamoun Sports City	200,000	Local	December 2016	December 2017
Total	239,745			

## Youth and Sports Main contracts under preparation in the horizon of 2017-2019

Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
million US\$	Source of Funding	Date expected to initiate work	Expected completion	06/02/2016
Rehabilitation and maintenance of Camille Chamoun Sports City	2,500,000	Local	September 2018	December 2020
Total	2,500,000			

## Education Main contracts signed in 2016

Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
Supervision over the construction of School no. 21+2 in Msaytbe (Women's Prison location)	59,865	Kuwait Fund For Arab Economic Development (KFAED)	03/01/2016	31/01/2018
Development of studies and tender documents for projects aimed at rehabilitating and equipping a number of public schools – Enhancing service provision in host communities program – First group	22,000	Local	26/05/2016	26/08/2016
Development of studies and tender documents for projects aimed at rehabilitating and equipping a number of public schools – Enhancing service provision in host communities program – First group	22,000	Local	27/05/2016	27/08/2016

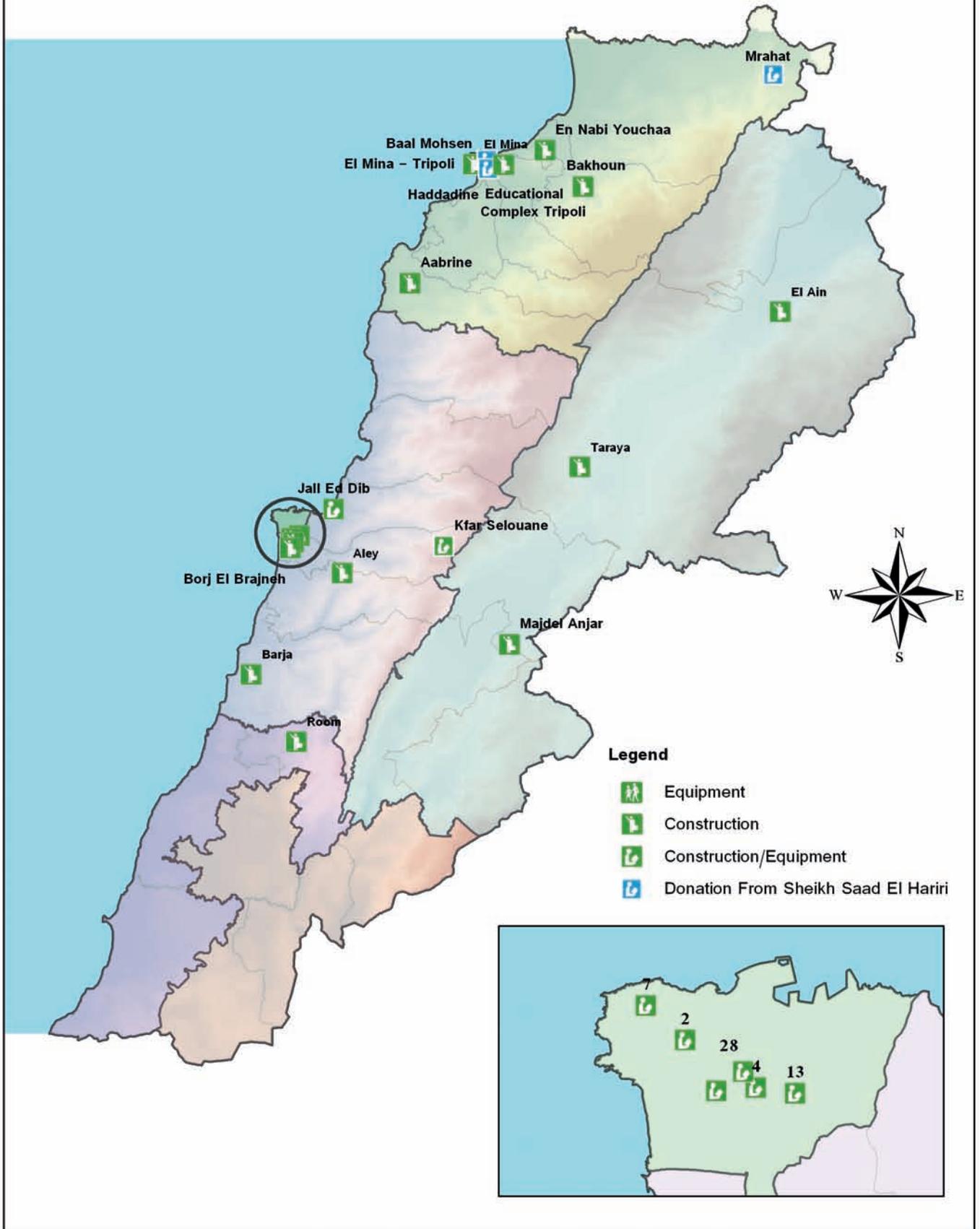
Development of studies and tender documents for projects aimed at rehabilitating and equipping a number of public schools – Enhancing service provision in host communities program – First group	26,400	Local	26/05/2016	26/08/2016
Development of studies and tender documents for projects aimed at rehabilitating and equipping a number of public schools – Enhancing service provision in host communities program – First group	22,000	Local	27/05/2016	27/08/2016
Total	92,400.00			

### Education Main contracts under preparation in the horizon of 2017-2019

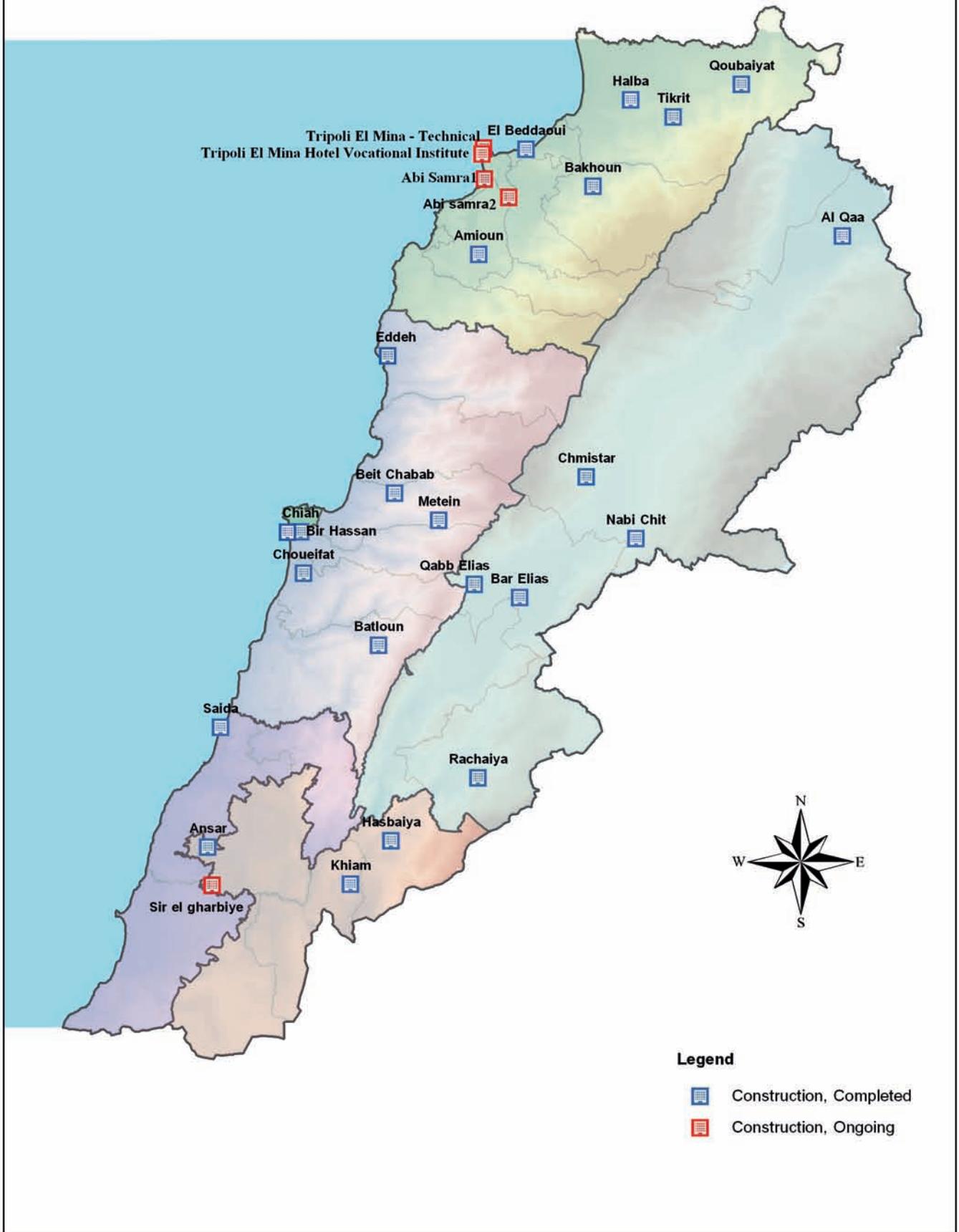
Project Title	Estimated value	Funding Source	Start Date	Expected date for completion
Construction of a public school in Kfarselwan	2,000,000	Local	March 2017	May 2018
Construction of 2 public secondary schools in Hadath	7,000,000	Saudi Grant	April 2017	Oct 2020
Rehabilitation and provision of equipment to Batloun public secondary school	240,000	Enhancing public services in Lebanese host communities - KFAED	September 2016	March 2017
Rehabilitation and provision of equipment to Barja public secondary school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Laure Moghayzel girls secondary school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Kafarmatta public mixed school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Qarya public school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Hermel public intermediate school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Saida secondary public school for boys	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Aadchit public intermediate school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment Nabha public intermediate school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Younin public intermediate school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Braiqeh public secondary school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to the third Tariq Jdide girls school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Baalchmay public intermediate school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to the Borj Al Brajnef fifth public school	240,000	Enhancing public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Martyr Hassan Qosayr intermediate public school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Martyr Morched Nahas public school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Al Mansouri intermediate public school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment Saida intermediate public school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Sayda Eslah girls school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation and provision of equipment to Ain Qanya public school	240,000	Enhancing of public services in Lebanese host communities - KFAED	December 2017	June 2018
Rehabilitation of Aarsal public secondary school ( renovation of the building, installation of metal fence, ceiling and doors for the warehouse)	100,000	Displaced Syrian Relief Initiative - AFESD	March 2018	September 2018
Purchase of equipment for Aarsal Third Public intermediate school	50,000	Displaced Syrian Relief Initiative - AFESD	March 2018	September 2018
Total	14,190,000			



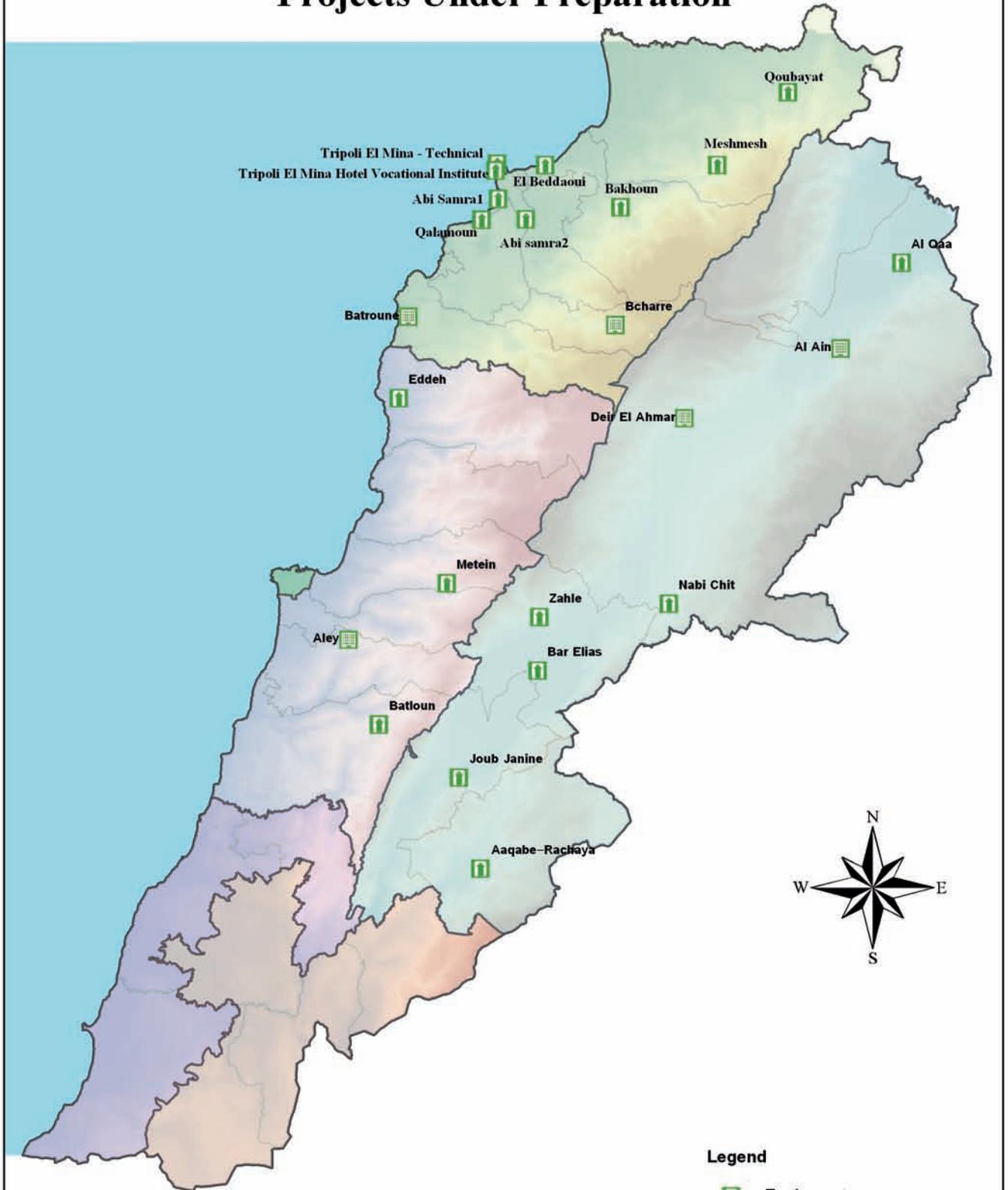
# Public Schools Projects Under Preparation



# Vocational & Technical Schools Completed & Ongoing Projects



# Vocational & Technical Schools Projects Under Preparation



### Legend

- Equipment
- Construction/Equipment

# Health Sector

## Current Situation

The health sector in Lebanon has shown remarkable resilience and capacity that helped in sustaining improvements in the level of health outcomes and indicators despite the challenges that has been faced by the sector. With the influx of large numbers of Syrian displaced into Lebanon, the demand for primary and hospital health services has increased, leading to increased strain on the health sector in Lebanon. The financial and economic impact of the Syrian crisis has been estimated at US\$ 13.1 billion since 2012, in addition to social impacts that are likely to persist in the long term.

The Ministry of Public Health (MoPH) persevered with the improvement of its services and programs in order to preserve the population health and provide prevention and treatment at the lowest cost while maintaining a high level of quality in order to achieve sustainable social and economic development. The Ministry continues to provide health services in addition to hospital services despite the decrease in the MoPH's budget in the total public expenditure.

The MOPH has established a network of around 220 Primary Health Care Centers (PHCCs), mostly run by private sector institutions, based on a contractual relationship, through which these PHCCs are committed to provide a package of basic health care services while MoPH provides technical support, essential drugs and immunization. Each Center is selected based on criteria set out by MoPH. This approach resulted in reduced costs of primary health care and improved health indicators. According to the statistical bulletin issued by MoPH, lastly in 2014, the female life expectancy is 82.11 years compared to 80.27 years for males, the infant mortality ratio is 9 per 1,000 live births, the mortality ratio under the age of five is 10 per 1,000 live births, and the maternal mortality ratio dropped from 18 per 100,000 live births in 2013 to 9 per 1000 live births in 2014.

The MoPH has also developed its hospital services through a) the Hospital Accreditation Program based on quality of services, b) the introduction of new mechanisms for the purchase of hospital services and c) the enforcement of

the Public Hospitals Autonomy Law to improve public hospital services, since the ministry constitutes the "insurer of last resort". And work is underway to establish the competitiveness of public hospitals.

In 2016, the MOPH developed a Health Strategic Plan (2016-2020) based on the achievements of its previous strategy, taking into account the importance of the increasing impact of the social and economic determinants and the crises faced by the health sector. The Ministry considers that strengthening its capacity to manage the health sector, improving the health level and providing comprehensive health coverage and stability are strategic issues that must be addressed in an environment conquered by multiple risks and uncertainties.

The MoPH will pursue its efforts to reform the health sector in order to achieve its mission which aims to work in partnership with all stakeholders, based on good governance principles, enforce the relevant laws and legislations, and ensure the promotion of better health and the provision of equitable, efficient and quality health services, in both public and private sector, that meet legitimate people's expectations and needs, with particular emphasis on the poor, disadvantaged and vulnerable populations.

## 2. Main achievements in 2016

### 2.1 Within the framework of improvement of primary health care services

- The Medical Health Center Labweh: In 2016, a tender was released for the procurement of additional medical equipment for the Medical Health Center Labweh after securing the necessary funds from the Lebanese Government. The contractor has started the works during the third quarter of 2016. The equipment installation was completed during the fourth quarter of 2016 and the equipment are being currently delivered.

- The Lebanon Municipal Services Emergency Project: Within the framework of this project, falls a series of small social activities that are proposed by civil society entities and NGOs and implemented by the CDR in liaison with 11 municipalities federations. These activities are financed by a World Bank US\$ 10 million grant.

- The CDR agreed to commission the National Union of Young Women in Lebanon (YWCA) to rehabilitate and equip the Ablah YWCA Primary Health Care Center, in order to enhance its health services which benefit the Lebanese and

the Syrian displaced in Ablah and its neighboring villages. The YCWA will also organize a Nurse Aid Training Program which is expected to benefit around 25 trainees. The contribution of the CDR amounted to US\$ 38,460.

- The CDR also approved the project submitted by “Al Manara Social Development Society” and “Arkoub Citizen Committee” to purchase and equip an ambulance that will be used as a mobile clinic to provide basic health services in the towns hosting an increasing number of displaced Syrians. The value of CDR’s contribution amounted to US\$ 40,000 for each association.

- Strengthening Primary Health Services Project: this project is financed by a loan from the Islamic Development Bank Loan (LE-0083) and includes a project aimed at establishing and equipping health centers in Khalwat Al-Kefir (Hasbaya), Jbaa (Jezzine), Ghobeiry (Baabda) and Damour (Chouf).

- During 2016, the consultant commissioned by the CDR completed the study and the tender document for each of the Khalwat and Jbaa centers. The bid is expected to be released in mid-2017, and the works are estimated for completion by August 2018.

- As for the Damour and Ghobeiry centers, a consultant was commissioned to prepare the

studies and tender documents for both centers in early 2016. The MoPH informed the CDR about the proposed location of the Damour center and is working on determining the location of the Ghobeiry Center.

- Rehabilitation & equipping of five medical centers in Batroun, Tyre, Sidon, Hasbaya and West Bekaa: This project aims at strengthening MoPH capacity to perform its planning and supervisory role at the local level. During the year 2016, the consultant commissioned by the CDR completed the study and the tender document. The bid is scheduled for release in early 2017. The study is financed by the CDR’s budget and the rehabilitation works and the cost of equipment will be financed by the Islamic Development Bank.

- The Program for Improvement of Public Services in the Lebanese Host Communities for Syrian Refugees: This program is funded by the first grant offered by the Kuwait Fund for Arab Economic Development with a value of US\$ 27 million. It includes a component to rehabilitate and equip health centers nation-wide with a focus on the towns impacted by the big numbers of Syrian displaced. Below a detailed proposed list of these centers according to their geographical distribution.

District	Name of Health Care Center
Nabatieh	Kfarrouman Health Center
Hasbaya	Primary Health Care Center
Beirut	Dar Al Fatwa Health Center Primary Health Care Center - Qarantina Governmental Hospital Primary Health Care Center - Rafic Hariri Governmental Hospital
Chouf	Al Barouk Health Center Baaklin Medical Center Beit el Din Health Center
Aley	Choueifat Governmental Center
Byblos	Jbeil Qadaa Governmental Dispensary
Baabda	Bint el Hoda Sabra Center
Metn	Dahr al Basheq Governmental Hospital Social Medical Center/ Bolghurjian - Bourj Hammoud Dr. Wadih Al-Hajj Center – Baskinta
Rashaya el Wadi	Primary Health Care Center – Rashaya Governmental Hospital
Tripoli	Alkarameh charity center
Akkar	Al Makassedi Health Center – Wadi Khaled Najdeh Chaabieh Halba

## 2.2 Within the framework of hospital services

•Bcharre Governmental Hospital: The CDR rehabilitated and equipped the Bcharre Governmental hospital through a grant offered by the Kingdom of Saudi Arabia. The CDR is currently completing the renovation of the building annexed to the hospital, with local funds. The works of the phase I of this project which started in May 2014 were completed and are being delivered. The contractor started the implementation of phase II which is expected to end in July 2017. Subsequently, the medical equipment bid will be released.

•Provision of medical equipment to Tibnine Governmental Hospital: This project will be implemented within the context of the second grant offered by the Kuwait Fund for Arab Economic Development within the framework of the Lebanon Crisis Response Plan (LCRP), in order to improve the level of public services in various sectors, including the health sector. A contract was signed with the consultant to prepare the study and the tender document during the month of June 2016, funded by the CDR's budget. The US\$ 1.300.00 cost of medical equipment will be financed by the funds appropriated for this purpose in the list of projects covered by the grant.

•Rehabilitation and completion of equipping of Baabda Governmental Hospital: The rehabilitation and equipping of the first section of Baabda Governmental hospital started in February 2012 and ended in June 2013 with the financial assistance of the IDB. In 2015, the rehabilitation of the second section started through an Italian Government Grant. In September 2015, the contractor started the works in the ground floor of the hospital, and in February 2016, the consultant started the works of the building annexed to the hospital, which represents 20% of the section proposed to be rehabilitated (SECTOR II), through the Italian Government Grant. Additional works are still under study before they get approved.

It is worth noting that 80% of the rehabilitation project is still pending, awaiting the delivery by the hospital of the sections that needs to be rehabilitated and which are in operations, in order for the consultant to start the rehabilitation works.

•Construction and equipping of a new hospital in Deir el Qamar: Phase I works started in August 2014, with funds from the Lebanese Government, and are expected to end in mid-2017,

after securing the necessary funds. Also budget appropriations are being secured to fund the second phase of construction and the purchase of medical equipment and furniture.

□Developing the capacities of Bouar Hospital/Ftough Keserwan and Al-Jabal Hospital/Qarnayel Project: This project will be implemented within the context of the second grant from the Kuwait Fund for Arab Economic Development, and under the Lebanon Crisis Response Plan (LCRP), in order to improve the level of health services. The contract was signed with the consultant to prepare the related study and the tender document during the month of April 2016, with funds from the CDR's budget. An amount of US\$ 1 million has been allocated for each hospital out of the financial proceeds of the grant.

•Rehabilitation & equipping of Halba Governmental Hospital Project: In April 2016, the CDR approved to outsource the study and tender document related to this project. It will be implemented within the framework of the second grant from the Kuwait Fund for Arab Economic Development and the Lebanon Crisis Response Plan (LCRP), in order to improve the level of the hospital's health care services. An amount of US\$ 1.500.00 has been allocated from the financial proceeds of the grant to perform the necessary works and provide the needed equipment.

•Construction & equipping of Maifouq Governmental Hospital – Phase I Project: Construction works at Maifouq Governmental Hospital started in March 2015 and ended during the last semester of 2016. At a later stage, budget appropriations will be sought to fund the second phase of construction and the purchase of medical equipment and furniture.

•Construction & equipping of Beirut Governmental Hospital/Qarantina new building Project: Upon the decision of the Ministry of Public Health a detailed study was developed to divert the Qarantina Hospital into a public hospital with a specialized Child Care Division. The contract was signed with the contractor in May 2016; the construction works began in April 2016 and are scheduled for completion within two years. The project is funded by the Islamic Development Bank (up to US\$ 6.15 million) and the remaining balance (US\$ 3.67 million), inclusive of V.A.T will be financed from the appropriations available at the CDR. Also the environmental impact study of the project was elaborated and the assigned contractor is developing the final report after the Ministry of Environment has submitted its observations.

•Construction & equipping of Sarafand Governmental Hospital Project: During the first half of 2016, the works tender was released after ob-

taining the approval of the Council of Ministers to allocate a property owned by the Municipality of Sarafand to the benefit of the Ministry of Public Health. The project is funded by the Islamic Development Bank (IDB) and the CDR and was commissioned in November 2016 after obtaining the approval of the IDB. The contractor is expected to commence the works in April 2017 and complete them within a period of 12 months.

- Construction & equipping of Sour Governmental Hospital Project: During the second half of 2016, the construction works tender that will be funded by the Government of Lebanon and the Islamic Development Bank was released. The Contract is expected to be signed with the winning bidder and the works are expected to begin in April 2017 and end in April 2019. At a later stage the Hospital will be supplied with medical equipment and furniture. The equipping process is expected to be completed in January 2020, whereby the MOPH will secure 75 beds for the city's residents and the neighborhood.
- Rehabilitation & equipping of Emile Bitar Governmental Hospital-Batroun Project: After the Council of Ministers commissioned the CDR to prepare the necessary studies for the rehabilitation and equipping of this hospital at an estimated cost US\$ one million, a consultant was commissioned to prepare the project studies and tender documents. The consultant developed the first phase of the study, and it was submitted to the Ministry of Public Health to provide its observations and identify its priorities. The observations of the MOPH will be communicated to the consultant to amend the study accordingly for finalization in August 2017.

- Support of Emergency Departments in Governmental Hospitals Project: This project includes the provision of support to 14 governmental hospitals. It is implemented within the framework of the Program for Improvement of Public Services in the Lebanese Host Communities for Syrian Refugees, and funded by the first grant of the Kuwait Fund for Arab Economic Development.

These hospitals were distributed into 3 groups and consultants were commissioned to prepare the studies and tender documents for each group.

- The first group includes the following government hospitals: Elias Hrawi in Zahle, Baalbeck, Hermel, Rashaya and Hasbaya.

- The second group includes the following hospitals: Bint Jbeil Governmental Hospital, Nabih Berri University Hospital, Saida Hospital and Rafic Hariri University Hospital.

- The third group includes the following government hospitals: Sibliin, Ftouh Keserwan, Qobbe

- Tripoli, Abdullah Rassi and Sir El Dannieh.

### 3. Main Projects under preparation

- Support of Emergency Departments in Governmental Hospitals Project: Within the framework of the Program for Improvement of Public Services in the Lebanese Host Communities for Syrian Refugees, funded by the third grant of the Kuwait Fund for Arab Economic Development, preparations are underway for this project, which will include an additional 16 governmental hospitals. The Council of Ministers approved in June 2016 the signature of the third grant agreement, and works are expected to begin in mid-2017.

- Strengthening Primary Health Services Project: This project is implemented with funds provided by The Islamic Development Bank, and aims to enhance and develop the capacities of the public sector in the fields of care and hospitalization. This project includes:

A.The establishment of the aforementioned five new health centers in Ghobeiry/Baabda district, Damour/Chouf district and Khalwat/Hasbaya district, in addition to the construction of two other centers in Sheikh Taba/Akkar district and Beshtefin/Chouf district.

B.The rehabilitation of three health centers in Jbaa/Jezzine district (referred to above), Terbol/Zahle district and Bouday/Baalbeck district.



**Mayfouk Public Hospital**

**Main contracts signed in 2016:**

Project name	Contract value Inclusive of V.A.T (In USD)	Funding Source
Development of a study for the rehabilitation & equipping of Emile Bitar Governmental Hospital	50,000	The Republic of Lebanon
Development of studies and tender documents & provision of support to the Bid Committee for the purchase of medical equipment for Tibnin Governmental Hospital	28,600	The Republic of Lebanon
Development of studies and tender documents & provision of support to the Bid Committee regarding the project on the purchase of medical equipment for Tibnin Governmental Hospital	55,000	The Republic of Lebanon
Development of studies and tender documents for the rehabilitation & equipping of health centers, in addition to the execution of works in Dahr El Basheq Governmental Hospital	110,000 (Four contracts)	The Republic of Lebanon
Development of studies and tender documents for the rehabilitation and equipping of Bouar-Ftuh Keserwan Hospital	38,500	The Republic of Lebanon
Development of studies and tender document & provision of support to the Bid Committee for the project on the support of emergency units in Governmental Hospitals	165,000 (Three contracts)	The Republic of Lebanon
Development of studies and tender documents for the rehabilitation of five hospitalization centers in the districts of Batroun, Tyre, Hasbaya, Sidon, and West Bekaa	38,500	The Republic of Lebanon
Development of studies and tender documents for health care centres construction, rehabilitation & equipping in Khalwat, Damour, Ghobairy, and for the rehabilitation & equipping of Jbaa Health Centre	89,100	The Republic of Lebanon
Development of a study and tender document & provision of support to the Bid Committee with regard to the project for the rehabilitation & equipping of Halba Governmental Hospital (Abdallah El Rassi Hospital)	55,000	The Republic of Lebanon
Development of studies and tender documents for health care centres construction, rehabilitation & equipping in Khalwat, Damour, Ghobairy, and for the rehabilitation & equipping of Jbaa Health Centre	55,000	The Republic of Lebanon
Development of studies and tender documents for governmental university hospitals rehabilitation & equipping with morgues (Rafic Hariri, Dahr el Basheq and Baabda)	38,500	The Republic of Lebanon
Provision of additional works and medical equipment for the Medical Health Center Labweh	218,929	The Republic of Lebanon
Execution of construction works at Beirut Governmental Hospital - Qarantina	9,821,437	Islamic Development Bank & the Republic of Lebanon



Tyre Public Hospital



Tyre Public Hospital



Karantina Public Hospital



Sarafand Public Hospital



**Karantina Public Hospital**

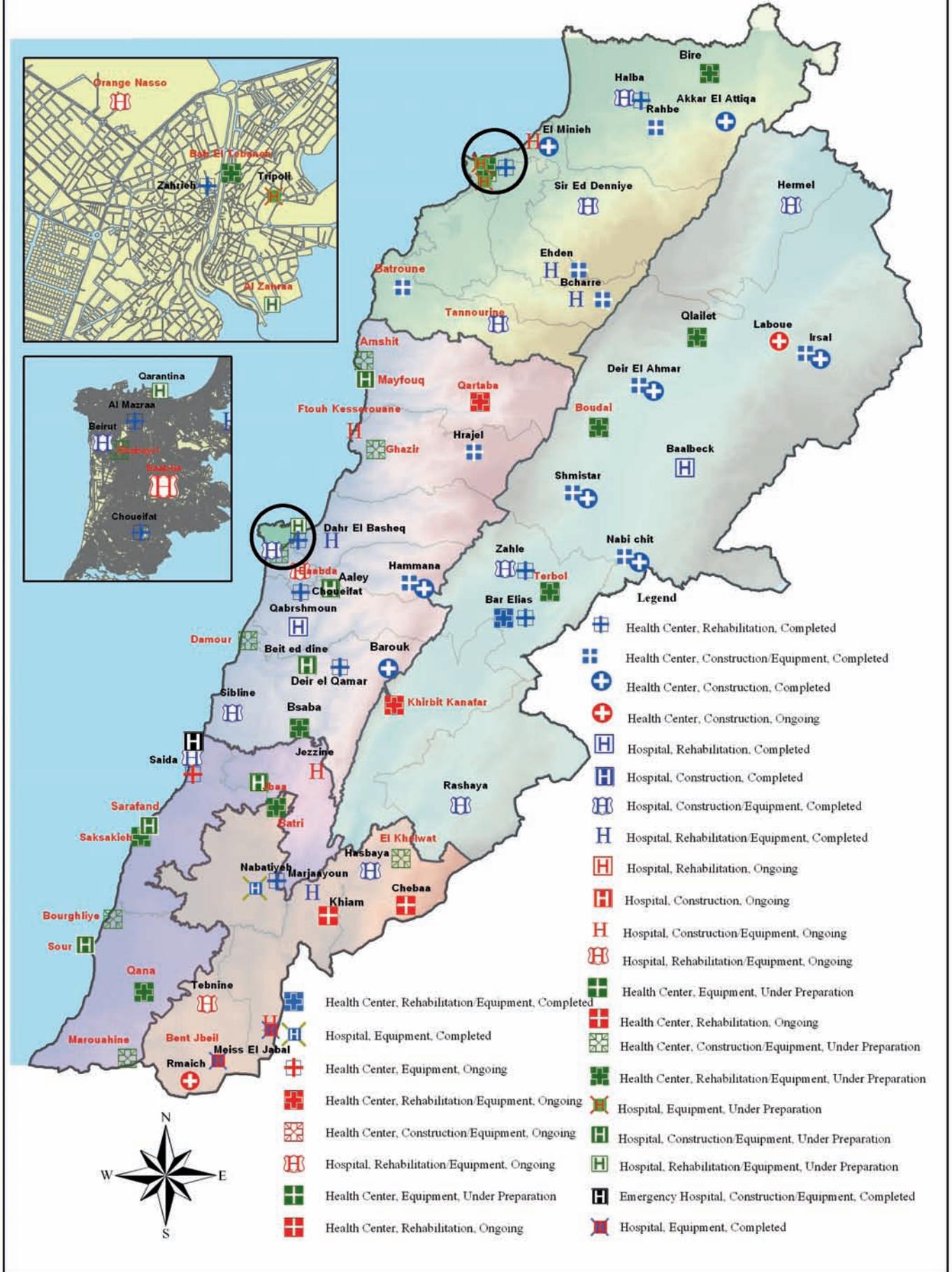


**Sarafand Public Hospital**



**Tyre Public Hospital**

# Public Health Completed, Ongoing & Under Preparation Projects



## Socio-Economic Development

Integrated Regional Development Projects

### Economic and Social Fund for Development (ESFD)

The Economic and Social Fund for Development (ESFD) contributes towards increasing job opportunities in the Lebanese marginalized regions by providing loans to Small and Medium Enterprises (SMEs) and building the capacities of the owners of private and individual projects. The ESFD also seeks to improve the livelihoods of the most impoverished and underprivileged local communities, by providing grants and technical support to municipalities since they act as liaison between the ESFD and the local communities. Since the year 2013, the ESFD has been contributing to the response to the Syrian displaced crisis, through programs aimed at improving the infrastructure and boosting local economies in the Lebanese host communities.

#### First: Job Creation and Income Generation Component

The job creation component provides financial assistance to private projects of SMEs in multiple sectors (agriculture, manufacturing, trade and services) in order to increase employment opportunities by providing access to productive loans characterized by incentives, in cooperation with six commercial banks having branches across the Lebanese territory, to facilitate access to credits for financially excluded people. The ESFD also endeavors to develop the capacities of the owners of private and individual projects to reduce unemployment and achieve a balanced economic development.

In 2016, the ESFD provided financial support to a number of SMEs to carry out 568 projects which resulted in the creation of 556 new jobs.

Between 2003 and the end of 2016, the ESFD

financed 9,392 projects and created 6,869 jobs.

#### Business Consulting Services

The ESFD seeks the help of business advisors to offer the necessary guidelines and consulting services to individuals and SMEs across Lebanon to enable them to have access to financial loans to invest in new or existing economic activities, the ESFD seeks the help of mentoring experts. This service includes the creation of business plans, productivity forecast and preparation of complete applications to ensure that applicants are in the best possible position to receive funding from a bank collaborating with the ESFD. The ESFD business advisors also follow up on the implementation of these projects.

In 2016, the ESFD relied on a team of 18 Freelance Business Advisors to offer these business consulting services, contributing to the funding of 183 projects and the creation of 172 new jobs.

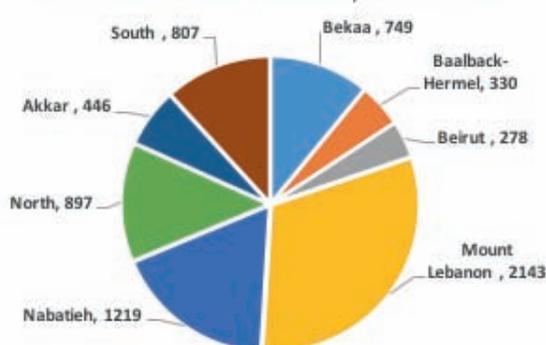
#### Second: Local Development and Livelihood Component

##### 2.1 Project on the Support of Local Development in North Lebanon (ADELNORD)

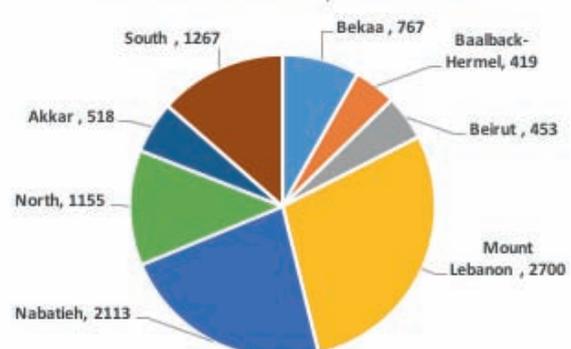
Within the framework of the funding agreement on "Supporting local development in North Lebanon" signed between the European Union and the Government of Lebanon (GoL), 9 grant contracts worth EUR 2,9 million were implemented to support local development projects in the regions of Akkar, Hermel and Dannieh. These projects were implemented by local communities, while the ESFD provided follow up and supervision of the tendering and contract awarding processes to ensure that criteria and specifications are adhered to.

At end-March 2016, the ESFD completed the implementation of the last project within the frame-

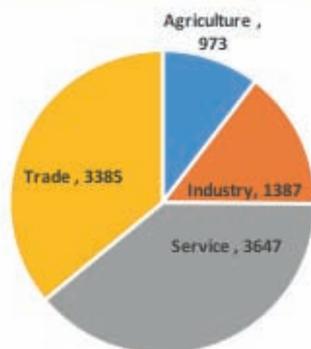
Distribution of Jobs created by Governorate



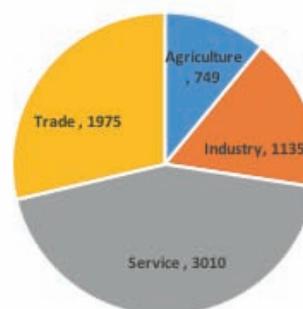
Distribution of loans by Governorate



Distribution of loans by sector



Distribution of jobs created by sector



work of this agreement, a EUR 360.000 project that aimed at constructing a solid waste treatment plant in the village of Fnaideq-Akkar. The CDR is seeking to complete the equipping of this plant through a grant from the Kuwait Fund.

Waste water treatment plant in Fnaideq - Akkar  
Third – Support to Communities Hosting Displaced Syrian

For the past six years Lebanon has been at the forefront of the Syrian crisis. The influx of large numbers of displaced Syrian, which reached around 1.5 million, strained the already over-stretched infrastructure, services and environmental resources. To put up with this reality, the

ESFD has expanded its interventions since 2014, targeting the regions hosting displaced Syrian, to help in facing the repercussions of this protracted situation and mitigating its repercussions on the services, health and social sectors.

### 3.1 Support to Municipal Finance in Lebanon-MUFIN:

In September 2013, the ESFD launched a new EU-funded project entitled “Support to Municipal Finance in Lebanon – MUFIN”, to reduce the burdens of the influx of displaced Syrian on local host communities.

The EUR 16 million project targets the municipi-

#### 3.1.1 MUFIN projects in the Bekaa-Lebanon:

District	Cluster/village	Project	Sector	Project Status	Contract value in Euro
West Bekaa	Ghazza	Expansion of the wastewater network	Waste Water	The project was delivered on 07/4/2016	198,180
	Souairi	Construction of potable water reservoir and connecting it with the general network	Water	The project was delivered on 15/04/2016	213,411
Zahle	Bar Elias, Marj, Qab Elias	Construction of solid waste treatment plant	Solid Waste	The project is underway and is expected to end in May 2017	Equipment contract worth 818,576.55 Construction contract worth 3,429,612
	Saadnayel	Installation of potable water network	Water	The project was delivered on 16/11/2016	758,876
Hermel	Hermel	Installation of sewage network and waste water treatment plant	Wastewater	Underway	3,391,235

palties of local communities in the North and the Bekaa hosting the highest percentage of displaced Syrian.

The project aims at improving the level and increasing the quantity of basic services rendered by these municipalities, through the implementation of potable water, waste water and solid waste infrastructure projects.

In this context, the ESFD completed in 2016 eight infrastructure projects worth EUR 2.5 million in the North and the Bekaa. These projects were delivered to the North Lebanon Water Establishment and the Bekaa Water Establishment to ensure their operation and maintenance, among the presence of representatives of the ESFD and

the Delegation of the European Union to Lebanon, head of municipalities and representatives of the North and the Bekaa water establishments. In parallel, the ESFD is implementing three projects worth 10 million Euros: a solid waste treatment plant in Bar Elias, a sewage network and a purification station in Hermel, rehabilitation, purification and transmission of water from Nabee el Safa to the main reservoirs in the towns of Wadi Khaled and rehabilitation of internal networks. Works are expected to be completed in the second quarter of 2017, with the exception of the Hermel project.

### 3.1.2 MUFIN projects in the North of Lebanon

District	Cluster/Village	Project	Sector	Project Status	Contract Value in Euro
Tripoli	Qobbeh	Digging and installation of artesian well and connecting it to the general network	Water	The project was delivered on 18/03/2016	227,705
Akkar	Kfartoun-Akroum	Digging and installation of an artesian well servicing Kfartoun & Akroum	Water	The project was delivered on 10/02/2016	181,952
	Sahleh	Rehabilitation of an artesian well and a reservoir, and expansion of the water network	Water	The project was delivered on 19/05/2016	192,166
	Qonnieh	Rehabilitation of an artesian well and construction of a propelling line	Water	The project was delivered on 18/03/2016	150,957
	Mouhamara	Digging and installation of an artesian well, expansion of the	Water	The project was delivered on 13/10/2016	391,966
	Wadi Khaled villages cluster	Rehabilitation of Nabaa el Safa station and transmission of water to main reservoirs in villages and towns of Wadi Khaled, and rehabilitation of internal networks	Water	The project is underway and is expected to be completed in April 2017	2,003,863

### 3.2 Recovery of Local Economies

The ESFD seeks to contribute towards boosting local economy in the farming villages hosting displaced Syrian, through the implementation of the "Recovery of Local Economies in Lebanon (RELOC) project. RELOC is a EUR 7 million project signed with the European Union to implement productive projects with an emphasis on agriculture, in the North, the Bekaa, and the South, in support of productive initiatives and job creation. The project has been implemented since April 2015.

#### The RELOC project includes various agricultural interventions as follows:

- Construction of agricultural infrastructure: Six projects worth EUR 3.5 million are implemented by the ESFD. The tenders for these projects will be released during the first quarter of 2017. The ESFD will also establish mountain ponds in Beit Younis (Akkar) and Al-Qaa (Bekaa), in addition to rehabilitation of irrigation canals in Ain Ebel (Bint Jbeil District) and in several villages of the district of Dannieh, installation of a solar system to pump irrigation water in Jbaa (Chouf), implementation of a project to transfer water by gravity to the spring of Zarzouqa and rehabilitation of the artesian well servicing the Deir Al Ahmar area. Service tenders for the selection of consultancy firms were launched at the end of 2015 and the works will start during the third quarter of 2017.
- Design and implementation of agricultural extension program for farmers in targeted areas: During 2016, the ESFD designed an agricultural extension program aimed at providing technical assistance and guidance to farmers benefiting from the above-mentioned agricultural infrastructure as well as farmers of the neighboring areas. This program focuses on cherry and apple cultivation and on raising awareness and conducting training on irrigation and water management.
- Support of active cooperatives in the sectors of olives, bees and fish, through the implementation of projects that contribute towards improving product quality and increasing marketing opportunities: With the financial assistance of the European Union, the ESFD launched a competition to select the best cooperative projects in the field of olives, bees, fish and food processing. 270 cooperatives were invited to participate in the submission of project proposals in coordination with the Directorate of Cooperatives. The participating cooperatives submitted 58 productive projects proposals, of which the ESFD selected 42 projects which will be offered financial assistance during the year 2017.

In this context, a cooperation protocol was signed between the ESFD's manager, the Director General of Cooperatives and the Chairman of the Board of the National Federation of Cooperative Associations in the presence of the representatives of the Delegation of the European Union to Lebanon. The Protocol aims to develop programs to finance cooperative projects and establish temporary and permanent exhibitions that promote and market products. It has been agreed to form a joint committee to follow up on the implementation of this Protocol through the cooperation of the three parties each within its prerogatives.

### 3.3 Implementation of accelerated vocational training courses in Tripoli

Within the framework of the Local Economies Support Program, the ESFD has prepared an accelerated vocational training program for the city of Tripoli. This project targets two groups of beneficiaries. The first group is composed of BT & TS students in public vocational schools. The second group consists of Tripoli students who drop out of the first intermediate grade and above, aged between 16 and 20 years. The importance of these courses is to provide a variety of trainings in the following disciplines: industrial mechanics, industrial electricity, and maintenance. In addition to mandatory courses in English language, communication and computer management.

Fourth - Sustainability of projects implemented since the establishment of the ESFD: Since 2016, the ESFD has attached great importance to the follow-up of its previously implemented projects. To this end, a special team has been formed to visit the projects, identify their needs, and provide assistance and advice to source operators/donors or facilitate networking with the concerned ministries, with the aim to promote the sustainability of these projects.

#### Fifth – ESFD Orientations during the year 2017:

The ESFD' technical and administrative staff aspire to utilize their expertise gained over the past 15 years to develop new and ambitious programs and to identify new and priority projects to support the host communities of Syrian displaced persons and empower local communities to play a leading role in local development. The ESFD will also continue to support Small and Medium Enterprises (SMEs) in order to contribute to job creation.

Projects implemented by the CDR to raise the level of public services in the Lebanese communities hosting displaced Syrians

In the framework of the international efforts to assist Syrian displaced host countries, Lebanon has received donations for the implementation of priority initiatives for local communities that will improve the level of public services in different sectors (sanitation, water, solid waste management, education, health and social facilities), as result of the exacerbation of the situation caused by the influx of displaced Syrians and its social, economic and environmental repercussions which exceed the capacity of institutions and infrastructure. As the Syrian crisis continues, the needs remain substantial and renewed support is essential, especially for the most impoverished individuals and families. According to the "Lebanon Crisis Response Plan 2017-2020", a joint plan between the GoL and its international and national partners, approximately 1.5 million Syrians fled Syria and are hosted by Lebanon. 1,017 of these Syrians are registered as refugees with the Office of the United Nations High Commissioner for Refugees (UNHCR).

The GoL continues to make efforts to provide humanitarian and development assistance, while maintaining a strong focus on partnerships and cooperation with the donors, the UN agencies and the national and international NGOs.

Below are detailed the main projects implemented by the CDR in this area:

1- Lebanon Municipal Emergency Services Project - LMSEP

On 4 December 2014, the Lebanese Council of Ministers issued Decree No. 1091 approving the "Lebanon Municipal Emergency Services Project (LMESP), funded by a World Bank US\$ 10 million grant.

The project aims to improve the level of infrastructure and provide municipal services and community activities in the areas most affected by the influx of displaced Syrians in the municipalities of Baalbeck, Zahle, Bekaa, el Sahel, Bouhaira, Jabal el Sheikh, Istiklal, Arqoub, Sour, Qaitaa and Shafat.

2 - Projects and programs for the relief of displaced Syrians in Lebanon

The Government of Lebanon issued Decree No.

1220 dated 23/12/2014 to approve the signature of a Memorandum of Understanding on a US\$ 10 million aid provided by the Arab Fund for Economic and Social Development to the Republic of Lebanon, to contribute to the funding of relief projects and programs targeting the municipalities of Aarsal, Hermel, Wadi Khaled, el Qaa, and Minnieh, in order to alleviate the suffering of the residents and the Syrian displaced population and to provide them with basic services.

### 3-Response plans to the Syrian crisis in the host countries

The response plans are composed of three initiatives funded by three grants from the Kuwait Fund for Arab Economic Development to alleviate negative burdens on local communities in the countries hosting Syrian displaced persons, including Lebanon.



**Educational Center**



**Olive press**



**Food processing plant**

The following table details out these grants:

Grant No.	Value (million USD)	Decree or Decision No. & Date	Projects funded by the grant
First grant No.2-334	27	Decree No.3047 dated 25/02/2016	Projects to upgrade the level of services in the following sectors: Health: Provision of support to emergency units in a number of government hospitals and rehabilitation & equipping of health centers. Education: Rehabilitation & equipping of public schools. Social Affairs: Rehabilitation & equipping of several social and cultural centers. Water: Completion of potable water networks & upgrading of irrigation systems. Solid waste: Purchase of vehicles to transport water aand open sewage systems, upgrading of waste sorting plants & equipping of solid waste treatment plants.
Second grant No. 1-349	30	Decree 3221 dated 07/04/2016	Projects within the framework of the Response Plan to the crisis of displaced Syrians include: Health: Rehabilitation & supply of medical equipment to several hospitals and health centers. Social Affairs: A children’s nursery in Aarsal and a specialized center for children and women in Zahle. Potable water and wastewater Equipment for municipalities and municipal federations.
Third grant No. 1-356	25	Council of Ministers Decision No. 144 dated 20/10/2016	Projects to raise the level of services in the following sectors: Health: Provision of support to emergency units in a number of government hospitals. Potable water: Projects aimed at upgrading the potable water systems in Akkar Governorate; Project for the rehabilitation & upgrading of potable water system in Qab Elias/Bekaa; Projects for the augmentation of potable water sources in the governorates of Mount Lebanon and Baalbek-Hermel Waste water: Rehabilitation of waste water networks in Sidon District / South Lebanon Governorate. Basic civil works and equipment for municipalities and municipal federations.



Capacity Building for Women



Health Care Center

### Women's Affairs/Population Issues

The role of the Economic & Social Fund for Development (ESFD) in promoting women's participation in the economic cycle:

The Economic and Social Development Fund was established within the framework of the Euro-Mediterranean Partnership pursuant to the Agreement signed by the CDR in November 2000 on behalf of the Government of Lebanon.

As part of its efforts to promote women's participation in the economic cycle, the ESFD works on promoting women's initiatives aimed at improving their economic situation. Since 2003, the ESFD has funded about 1,596 women-run projects, which represents 17% of total ESFD-funded projects. These projects are distributed across all economic sectors and have contributed to the creation of 1084 jobs.

Within the framework of its local development component, which aims at empowering women and activating their role, the ESFD has implemented a large number of projects directed towards supporting women and enhancing their economic role, including:

- A day care center in the town of Aitaroun, Bint Jbeil district, to enable women to work while their children attend the center, acquire new skills and participate in various activities.
- A handicraft center for handicrafts in Al-Kawashra-Akkar, which is being revitalized to create jobs for women by marketing their products.
- Milk manufacturing center in the town of Aarsal, which contributes to women job creation.
- Support food-processing cooperatives run by women in different areas across Lebanon.

The CDR, through its representative in the National Commission for Lebanese Women (NCLW), participated in workshops and trainings for Gender Focal Points, in ministries and public administrations, organized by the NCLW, within the framework of capacity building in the following areas:

#### -Training workshop on Advocacy.

- Gathering to discuss the role of women in municipal councils, in support of local development.
- Participation in the forum, on "Syrian Displacement in Lebanon: The legal framework, and the



**Rehabilitation of a Water Tank and a Well and its infrastructure**



**Waste Water treatment plant - Bar Elias**



**Training and Capacity Building**

social and economic status of displaced woman".

- Training workshop on gender and development.
- Participation in the conference entitled «UN Security Council Resolution 1325/2000 on Women, Peace and Security», which is part of the NCLW continuous implementation of the recommendations of the International Committee on the Implementation of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).
- Workshop on gender indicators.
- Workshop on electoral laws that support women's participation in politics.

In addition, the CDR participated in a series of

training courses on women organized by the NCLW in cooperation with the Delegation of the European Union to Lebanon.



**Water Tank**



**Movable Dispensary**

## Land-use

### Integrated Regional Development Projects

The Land-use sector includes three sections:

1. Land use planning and urban development
2. Environmental and tourist projects
3. Cultural heritage and urban development

### 1. Land-use Planning and Urban Development

#### 1. A) Overview:

##### 1. A.1) Legal Framework:

The Law 5/77 dated 31/01/1977 establishing the Council for Development and Reconstruction (CDR), stipulates in its article 3 - paragraph 4, that the CDR "shall develop the draft general guiding framework for urban planning and submit it to the Council of Ministers for approval."

The Urban Planning Law 96/83, dated 09/09/1983, stipulates in its article 4, that the master plans and the detailed plans for cities and villages shall be prepared according under the Land Use Master Plan.

##### 1-A-2) Current Urbanization Situation:

In the seventies, during the Lebanese Civil War and thereafter, Lebanon witnessed an unprecedented urbanization activity, but lacked control and regulation mechanisms. This situation led to undesired results, including the following:

- Random urbanization along the main axis and in the suburbs of large cities;
- Negative impact on natural and archeological sites;
- Proliferation of licensed and unlicensed quarries;
- Deterioration of the quality of water and pollution of rivers and groundwater;
- Trespasses to agricultural land, coastlines, and important tourist sites.

This situation necessitated immediate solutions to reduce the negative impacts on the economic and social growth in Lebanon, under stressing factors, mainly the following:

- The decrease in the financial capabilities of the public sector and the priority given to the reduction of public debt.
- The globalization and the new economic laws that the countries should comply with to position themselves in international markets.
- The increased interest in environment and heritage, which started during the nineties and the orientation towards the rationalization of the use

of natural resources and the deployment of big efforts to focus on heritage.

Based on the above, the current phase is characterized by the rationalization of the use of resources, the cut in public expenditures and the enforcement of control mechanisms.

##### 1.A.3) Preparation of a Land Use Master Plan– National Future Outlook:

Based on the above, the CDR prepared a Land-use Master Plan in cooperation with the General Directorate of Urban Planning. This plan was studied between 2002 and 2004 and outlined topics of great importance, such as environment and natural resources, population growth and urban development, transportation, service projects and large constructions, agricultural lands, industrial zones, cultural and historical heritage elements, and other factors.

The Plan tackles these topics from a comprehensive strategic perspective and with a scientific and objective approach that takes into consideration the characteristics of the Lebanese society, with a view to shape a long-term ambitious and integrated vision about the future of the country lands (25 years). In the first place, the purpose of this vision is to constitute the general framework of the urban planning policy on one hand, and the unified geographical reference for the various sectors projects and investments on the other hand.

#### 1. B) Achievements to Date:

##### 1. B.1) Land Use Master Plan:

The CDR prepared between 2002 and 2004 a Land Use Master Plan with the assistance of Dar al Handassah (Sha'ir and Partners) and the Institute of Regional Planning of Ile de France (IAURIF).

Additionally, the CDR organized in 2005 a campaign to circulate the Land Use Master Plan to a large number of central and local public administrations and institutions, universities, civil society organizations, the Syndicates of Engineers and Architects of Beirut and Tripoli and international financing institutions.

The Land Use Master Plan was approved by the Higher Council for Urban Planning and the CDR and was referred to the General Secretariat of the Council of Ministers in September 2005. It was subsequently submitted to the Council of Ministers enclosed with a draft law.

The Land Use Master Plan approval Decree No. 3366 was issued on 20/06/2009, based on the approval of the Council of Ministers dated

02/04/2009. Below are outlined the main issues highlighted by this Decree:

1) The identification of the general land-use orientations in tables annexed to the Decree. The General Directorate of Urban Planning has to consider these when studying or modifying the master plans and detailed plans for cities and villages. These orientations took into consideration the land nature and characteristics and its possible use prohibitions.

2) The establishment of an administrative committee headed by the president of the Higher Council of Urban Planning and composed of delegates from the following ministries: Ministry of Public works and Transport, Ministry of Environment, Ministry of Culture, Ministry of Interior and Municipalities, Ministry of Energy and Water, Ministry of Agriculture, Ministry of Industry, Ministry of Economy and Trade, Ministry of Finance, Ministry of Defense and the CDR. This committee is in charge of the Land Use Master Plan monitoring and evaluation.

### **1. B.2 Local Development Support Project in North Lebanon (ADELNORD):**

The CDR was commissioned to implement the ADELNORD project in the North of Lebanon, with a US\$ 18 million grant offered by the European Union. In 2010, urgent projects related to agricultural infrastructure were identified as well as the clusters in which local development projects will be implemented through a participatory approach that will lead to the elaboration of a comprehensive plan for the villages clusters, with the participation of the local authorities and the civil society bodies, and with the support of ADELNORD's technical support team and the management of the Economic and Social Fund for Development (ESFD). Based on this plan, urgent projects that will be implemented by local authorities and funded by ADELNORD were agreed upon. (Please review the details of this plan in the Agriculture Sector section of this report and on the website: [www.cdr-adelnord.org](http://www.cdr-adelnord.org)).

In 2011, the study and supervision of agricultural infrastructure projects were subcontracted. These projects were distributed into 6 groups based on the type and geographical location of the works. In 2012, all activities and works were subcontracted. The project was fully completed in 2015.

### **1. B. 3) Regional Natural Parks Projects:**

the Land Use Master Plan recommends the creation of Regional Natural Parks. A regional natural park is designed as a joint project with several neighboring municipalities agreeing on

a development chart that establish a balance between non-polluting and non-harmful economic activities and a moderate and high-quality urban development, as well as practical regulatory procedures, all aimed at preserving the natural environment. In this context, the CDR coordinated with the municipalities and associations which have started to take an initiative in this direction (Al Juma and Jurd Al Qaytaa Municipalities' union and Qoubayet Municipality in Akkar) with the participation of Mada association, El Matn El Aala municipalities' federation and IAURIF.

In the framework of supporting the creation of natural parks, and in the absence of a legal framework that governs the creation and management of such parks, the technical assistance team for the ADELNORD project funded by the EU, was commissioned by the CDR to prepare the related draft legal framework, after setting out the relevant terms of reference in collaboration with the Ministry of Environment (MoE). The team completed this draft law and the CDR referred it to the MoE. The draft law was enclosed with its draft implementing decrees and a legal text proposal to amend a draft decree on the protected natural reserves in Lebanon that was approved earlier by the Council of Ministers. The MoE referred these texts to the relevant concerned parliamentary committees, which approved them laying the ground for their approval in the foreseen parliamentary plenary session.

### **1.B.4) Preparation of a Common Methodology to study the Strategic Regional Development Plans:**

After several international organizations expressed their willingness to finance Regional developmental plans studies, and in order to consolidate the work methodology, the CDR elaborated in 2011, in collaboration with the Ministry of Interior and Municipalities and in cooperation with the administrations involved in the development sector, a common methodology that will be adopted in the preparation of such plans. This methodology was adopted in the preparation of terms of reference related to the study of the strategic sustainable development plan for Tyre and Akkar.

### **1.B.5) Preparation of Strategic Regional Development Plans:**

The CDR participated in the elaboration and preparation of comprehensive and sustainable

development plans for the two regions of Fayhaa and the Caza of Tyre.

In the Fayhaa region: The Fayhaa cities federation worked on the elaboration of a sustainable strategy for its cities with the support and financial assistance of several local and international entities. A team of several experts was commissioned to elaborate this plan in collaboration with all central and local administrations and civil society bodies. The CDR participated in the discussion of this plan in the Advisory Committee that was formed for this purpose. This plan resulted in a list of priority projects. The French Agency expressed its willingness to finance feasibility studies for these projects to lay the ground for the funding of some of such projects at a later stage.

In Tyre (Sour): The Tyre Municipalities Union in cooperation with and the support of the French PACA region conducted several workshops intended to train and raise the awareness of local electors about the importance and the content of the Strategic Sustainable Development Plan (SSDP) for Tyre. The CDR, in cooperation with the Tyre Municipalities Union, subcontracted the Tyre SSDP preparation to the Consultation and Research Institute (CRI)/Habib Debs/ECODIT/IAURIF. The development of the SSDP for Tyre started in June 2013.

In October 2013, a workshop was conducted regarding Phase I which consists of the launching of the SSDP and the data collection process. Between 2014 and 2015, the consultants prepared draft reports concerning the following:

- 1- Data analysis (Diagnostic - SWOT analysis).
- 2- Goals, vision and priority sectors.
- 3- Draft of the Strategic Sustainable Development Plan.

Shortly after the draft of each report was prepared, the Tyre Municipalities Union organized workshops attended by municipalities, civil society actors and local and central administrations, to discuss the findings of the draft and get the participants' feedback, and therefore issue the final version in accordance thereto. Final versions were issued in May 2015. Pursuant to decree 8213/2012 (Strategic environmental assessment of draft public sector policies, plans and programs), the consultant prepared a strategic environmental assessment of the Tyre SSDP which was approved by the Ministry of Environment.

In Akkar: Within the framework of ADELNORD Project funded by the EU, the CDR commis-

sioned the technical support team to formulate a Strategic Sustainable Development Plan (SSDP) for Akkar, which kicked off at the end of 2012. In April 2013, the first workshop was conducted to launch the SSDP and the data collection process. Between 2014 and 2015, the consultants prepared reports concerning the following:

- 1- Data analysis (Diagnostic - SWOT analysis)
- 2- Goals, vision and priority sectors.

Shortly after the draft of each report was prepared, the Tyre Municipalities Union organized workshops attended by municipalities, civil society actors and local and central administrations, to discuss the findings of the draft and get the participants' feedback, and therefore issue the final version in accordance thereto.

The CDR prepared the draft SSDP for Akkar. Pursuant to decree 8213/2012 (Strategic environmental assessment of draft public sector policies, plans and programs), the strategic environmental assessment of the Akkar SSDP was prepared and approved by the Ministry of Environment.

#### **1 – B-6) Preparation of a Work Paper on Real Estate policies in Lebanon:**

The current situation and high prices of the real estate market in Lebanon impede and complicate the implementation of general real estate policies. Therefore, it has become necessary to tackle the topic of real estate policies in Lebanon in order to propose practical procedures that would improve and reform the real estate situation. To that end, a study was conducted to analyze the situation of real estate in Lebanon in cooperation with the CMI (Centre de Marseille pour l'intégration en Méditerranée), specialized in urban development studies and research in the Mediterranean. Based on the findings of this study, recommendations and procedures were proposed to improve the situation. This study will pave the way for discussing this topic with concerned administrations in Lebanon with a view to approve any procedure or regulation that would reform the fiscal real estate sector, include the rental of apartments in the housing policy, help low-income individuals in finding suitable lodging, and rationalize the financing of infrastructure to serve residential areas.

#### **1 – B-7) Preparation of a the Habitat III report to lay the ground for the participation of the Lebanese Republic in the third United Nations Conference on Housing and Sustainable Urban Development:**

After the Lebanese Republic received an invitation to participate in the above mentioned conference that will be held in 2016, the CDR commissioned a local expert on urban planning and

urbanization to prepare a report on Housing and Sustainable Urban Development in Lebanon in coordination with the United Nations Human Settlements Programme (UN Habitat) and the concerned administrations and institutions.

The expert prepared this report which was discussed with the concerned administrations and institutions, and submitted to the concerned administrations and institutions for approval and referral to the General Secretariat of Habitat III Conference.

### **1-C) Work Progress during 2016:**

In 2016, the CDR continued to carry out the following activities:

-Update of the Land Use Master Plan: The Land Use Master Plan was prepared in 2004 and approved pursuant to a decree issued in June 2009. Ten years have elapsed since the development of this Plan and it needs to be updated. In 2015, the CDR hopes to initiate the preparatory activities to update this plan, in collaboration with relevant authorities (namely the General Directorate of Urban Planning). As part of these preparations, the CDR is working in collaboration with the National Center for Remote Sensing (NCRS) of the National Council for Scientific Research (CNRS) in order to update the databases of the national geographical information systems and subsequently update the National Land Use Map. This map will represent a main tool when the update of the Land Use Master Plan will start.

### **1-D) Projects under preparation:**

-Preparation of the Lebanese Coastline Master Plan: The preparation of a master plan for the Lebanese coastline is one of the major land-use projects that the CDR is planning to initiate in collaboration with the Ministry of Environment and the Ministry of Public Works and Transport. Fundraising for this study is underway and positive results are expected to be achieved during 2016.

-Update of the Land Use Master Plan: The Land Use Master Plan should evidently be updated because it was prepared in 2004 and approved pursuant to a decree issued in June 2009. In 2015, the CDR hopes to initiate the preparatory activities to update this plan, in collaboration with relevant authorities (namely the General Directorate of Urban Planning). As part of these preparations, the CDR is working in collaboration with the National Center for Remote Sensing (NCRS) of the National Council for Scientific Research (CNRS) in order to update the databases of the national geographical information systems and subsequently update the National Land Use Map. This map will represent a main tool when the update of the Land Use Master

Plan will start.

## **2- Environmental and Tourism Projects Main achievements until 2016**

The Council for Development and Reconstruction's Planning and Programming Administration, in cooperation with other administrations of the Council, continuously identify and solicit funding sources to fund projects that represent environmental, economic and social benefits.

Among the projects implemented so far is the Environmental Fund for Lebanon (EFL). EFL is implemented by the German Agency for International Cooperation (GIZ) in cooperation with the Ministry of Environment and the Council for Reconstruction and Development (CDR), with a total budget of EUR 8.5 million. A steering committee was formed to set out EFL's action plan and monitor its performance, composed of representatives of the Ministry of Environment, the CDR, The Federation of the Chambers of Commerce, Industry and Agriculture, the Lebanese Banks Association, the Lebanese Environment Forum and the German Agency for International Cooperation (GIZ).

EFL aims at reducing environmental risks and economic impacts in areas affected by the Israeli 2006 war and in other underserved areas in Lebanon. EFL also supports innovative initiatives in the private sector, which are likely to produce clear environmental and economic benefits. In addition, EFL provides training opportunities to develop local capacities in order to create a mechanism for sound local management of natural resources.

Funds worth of EUR 3 million were invested in 16 local projects, across key areas of environmental protection such as sound waste management and rehabilitation of land, forests, and natural reserves damaged by the July 2006 war. Also a total budget of EUR 1,8 million was allocated for 6 projects aimed to address the issue of climate change adaptation in the North of Lebanon, and another budget of EUR 1,1 million was allocated to 8 projects aimed at reducing the pollution caused by industrial wastewater discharged by private companies in Keserouan, the Litani Basin and the North of Lebanon.

EFLS' funded interventions in North Lebanon tackled climate change challenges. Key areas of focus included:

- Forest protection and sustainable development;
- Adopting drip irrigation and biological insect control in fruit trees;

- Rainwater harvesting;
- Reducing water consumption and water wastage in resorts frequented by tourists;
- Protecting the economic infrastructure of the Lebanese coastline from natural hazards.

With regard to interventions, aimed at reducing the pollution caused by private companies industrial wastewater discharge, key areas of focus included:

- Foodstuffs and beverages;
- Textile manufacturing;
- Paper industry;
- Chemicals;
- Non-metallic mineral products (decorative stone saws);
- Basic metals and metal products.

Moreover, EFL created a mechanism for the implementation of profitable environmental projects such as eco-tourism projects, cleaner production, and organic agriculture, which could stimulate pilot environmental projects. Through EFL's interventions, environmental action at local level proved to be successful, involving municipalities that showed a high level of seriousness in projects' implementation and follow up. EFL developed a research paper on the general policy that should be adopted to achieve environmental compliance and manage liquid industrial waste, and that aims at the following:

- Baseline analysis of industrial treatment of industrial wastewater;
- Review of environmental laws and regulations that regulate wastewater treatment in general, and industrial wastewater and their evacuation in particular;
- Assess the responsibilities and capabilities of stakeholders in terms of environmental compliance and assess all processes and procedures related to treatment facilities;
- Identify and draft recommendations to move forward in achieving the industrial sector's environmental compliance.

It is worth noting that EFL sought to shift from a research paper on the general policy regarding industrial wastewater management and environmental compliance to an action plan on industrial wastewater management, to identify priority measures and required resources to address the issue of industrial wastewater management in Lebanon.

In parallel to the provision of financial assistance to a number of projects aimed at abating industrial pollution, EFL worked on the organization of an integrated capacity-building program tar-

geting institutions involved in industrial pollution abatement including private industrial enterprises and concerned public administrations, within the scope of supporting the Ministry of Environment in the preparation of a national program for industrial pollution abatement. This program carried out a number of activities and organized workshops on industrial waste management.

In the framework of environmental tourism, the Council for Development and Reconstruction (CDR), in cooperation with the Ministry of Tourism, executed a tourism and development master plan for Zahle, Baalback, Becharre and the Cedars, funded by the Japanese government, with a total budget of US\$ 2.5 million. One of the main purposes of this study is to determine the basic needs for tourism and eco-tourism development and provide feasibility studies for pilot projects designed to develop mountainous and rural regions, to be implemented at a later stage. Since 2010, the Council for Development and Reconstruction (CDR) has been implementing the Project to Support Local Development in North Lebanon (ADELNORD) which encompasses an environment component and is funded by an EU Grant Agreement (ENPI/2008/019-623). Areas of progress of ADELNORD's environment component over until 2016 include:

1-Within the context of the initiative aimed at developing a sustainable strategic plan for Akkar, ADELNORD created a standardized methodology to draft the terms of reference of the preliminary studies related to the Regional Development Plans, in collaboration with the Ministry of Interior and Municipalities and in cooperation with the administrations involved in the development sector, as a preliminary step for the preparation of the tender document pertaining to the Strategic Sustainable Regional Development Plan for Akkar.

2-In 2014, ADELNORD started to put in place the Strategic Sustainable Regional Development Plan for Akkar, in cooperation with a team of subject matter experts in environmental sciences, economics, urban planning and social development. The experts were assigned by the technical assistance (GFA –ELARD) according to the above mentioned terms of reference. In this context, the final version of the Strategic Sustainable Regional Development Plan for Akkar, Hermel and Dannieh was completed in cooperation with a team of subject matter experts in environmental sciences, economics, urban planning and social development, assigned by the technical assistance (GFA –ELARD) in liaison with local authorities.

3-Within the framework of the initiative aimed at providing technical support for the creation of a national park in the mountainous areas of Akkar, ADELNORD put in place a tender document pertaining to a technical study for the creation, management and regulation of natural reserves in Lebanon, in coordination with the Ministry of Environment. Because national parks are considered natural reserves, these steps will be preliminary to the provision of technical support for the creation of a national park in Akkar. In 2012, the project launched the said study which culminated in a detailed technical report and draft law on natural reserves, approved by the Ministry of Environment on 2013 and referred to the concerned parliamentary committee for review and approval.

4-In 2014, the competent parliamentary committees approved the Natural Reserves Law which was developed by the CDR. Also in 2014, the CDR, through ADELNORD, completed the draft implementing decree of the Natural Reserves Law and submitted it to the Ministry of Environment.

5-Within the framework of the initiative aimed at fire suppression and forest protection and management, ADELNORD put in place in 2012 two plans for the management of the forests of Andkit-Akkar and Safira-Dannieh that culminated in the elaboration of the terms of reference for forest management including pruning. This task was carried out by experts specialized in forest and shrub land management and fire suppression, in close cooperation with the municipalities and the shrub land stations of Akkar and Dannieh and with the Ministry of Agriculture.

In 2013, the CDR submitted to the Ministry of Agriculture a final report containing two plans for the management of the forests of Andkit-Akkar and Safira-Dannieh and the related two terms of reference, awaiting approval of the Ministry of Agriculture.

Upon the request of the Ministry of Agriculture, the CDR launched the second phase of this mandate which includes.

- 1.Implementation of a training program targeting forests guards and local activists;
- 2.Supply of forest management tools and supplies;
- 3.Proposal of a follow up mechanism to implement the two management plans of the Forests of Andkit and Safira.

With regard to the environmental impact as-

essment (EIA) and strategic environmental assessment (SEA), the CDR required until the end of 2011, the preparation and commissioning of EIAs and SEAs as a mandatory condition for many projects, in accordance with the standards of the World Bank, the EU, and other international scientific references. After the issuance of Decree No. 8213 dated 24/05/2012 on “the Strategic Environmental Assessment of Public Draft Policies, Plans and Programs” and Decree No. 8633 dated 07/08/2012 on “Environmental Impact Assessment Rules”, SEAs and EIAs became mandatory for all projects described in the said decrees.

The CDR participated in a) the development of national environmental reports, together with donors, ministries, and other authorities, by attending workshops and round table discussions, and b) suggestion of the necessary recommendations, including but not limited to the following:

- The “Millennium Development Report 2010” for Lebanon issued by the UNDP;
- The “Country Environmental Assessment” report issued by the World Bank in cooperation with the Ministry of Environment;
- The Lebanon 2012 National Report to the United Nations Conference on Sustainable Development (UNCSD), also known as Rio+20, in cooperation with UNDP, ESCWA, and relevant ministries, as a preparatory phase for attending the Conference held in June 2012.

The CDR participated in the follow-up of several environmental programs executed by the Ministry of Environment and the UNDP, through coordination committees, or pursuant to financial assistance agreements,. These projects tackled the issues of biodiversity, climate change, and institutional capacity-building.

#### **Work progress in 2016:**

Within the context of the Environmental Fund for Lebanon (EFL) project funded by the Government of Germany, the Fund provided the required technical assistance to industrial Lebanese businesses, in the form of grants, which allowed the preparation of a preliminary environmental study to identify the investments needed for industrial pollution abatement and secure soft loans to implement them. The EFL has prepared detailed environmental studies for thirteen enterprises to help them identify the sources of industrial pollution caused by the production process and their treatment methods, along with proposing a preliminary economic feasibility study for

each of the targeted enterprises. EFL provided technical support to other industrial enterprises in Lebanon seeking to develop preliminary studies to reduce industrial pollution and its impacts. The CDR continued the implementation of the ADELNORD project, funded by an EU grant agreement, namely its environmental component. The CDR also coordinated with the Ministry of Environment regarding the approval and implementation of the natural reserves draft implementing decree, and with the Ministry of Agriculture regarding the ratification of the two management plans of Andkit-Akkar and Safira-Dannieh, and the two terms of reference related to forest management including pruning, fire suppression and forest protection and management.

On a different level, and after issuance of the Decree No. 8213 dated 24/05/2012 regarding “Strategic Environmental Assessment of Public Draft policies, Plans and Programs”, and Decree No. 8633 dated 07/08/2012 regarding the “Environmental Impact Assessment Rules”, the Council for Reconstruction and Development (CDR) started including these two decrees and their related requirements as mandatory items to be described in the tender documents of all projects, in due course of law. The CDR is now in the process of preparing environmental impact assessments for many infrastructure projects for schools, hospitals, roads and sewage water refinement stations. Moreover, the CDR is preparing two strategic environmental assessments for the Sustainable Strategic Development Plan for Akkar, as part of the ADELNORD project, as well as a strategic environmental assessment related to the Sustainable Strategic Development Plan for Sour.

Furthermore, in 2016, the CDR participated in coordination committees and continued the execution of works related to the following:

- The Integrated Waste Management in Baalbek Caza (Lebanon) project, funded by the Italian Agency and implemented by the Ministry of Environment. The review of the first draft of the Master Plan for the solid waste sector in Baalbek-Hermel is underway along with the preparation of the tender documents to outsource works and executive tasks. It is worth noting that an environmental impact assessment of the project was developed.

- The “ENPI Horizon 2020 Capacity Building” project, funded by EU/MAP and implemented by

the Ministry of Environment, in cooperation with the CDR. The CDR participates in coordination committee meetings and in workshops on the management of solid waste, wastewater and industrial emissions. The CDR also suggests Lebanese representatives from the private sector and the civil society, involved in the previous topics, in order to build their capacities and increase the number of local specialists in these fields.

The CDR continues to follow-up on environmental projects executed by the Ministry of Environment and funded by the United Nations Development Program (UNDP) in the following fields:

In management:

- Institutional support for the Ministry of Environment.

In preserving natural resources:

- The Small Grants Program funded by the Global Environment Facility (GEF), which provides financial assistance to small pilot projects managed by civil society organizations.

In air pollution reduction:

- Institutional Support for the Ozone Office located at the Ministry of Environment in Lebanon (Phase Five).

- The CEDRO project targeting the energy efficiency and renewable energy applications for public sector buildings and facilities (in the South, Bekaa and Akkar).

- The “Toward Sustainable Energy Production” project.

In nature preservation:

- Project to support the National Forestation Plan.

- Migratory Birds Project.

- Preservation of Medicinal Herbs Project.

- Preservation of Forest Resources Project.

Also, the CDR is in the process of implementing the project to construct a wholesale fruits and vegetables market in Tripoli, and a study for the construction, rehabilitation and equipping of the slaughterhouse of Tripoli.

#### **Major projects and activities that CDR will pursue in 2017:**

- Performing a strategic environmental assessment for the two strategic plans of Akkar and Sour.

- Coordinating with the Ministry of Environment to approve and put into effect the Draft Law on Natural Reserves and its draft implementing decree.

- Coordinating with the Ministry of Agriculture regarding the approval and ratification of the two management plans for Andkit in Akkar and Safira in Dannieh, and regarding the terms of reference pertaining to forest management -including pruning-, fire suppression and forest protection and management.

The Forestation Project in West Bekaa, the creation of local job opportunities and awareness activities; the project aimed at creating an eco-tourism strategy for the fishing industry on the Lebanese coastline; the project aimed at controlling natural resources in Lebanon; the self-assessment project in preparation for the Third Conference on Climate Change and for the national climate change report; in addition to the project on the provision of institutional support to the Ministry of Environment.

The CDR will also continue to follow up on the preparation of environmental projects that will be executed in 2017 by the Ministry of Environment with funds provided by the UNDP, among which:

- The Third National Communication project to the UNFCCC.
- The Capacity Building Project for Reducing Emissions in Lebanon.
- The National Work Program to Introduce Climate Change to Development Works in Lebanon.

The CDR will also continue to follow up on the preparation of other environmental projects that will be executed in 2017, among which:

- Enterprises Environmental Compliance project funded by the World Bank.
- A second project for Enterprises Environmental Compliance funded by the Government of Italy.
- The Biodiversity Project funded by the GEF.
- A project for climate change funded by the EU.
- A second project for climate change funded by the GEF.
- Project for the Protection of the Ozone Layer funded by the Montreal Protocol.
- Project to support a Management Unit for the Lebanese Industrial Pollution Abatement Project.
- Support to the Lebanese Environmental Pollution Abatement Project.
- Support to the Syrian Crisis (Sustainable Energy and Water).
- Sustainable Land Management of Qaroun Watershed.
- GEF 6 cycle.

### **3- Cultural Heritage and Urban Development**

#### **Cultural Heritage Preservation and Urban Development Project:**

The Council for Development and Reconstruction (CDR), in partnership with the Directorate General of Antiquities and the concerned municipalities, launched a project for the preservation of cultural heritage and urban development in five historic cities in Lebanon: Tripoli, Byblos (Jbeil), Sidon, Tyre and Baalbeck. With a view to improve the historic infrastructure and archaeo-

logical sites of these five cities, the project is intended to a) create an adequate environment to achieve local economic development and b) provide the required technical assistance to improve the preservation, regulation and management of Lebanon's cultural heritage.

The project's components are:

-Rehabilitation of historic city centers and part of their Infrastructure: This component aims at renovating the historic locations in the five targeted cities, through the following works: renovation and creation of public squares and green spaces; renovation of certain markets and pedestrian zones; renovation and protection of certain historic buildings and determination of their intended use; support and promotion of economic tourist activities; assistance in the renovation of a number of private traditional homes; organization of traffic in the surroundings of historic areas and creation of car parks. In addition, the infrastructure will be renovated in a number of streets in these five cities, to install drinking water networks and renovate wastewater networks.

-Protection, Maintenance and Management of Archaeological Sites: This component aims at developing archeological sites in Baalbeck, Sidon and Tyre and includes the following activities: Research and documentation regarding archeological sites; restoration and reinforcement of several archeological monuments including Bacchus and Jupiter temples in Baalbeck and the Sidon Land Castle; management of archeological landmarks; protection of locations and fitting them out to receive visitors by - for example- establishing visitor and information centers.

-Provision of technical assistance to Institutions involved in the Project's implementation: This includes all activities that contribute to the improvement of the performance of targeted institutions to ensure the sustainability and continuity of the project. These institutions are: the municipalities of the five cities, the Directorate of Antiquities and the Directorate of Urban Planning. This project plays a major role in boosting tourism in the targeted cities and works towards enhancing and upgrading geographic, economic and social infrastructure which will eventually lead to local economic development and creation of new job opportunities.

The project faced many obstacles and challenges which obstructed its execution within the initial set timelines, including but not limited to the following:

- Security situation in Lebanon
- Increased construction costs
- Change in municipality structures during the term of the project and the necessity to re-explain the projects and make several amendments
- Change in cabinet and parliamentary structures during the term of the project and the necessity to re-explain the projects and make several amendments
- Presence of several trespasses on the work sites which are often hard to remove
- People's resistant to change
- Delay in the execution of all clauses of the Additional Funding Agreement, pending its approval by the Parliament
- Security situation that hindered the arrival to Lebanon of the foreign committed companies and hindered the execution of works as scheduled

Despite the many challenges encountered and following the completion of the first phase, the project surveyed the opinions of the citizens and visitors of the five targeted cities, the concerned ministries and the municipalities. As shown by the surveys, the importance of the project lies in improving the living, social, and environmental conditions in the targeted regions. It was also noticed that there is a growing awareness in communities regarding the importance of cultural heritage preservation.

The CDR raised additional funds from the World Bank and the French Development Agency to complement the projects prescribed in the Initial Funding Agreement.

In an attempt to develop and widen the scope of the experience of the Cultural Heritage Preservation and Urban Development Project, the CDR is currently negotiating with donors to raise the funds required to execute additional works in the five targeted cities and to widen the scope of the project to include other cities in Lebanon.

#### **Main Achievements (1992-2013):**

Funds were raised to carry out the activities of the project as follows:

- A US\$ 31.5 million loan agreement was concluded with the International Bank for Reconstruction and Development (IBRD). The agreement was referred by the Council of Ministers by Decree 10858 of September 9, 2003 and ratified by the Parliament pursuant to Law 555 of 31/01/2004.
- A EUR 12 million loan agreement was concluded with the French Development Agency. The

agreement was referred by the Council of Ministers pursuant to Decree 11163 of 14/10/ 2003 and ratified by the Parliament pursuant to Law 556 of 30/01/ 2004.

- On May 3, 2006, the CDR signed a EUR 10 million agreement to implement the part allocated in the Italian Protocol for the cultural heritage project.

- On November 28, 2007, the CDR signed EUR 500,000,000 grant agreement with the French Development Agency, to provide support to the Directorate of Antiquities. The agreement was referred by the Council of Ministers pursuant to Decree 1058 of November, 24 2007.

- On October 7, 2008, the CDR signed a grant agreement with the Italian government stipulating the allocation of an amount of EUR 2.2 million for the Cultural Heritage project.

- A EUR 21 million additional loan agreement was signed with the French Development Agency and referred to the Council of Ministers and the Parliament for approval. The agreement was referred by the Council of Ministers by Decree 7554 of 25/01/2012 and ratified by the Parliament by Law 282 of 30/04/2014.

- A EUR 27 million Additional Fund Agreement was signed with the International Bank for Reconstruction and Development, and was referred to the Council of Ministers and the Parliament for approval. The agreement was referred by the Council of Ministers by Decree 8992 of 29/9/2012 and was ratified by the Parliament by Law 255 of 15/04/2014.

In 2002, The CDR completed the detailed primary studies of the project in particular the studies related to five targeted cities: Tripoli, Byblos, Baalbeck, Sidon, and Tyre.

- The CDR created a project management unit (PMU) which consists of consultants responsible for the follow-up and management of the project. For this purpose, the CDR recruited a multi-specialty team composed of a procurement expert; an architect specialized in restoration, a civil engineer, a sociologist and an archeologist who will provide oversight over the works linked with the Directorate of Antiquities.

- The CDR created local municipal management units in the five targeted cities, composed of engineers, specialists, sociologists and economists. The CDR recruited ten specialists who will provide oversight over the project, in coordination with relevant municipalities in the five cities. The specialists carry out the following tasks:

- a. supervision of works;
- b. coordination and cooperation with municipal, administrative and technical authorities, and with the Directorate General of Urban Planning, the

Directorate General of Antiquities, the offices of the Ministry of Tourism and other public institutions involved in the implementation of the project in the five cities;

c. Coordination with the citizens, local communities and local and civil society organizations during different phases of the project.

-In 2004, the CDR completed the detailed studies and tender documents related to the first part of the works for the five cities (US\$ 12 million). This enabled CDR to release a call for tenders and award the contracts related to the renovation and restoration works in the five cities.

-The first phase site works started in the summer of 2005 in Tyre, Tripoli, Baalbeck, Byblos and Sidon, consecutively.

-Supervision contracts for the five cities were awarded in the summer of 2005.

-The CDR signed a contract to assess indicators related to the economic, touristic and social impact of the project in the five cities at the end of 2005.

-During 2006, the CDR commissioned consultancy firms to develop detailed studies and tender documents of the second phase works in Tyre, Tripoli, Byblos and Baalbeck. This enabled CDR to release the call for tenders and to award the relevant infrastructure and restoration works, in 2007.

-In February 2007, the renovations of the western coastal road in Tyre were wrapped up.

-Consultants developed traffic plans, traffic flow organization plans and created convenient parking lots in several historical cities.

-In 2007, a contract was awarded to provide oversight over the environmental impact plan in the five cities.

-In the beginning of 2007, the renovations of the facades in the northern souks (Group 1) in Tripoli were wrapped up.

-In May 2007, works to relocate the inhabitants of Bloc A in Khan Al Askar in Tripoli were wrapped up, followed by the completion of works to relocate the inhabitants of Bloc B in February 2008. This resulted in the relocation of most of the inhabitants of Khan Al Askar to their apartments in December 2009.

-In August 2007, the contract with the South for Construction to execute the renovation works in the souks of the old city in Sidon (phase 1 – Bab As-Saray square and the tourist passageway) was terminated. The remaining works were incorporated in the project on the renovation of the old souk (phase 2), the electrical works and the renovation of two old buildings in the old city.

-At the end of 2007, the renovation of mud houses in Al Qalaa neighborhood in Baalbeck (phase 1), the renovation of roads, public squares and

infrastructure in Byblos (phase 1) and the renovation of facades in Al Sweyqa in Bab AtTabaneh in Tripoli were wrapped up.

-During 2008, detailed studies for the renovation of the archeological sites in Baalbeck and Tyre-phase 1 were elaborated.

-In May 2008, the renovation works for the facades in the northern markets in Tripoli (group 2) and the phase 1 works in Tyre (the cultural path near the archeological site) were wrapped up.

-In August 2008, the renovations of roads, public squares and infrastructure (phase 2) started in Byblos.

-In August 2008, the renovations of the facades of the northern markets in Tripoli were wrapped up.

-At the end of 2008, the renovation of the foundation wall at Tyre archeological site was wrapped up.

-Detailed studies for the renovation of Tripoli Castle were elaborated.

-In 2006, the archeological map of Tyre was developed.

-The Technical Support Project for the municipalities of Tripoli and Tyre was launched.

-During 2009, environmental workshops were conducted in municipalities and attended by municipal employees, representatives of polluting industries, engineers and environmentalists etc... The purpose of the workshops was to increase awareness and improve performance in the field of environment preservation.

-The study for the renovation project of Shqeeb Castle in Arnoun - Nabatiyeh was elaborated.

-The renovations and restorations in the markets of the old Souk in Sidon (phase 1) were wrapped up.

-In May 2009, the restoration project for Al-Bawaba Square, Hamra Street, and Al-Jaafarih region was launched.

-In April 2009, the renovation and restoration of the presidential wing at the Beiteddine Palace started and were wrapped up in July of that same year.

-In November 2009, the detailed studies for the Sidon Land Castle renovation were developed.

-In December 2009, the detailed studies for the restoration and renovation of Deir Al Qalaa in Beit Mery were put in place.

-In 2010, the restoration and renovation of Hammam Ezzeddine were wrapped up.

-In February 2010, the renovation of the Fishermen port and its seafront in Tyre started.

-In April 2010, the renovation works of the old city

squares and seafront building facades of the old city in Sidon were launched.

-In May 2010, the renovation works of the tourist passageway, section 2, and the electric works in addition to the renovation of two traditional buildings in the old city were launched.

- In June 2010, the renovation works of the Tripoli Castle started.

-In June 2010, the renovation works of the infrastructure in Baalbeck and Tyre archaeological sites started.

-In September 2010, a contract was signed with the National Institute of Administration to provide training to the employees of the Directorate General of Antiquities.

-In October 2010, the renovation works of the Qala'at el-Shaqif in Arnoun were launched.

-In October 2010, a contract was signed for the procurement of office furniture for the Directorate General of Antiquities.

-In October 2010, the renovation works of Khan Al Askar started.

-In January 2010, delivery of the building intended for the relocation of the inhabitants of Bloc C in Khan Al Askar in Tripoli.

-In February 2011, office furniture was delivered to the offices of the Directorate General of Antiquities.

-In August 2011, the renovations of roads, public squares and infrastructure (phase 2) were completed in Byblos.

-In December 2011, office equipment was procured for the Directorate General of Antiquities.

-In November 2011, two vehicles were purchased for the Directorate General of Antiquities.

-In October 2011, a conference on "Tyre's history through archeology" was held in "Beit el Mamlouk" in Tyre, under the patronage of the Minister of Culture, and was attended by the Chairman of CDR and the French ambassador. International experts participated in the event.

-A training session was conducted for the employees of the Directorate General of Antiquities.

-Detailed studies for the renovation of the Chamaa Castle were formulated in July 2012.

-In August 2012, underwater archeological material was procured to the benefit of the Directorate General of Antiquities.

-In August 2011, the detailed studies related to the renovation of Khan Al Qishleh in Sidon and Baalbeck Saray, were launched.

-Topographic supplies were procured to the benefit of the Directorate General of Antiquities.

-The technical assistance contract to the bene-

fit of the Directorate General of Antiquities was signed, to select antique objects, organize these object labels and display them at the Tripoli Hall Museum in May 2012.

-In October 2012, the restoration of Khan El Askar was wrapped up.

-The urban planning administrative support plan was completed.

-A call for tenders was released to outsource the renovations and restorations of roads, infrastructure, facades and car parks in Baalbeck historical city – Phase II (Section 1), awaiting the approval of the World Bank additional funds by the Parliament.

-Scientific reports were elaborated for the UNESCO World Heritage Centre, as part of the technical assistance prescribed in the Technical Agreement Contract signed to the benefit of the Directorate General of Antiquities.

-A call for tenders was released to outsource the restorations and renovations of the two historical sites of Baalbeck and Tyre, restricted to Italian contractors.

-A call for tenders was released to outsource the restorations and renovations of the historical Chamaa Castle. Only one bidder submitted a proposal. The study was modified following the collapse of a part of the Castle's tower and a new tender document was elaborated to release a new call for tenders.

-The Cultural Heritage Unit continued to provide technical support during the preparation of the detailed studies for the Archeology Museum in Sidon and during the commencement of site works.

-A contract was signed in April 2013 to outsource the renovation of ASNADMIR Mill in Tripoli and the Land Castle.

-The restoration and renovation of Khan Al Askar are underway.

-Execution of the additional works in the building intended for the relocation of the inhabitants of Bloc C in Khan Al Askar, and making repairs and alterations to the buildings intended for the relocation of the inhabitants of Bloc A and Block B in Khan Al Askar in Tripoli.

-Follow up on the rehabilitation works of Al Bawaba Square, Hamra Street and Al Jaafariya.

-Follow up on the rehabilitation works of the Fishermen Port and its seafront in Tyre.

-The team of the Management Unit of the Cultural Heritage project reviewed the study proposed by the Municipality of Byblos to build a parking lot in the city. The administrative file was prepared, as a preparatory step for the release of the call for tenders.

**Work progress in 2014:**

- Oversight over the Environmental Impact Plan in the CHUD five targeted cities.
- Delivery of the restorations and renovations of the Beiteddine Palace (water isolation).
- Continuation of restoration of the Qala'at el-Shaqif in Arnaoun.
- Preparing to release a call for tenders to outsource the restoration of the Beit Mery archeological site.
- Follow up on the infrastructure project in Baalbeck and Tyre archeological sites.
- The Cultural heritage Unit team holds regular meetings with the stakeholders supervising the construction of the Beirut National Museum and providing technical support to the project.
- Re-release of a new call for tenders to outsource the restoration and renovation of Chamaa Castle.

**1. Sidon:**

- Continuation of the site works of the tourist passageway, phase II, and the electric works in addition to the renovation of two traditional buildings in the old city.
- Continuation of the renovations of the old city squares and seafront facades of the old city in Sidon (works are inactive due to lack of funding).
- Preparing the tender document and the detailed studies related to Khan Al Qishleh renovation project, as a preparatory step for the release of a call for tenders.
- Continuation of the Sidon Land Castle site works.

**2. Tripoli:**

- Continuation of the works for the renovation of the surrounding area of Al Burtassi mosque and Abu Ali River banks and construction of an awning above a section of the banks stretched within the old city.
- Outsourcing the guardianship and maintenance of Khan El Askar.
- Completion of Citadel of Tripoli restoration works.
- Delivery of the additional site works related to the relocation of Khan El Askar Bloc C, and repairs and modifications of Blocs A and B of Khan El Askar in Tripoli.

**3. Tyre:**

- Continuation of the renovation works at the fishermen port and its seafront in Tyre, and construction of fishermen building according to the modified design.
- A contract was signed to award the archeological site renovation works, Phase I.

**4. Baalbeck:**

- Continuation of infrastructure renovation at the archeological sites of Baalbeck and Tyre.
- A contract was signed to award the site works (Phase II works – Abdel Halim Hajjar and Saleh Haidar Streets) and commencement of site works.
- A contract was signed to award the archeological site renovation works, Phase I.

**5. Byblos:**

- A contract was signed to award the construction of a parking lot in the city.

Main Contracts signed during 2014:

The CDR signed the following contracts:

- Contract related to phase II works at the city of Baalbeck.
  - Contract related to the creation of a parking lot in the city of Byblos.
  - Contract related to the archeological projects in Baalbeck and Tyre – Phase II.
  - Contract related to the oversight over Baalback site works – Phase II.
  - Contract related to the oversight over the construction works of the parking lot in Byblos.
- The CDR prepared the following studies and projects:

- Plans related to social projects accompanying the CHUD project.
  - Plans related to local economic development in the CHUD five targeted cities.
- The CDR outsourced the following works:
- Preparation, development and filming of a documentary about CHUD.
  - Development of CHUD project's environment impact assessment.

- Restoration works at the archeological project in Deir El Kalaa.

- Restoration works at Beiteddine Palace – Phase II.

- Works for the rehabilitation of Chamaa castle.
- Excavation works at the Archeological Museum of Beirut.

**1. Baalbeck:**

- Release of a call for tenders to outsource the renovation of the Baalbeck Saray.
- Commencement of the restoration works at the archeological site -phase II.

**2. Sidon:**

- Release of a call for tenders for the renovation of Khan Al Qishleh.

**3. Tripoli:**

- Outsourcing the guardianship and maintenance works at Khan Al Askar.
- Making preparations to outsource the detailed

studies related to the renovation of Khan Al Saboun and Property No. 131.

-Making preparations to outsource the detailed studies related to the renovation of the eastern facades of the Abu Ali River.

-Making preparations to release of a call for tenders for the renovation of the facades, roads, and public squares in the northern and eastern souks, phase II.

-Commencement of sites works for the restoration of the ISNADMIR Mill.

-Making preparations to complete of Abu Ali River sites works.

#### 4. Tyre:

-Making preparations to release of a call of tenders to outsource the completion of the Tyre southern costal roads site works.

-Making preparations to release of a call for tenders to outsource the restoration of Tyre old souks.

-Commencement of renovation works of Al Bawaba Square and parking lots.

#### Work progress during (2016):

The CDR prepared the following studies and projects:

-Preparation of economic impact studies related to Cultural Heritage and Urban Development (CHUD) project.

-Plans related to social projects accompanying the CHUD project.

-Plans related to local economic development in the CHUD five targeted historical cities.

-Preparation, development and filming of a documentary about CHUD.

-Preparation of the final report of the surveys on the status of municipal services and the monitoring of social and economic indicators of the CHUD project until 30/11/2016.

-All works of the World Bank-funded CHUD Project have been completed and the two loans closed.

-Local funding has been secured for the execution of works that complement the Qala'at el-Shaqif rehabilitation project.

The CDR also outsourced and continued the following works and studies:

-Restoration works at Beiteddine Palace – Phase II.

-Works for the rehabilitation of Chamaa castle.

-Excavation works at the Archeological Museum of Beirut.

-Preparation of the tender document of Deir el

Kalaa archeological project.

Making preparations to release a tender to outsource the detailed study for the renovation of the Tebnine Castle and its surrounding area.

#### 1. Baalbeck:

-Outsourcing of Baalbeck Saray renovation works.

-Renovation works in the archeological site – Phase II.

#### 2. Sidon:

-Release of a tender to outsourcing Khan Al Qishleh rehabilitation works.

-Continuation of Sidon Castle rehabilitation works.

#### 3. Tripoli:

-Extension of Khan Al Askar guardianship and maintenance works contract.

-Release of a tender to outsource the detailed studies related to the rehabilitation of Khan Al Saboun and Property No. 131.

-Release of a tender to outsource the detailed studies related to the renovation of the eastern facades of the Abu Ali River.

-Release of a tender to outsource the renovation of the facades, roads, and public squares in Tripoli, phase II (Sections 4, 6 and 8).

-Release of a tender to outsource the renovation of the facades, roads, and public squares in the northern and eastern souks, phase II (Sections 5 and 7).

-Continuation of sites works for the restoration of the ISNADMIR Mill.

-Outsourcing the completion of the Abu Ali River site works projects.

-Outsourcing the implementation of two local economic developmental projects in Tripoli.

#### 4. Tyre:

-Release of a tender to outsource the development of detailed studies for the project aimed at completing the rehabilitation of the Tyre southern sea corniche.

-Release of a tender to outsource the development of detailed studies for the project aimed at the restoration of Tyre old souks.

-Completion of the Al Bawaba square and parking lots rehabilitation project.

-Renovation works in the archeological site

#### (Phase II)

#### Main projects pipeline (2017-2018)

-Providing assistance to the World Bank in developing its final report on the termination of the works of the Cultural Heritage Project funded by the World Bank; the funder gave a “fair” rating to the implementation of the project.

-Delivery of the Khan al Askar site in Tripoli to an official authority for management and operation.

-Outsourcing of the renovation of the facades, roads, and public squares in the northern and eastern souks in the city of Tripoli, Phase II (sections 4, 6 and 8).

-Outsourcing of the renovation of the facades, roads, and public squares in the northern and eastern souks in the city of Tripoli, Phase II (sections 5 and 7).

-Outsourcing of the works of the Khan el Saboun rehabilitation project.

-Outsourcing of the rehabilitation works of the facades of Abu Ali Riverbanks in Tripoli.

-Outsourcing of the rehabilitation works of Tyre old souks and completion of the Tyre south sea corniche.

-Outsourcing of the detailed study related to the renovation of Tebnine Castle and its surrounding area.

-Outsourcing of the phase III works for the renovation of Beiteddine Palace.

-Outsourcing of the complementary works of Qa-la'at el-Shaqif rehabilitation project.



**Beirut Archeological Museum (CHUD)**

**Main contracts signed in 2014:**

Project	Estimated Value (USD)	Source of Funding	Scheduled Start	Scheduled Completion
Phase II works – Saleh Haidar Abdel Halim Hajjar in the City of Baalbeck	3,263,971	World Bank	13/11/2014	12/11/2016
Oversight over Phase II works in the City of Baalbeck	130,587	Local	13/11/2014	12/05/2016

**Main contracts signed in 2015:**

Project	Estimated Value (USD)	Source of Funding	Scheduled Start	Scheduled Completion
Guardianship and maintenance of Khan Al Askar in Tripoli	389,193	World Bank & Local funding	2015/02/10	2017/08/08
Construction of a car parking in Byblos	1,706.307	World Bank & Local funding	2015/04/15	2017/03/01
Oversight over Phase III works in Byblos	153,411	local	16/04/2015	01/03/2017
Preparation, development and filming of a documentary about CHUD	174,411,8	World Bank	23/07/2015	31/12/2016
Outsourcing of the restoration of Chamaa Castle	499,900 Euro	Italy	18/09/2015	30/04/2018
Excavation works at the Archaeological Museum of Beirut	3,353.880	Kuwait Fund for Arab Economic Development	16/06/2015	14/11/2018
Environment impact assessment of the Cultural Heritage and Urban Development Project	92,314	World Bank	11/10/2015	31/12/2016
Restoration works at Baalbeck and Tyre historic sites – Phase II	3,065.356	Italy	04/11/2015	03/11/2017
Main projects pipeline (2016-2017)				
Guardianship and maintenance of Khan Al Askar in Tripoli		Local funding	10/02/2016	10/02/2017
Continuation of the rehabilitation works of Abou Ali river-banks	2,778,430	French Development Agency, World Bank and local funding	14/02/2016	14/02/2017
Execution of local economic project in Tripoli	80,000	World Bank	01/07/2016	31/12/2016
Execution of local economic project in Tyre	50,000	World Bank	01/07/2016	31/12/2016
Renovation and rehabilitation of Khan al Qishly in Saida	EUR 2,250,000	Italy	01/08/2016	31/01/2018

**Main projects signed in 2016**

Project	Estimated Value (USD)	Source of Funding	Scheduled Start	Scheduled Completion
Continuation of the rehabilitation works of Abou Ali riverbanks	3,717,242	French Development Agency, World Bank and local funding	14/02/2016	14/02/2017
Execution of local economic project in Tripoli	80,236	World Bank	01/07/2016	31/12/2016
Execution of local economic project in Tyre	79,969	World Bank	01/07/2016	31/12/2016
Renovation and rehabilitation of Khan al Qishly in Sidon	EUR 1,718,527	Italy	01/08/2016	31/01/2018

**Main projects under preparation for 2016-2018**

Project	Estimated Value (USD)	Source of Funding	Scheduled Start	Scheduled Completion
Renovation and rehabilitation of Baalback Saray building	EUR 849,966	Italy	26/07/2017	25/07/2018
Rehabilitation of facades, roads, and public squares in Tripoli-phase II (parts 4,6, and 8)	6,398,101	French Development Agency	01/11/2017	30/04/2019
Rehabilitation of facades, roads, and public squares in the northern and eastern souks in Tripoli –phase II (parts 5 and 7)	EUR 3,000,000	French Development Agency	31/11/2017	01/05/2019
Development of detailed studies and oversight over the renovation of Khan Al Saboun and Property No.131	216,700	French Development Agency	31/11/2017	31/05/2019
Rehabilitation works of Khan Al Saboun	EUR 1,792,000	French Development Agency	2018/05/13	2019/05/31
Development of detailed studies and supervision over the project aimed at rehabilitating the facades of Abu Ali riverbanks in Tripoli	240,125	French Development Agency	2017/11/31	2019/05/31
Development of detailed studies for the renovation of Tebnine Castel and its surrounding area	EUR 78,000	French Development Agency	2017/06/05	2018/03/04
Rehabilitation of the facades of the Abu Ali riverbanks	EUR 1,750,000	French Development Agency	2017/11/31	2019/05/31



Development of detailed studies and oversight over the restoration of the old souks and the southern seafront in Tyre	210,375	French Development Agency	2017/11/31	2019/05/31
Restoration of old souks in Tyre and continuation of the Tyre southern sea corniche	EUR 1,800,000	French Development Agency	2017/11/23	2019/05/31
Rehabilitation of Beiteddine Palace	1,350,000	GoL	2017/12/01	2019/05/31
Renovation works at the Beit Mery Archeological Site		GoL		
Provision of technical support to the funder to continue the works at the Sidon Archeological Museum	4,400,000	KFAED & AFESD		
Site works at the Archeological Museum of Beirut	27,500,000	Kuwait Fund for Arab Economic Development	2019/12/31	2021/01/01
Old Souk works in Douma (renovation of facades, public squares and infrastructure)	3,000,000	No funding		
Restoration works at the Tebnine Castle and its surrounding area		No Funding		



Rehabilitation of Baalbeck Archeological Site(CHUD)



Rehabilitation of Khan Al Echli Saida (CHUD)



Rehabilitation of Saida Land Fortress (CHUD)



Rehabilitation of Baalbeck Facades (CHUD)



Rehabilitation of Abu Ali River Sides - Tripoli (CHUD)



Construction of Fishermen Sendicate Building - Tyre (CHUD)

# Water

## Sector Overview

In the aftermath of the Lebanese civil war, the existing potable water facilities were limited to incomplete networks in main cities and other smaller networks in other Lebanese regions. The water insufficiency was accompanied by the increase in the underground and surface water pollution resulting from free wastewater discharge, yet creating health-threatening and environmental problems.

**The ever since insufficiency in potable water supply is due to several reasons, mainly:**

1. Increasing water demand and the inadequate capacity and status of the existing water supply network.
2. Increased water losses from the old and worn-out networks.
3. Absence of means to protect water from pollution (free wastewater discharge, industrial and agricultural pollutants...)
4. Insufficiency of water and wastewater government spending that is the scarcity of investments necessary to rehabilitate and upgrade the facilities to the required service and environmental levels.
5. Absence of an adequate administrative and executive structure to manage the increasing demand for potable water (and wastewater service) or apply new administration practices and modern water purification technologies.

To face this situation, the Lebanese Government intervened since 1992 through the following:

- 1-Execution of urgent rehabilitation works for the existing water facilities, networks, pumping and treatment facilities, and addressing all existing or upcoming problems.**
- 2-Completion, expansion and rehabilitation of the networks according to needs.**
- 3-Upgrade and increase the water sources, reduce water leakages and thus increase supply rate.**

In other wording, the sectorial action plan aims at completing the rehabilitation and expansion of potable water systems in all Lebanese regions, and increase the water resources to address the anticipated deficit through large-scale projects e.g the construction of dams and mountain lakes. However, on the institutional level, the promulgation of Law 221/2000 was an essential step

towards restructuring and modernizing both water and wastewater sectors; as it defined the water public properties (surface and ground) and entrusted the water service administration and management (potable water, irrigation, wastewater) to 4 public institutions (excluding the Litani river which remained under the management of the Litani River Authority to exploit its water for irrigation in South Lebanon and West Bekaa) into which it integrated all water departments, under the tutelage of the Ministry of Energy and Water. In 2001, the boards of water institutions were appointed. In 2005, new regulatory and structural decrees were issued and put into effect in order to achieve many goals mainly: a) rehabilitation and improvement of the services of these institutions, b) expansion of their coverage area and c) maintain their administrative stability and financial situation.

In line with the Lebanese Government policy, the Ministry of Energy and Water commissioned a private French company to study the feasibility of the private sector involvement in the management of Beirut and Mount Lebanon Water Establishment. Concurrently, the CDR was charged with supervising the management of the other regional water establishments by private sector specialized firms.

### **Main achievements in the sector (1992-2016)**

At the end of the Lebanese civil war, the water projects implemented by the CDR aimed at fulfilling national objectives, including but not limited to the following:

**-Rehabilitation program for water authorities (National Emergency Recovery Program – NERP – first year):** at an estimated cost of US\$ 60 million, funded by the World Bank and the European Investment Bank. Its purpose was to rehabilitate the networks and potable water supply installations belonging to 19 potable water authorities (formerly).

**-Rehabilitation and expansion of potable water treatment plants, pumping and chlorination stations in several regions:** The program covered projects for the rehabilitation and expansion of seven main potable water treatment plants in Zahle, Kfar Halda, Tripoli, Jbeil, Kousba, Ras el Ain and al-Bass (Sour). It also covered rehabilitation of 200 pumping stations located in all Lebanese regions. This project begun in August 1996, at an estimated cost of around US\$ 54 million and was funded by the French-Lebanese Financial Protocol.

**-Technical assistance to the Ministry of Energy and Water:** A technical assistance

program, amounting to 30 million French Francs funded by the financial French-Lebanese Protocol, was completed. Under this program, the technical assistance was provided to the Ministry of Energy and Water and to major water authorities in the form of capacity building, institutional development and supply of necessary equipment.

At the national level, and in parallel to these programs, the CDR focused on the development of water treatment plants across all Lebanese regions. These projects are detailed below by governorates, as follows:

### **Greater Beirut area**

NERP: Several contracts have been awarded related to the rehabilitation and construction of potable water supply systems in the Greater Beirut area, for a total cost of US\$ 45 million, funded by Kuwait Fund for Arab Economic Development – KFAED. These contracts included the following works:

**-Rehabilitation of water sources**, such as Qashkoush, Ain al Delbe springs and Daichounieh wells

**-Rehabilitation of Daichounieh and Hazmieh** potable water treatment plants

**-Rehabilitation and construction of potable water supply and distribution networks in the Greater Beirut area.**

Expansion of Dbayeh potable water treatment plant (First phase): the capacity of Dbayeh potable water treatment plant has been increased to 430000 m<sup>3</sup> per day. This project was funded by the Italian-Lebanese Protocol with a total budget of US\$ 5.7 million.

In addition to these projects, and within the framework of the Beirut infrastructure rehabilitation, the water supply and distribution networks were rehabilitated and upgraded in areas targeted by this project.

Bekaa and Baalbeck Hermel Governorates:

**-Baalbeck-Nabi Sheet potable water supply and Baalbeck wastewater network:** the US\$ 32 million contract was funded by the World Bank. Under this project, the rehabilitation of potable water reservoirs, pumping stations and installation of distribution pipes were completed, digging and installation of wells in the project area, as well as creating a wastewater discharge network in Baalbeck.

**-Baalbeck-Nabi Sheet House connections and complementary distribution lines:** the value of this contract amounts to around US\$ 1.25 million, funded by the World Bank.

**-Construction of wastewater and complementary potable water distribution pipes**

**in Baalbeck and Amshki:** these works are considered as complementary to the above mentioned project for potable water distribution and wastewater pipeline network construction for Baalbeck-Nabi Sheet region. The works resulted also in the construction of pipeline network to distribute potable water and execute house connections and wastewater networks at a cost amounting to about US\$ 11.7 million funded by the World Bank.

**-Construction of wastewater and complementary potable water distribution pipes in 17 villages in Baalbeck district:** these

works complement the above mentioned project on potable water distribution and wastewater pipeline network construction for Baalbeck-Nabi Sheet region; consisting of a distribution network for potable water and household connections and wastewater networks at a cost amounting to around US\$ 12.2 million funded by the World bank.

**-Yammouneh potable water supply:** the US\$ 11.9 contract is funded by the Islamic Development Bank (IDB). This project includes the construction of a dam to impound the water of the Yammouneh Spring, the installation of 76 km long water supply pipes, 246 kms long of water distribution pipes, and the construction of 23 new water reservoirs and two artesian wells.

**-Ouyoun Orghosh potable water supply:** the US\$ 7.8 million contract is funded by IDB. This project includes the installation of pipes for the supply of water from Qabua and Shemali springs, 72 kms of supply pipes, 110 kms of distribution networks and construction of 18 new water reservoirs.

**-Bekaa governorate villages (north-east Bekaa) water supply systems Lot 3 of Phase 1:** this project included the drilling and equipping of wells and transmission & distribution networks. The cost of the project was US\$ 13.4 million locally funded by virtue of Bekaa Development Decree number 12919, dated 27/08/1998.

**-Installation of potable water transmission lines to al-Bustan and al-Harf from Nassara and Harik springs in Hermel region:** the contract value amounted to US\$ 2 million and was funded by the Kuwait Fund.

**-Execution of irrigation channels in Hermel region:** With a total budget of about US\$ 1 million funded by the Kuwait Fund for Economic and Social Development

**-Al-Yammouneh infrastructure:** This project included the construction of potable water

supply and wastewater networks, in addition to a wastewater treatment plant in al-Yammouneh. The works amounted to US\$ 3.96 million funded by the IDB.

**-House connections for the regions covered by Yammouneh-Ouyoun Orghosh potable water systems:**

in this project, house connections are being set up for all villages that benefited from the Yammouneh-Ouyoun Orghosh projects, which were achieved as shown above; the project amounted to approximately US\$ 6.5 million through local funding (Bekaa Development Decree number 12919 dated 27/08/1998).

**-Shmistar water supply:** this project cost approximately US\$ 4.5 million, and provided potable water to Shmistar region and its surroundings.

**-Execution of water supply networks and water reservoirs for some regions in Bekaa governorate:** with a total budget of US\$ 1.1 million funded by the Arab Fund for Economic and Social Development.

**-Execution of potable water network in Harbata in Baalbeck district:** with a total budget of US\$ 1.4 million locally funded.

**-Supply of potable water to villages in Baalbeck district (north east part) – lots 1 and 2:** this project was split into three sections to supply potable water to the regions extending from Rassem Al Hadeth – Arsel to Kaa region in North Bekaa, and included construction of reservoirs and distribution networks. The cost of the project reached US\$ 13 million with local funding.

**-Execution of distribution lines and complementary drinking networks and house connections in Baalbeck, Khodr, Nabi Sheet and Khraybe:** with a total budget of US\$ 4.9 million funded by the International Bank for Reconstruction and Development (IBRD).

**-Operation and maintenance of water and sewage systems in Baalbeck-Nabi Sheet region:** with a total budget of US\$ 9.5 million funded by the International Bank for Reconstruction and Development (IBRD) for the period 2005-2016.

**-Execution of complementary house connections in Yammouneh-Ouyoun Orghosh regions:** with a total budget of US\$ 5.6 million locally funded (Bekaa Developmental Decree No. 12919 dated 27/08/1998).

**-Rehabilitation of water supply systems in West Bekaa and villages in east Zahle (Lot 1):** funded by the World Bank with a total budget

of US\$ 14.2 million and included the construction of pumping and disinfection stations, water reservoirs, transmission and distribution networks and house connections in many villages of West Bekaa and Zahlé districts.

**-Execution of complementary water works on the Rashaya –West Bekaa roads – Part II – Section I – Group I:** Works included the installation of potable water transmission and distribution lines on roads in Rashaya and West Bekaa Districts, namely in Dahr el Ahmar, Kfarqouq-Rashaya, Rashaya-Masnaa, Jib Janin-Kefraya, with a total budget of US\$ 3.7 million locally funded.

**-Execution of complementary water works on the Rashaya –West Bekaa roads – Part II – Section I – Group II:** Works included the installation of potable water transmission and distribution lines on roads in Rashaya and West Bekaa Districts, namely in Kherbet Rouha-Ain Arab- Bekka- Deir el Ashayer- Rashaya-Ain Ata, Jib Janin-Kamed el Loz-Falouj, with a total budget of US\$ 2.9 million locally funded.

**Akkar Governorate**

**-Potable water supply network for Kobayat Water Authority and Akkar Wastewater channels network:** with a total budget of US\$ 14.8 million funded by the European Investment Bank; it included the execution works of wells and reservoirs and pumping stations as well as drinking water transmission lines.

**-Potable water supply network for some villages in Akkar supplied by wells:** with a total budget of US\$ 4 million funded by a grant from the Kingdom of Saudi Arabia.

**-Akroum and Kfartoun potable water supply:** with a total budget of US\$ 6.6 million funded by the Saudi Fund for Development. It included the catchment of Sabeh spring and the execution of wells, reservoirs, pumping stations and potable water transmission lines.

**-Installation of potable water supply transmission pipelines for Beit Mallat and surrounding villages in Akkar:** the project included the construction of water reservoirs and water towers, rehabilitation of water reservoirs, potable water transmission lines, boreholes and pumping stations. The value of the contract reached approximately US\$ 19.5 million funded by the Islamic Development Bank and OPEC for International Development Fund.

**-Execution of works for Ain Yacoub potable water supply:** with a total budget of US\$ 5.9 million funded by the Saudi Fund for Development; it included the construction of reservoirs, a pumping station and transmission pipelines.

**-Barghash-Hrar, Kaf al Tineh, Qobiit region**

**- Akkar water supply project:** with a total budget of US\$5.8 million contract funded by the Saudi Fund for Development. This project included the execution of the Kaf al Tineh spring catchment, construction of local reservoirs and a regional reservoir, pumping stations and transmission lines.

**-Supply potable water to Akkar al-Atika region:** this project aimed at supplying Akkar al-Atika region and its surroundings with potable water. The works included the spring catchment, construction of local and regional reservoirs, pumping stations and transmission lines, with a total budget of US\$ 7.6 million locally funded.

#### North Governorate

**-Installation of potable water supply networks for the (ex) Tripoli Water Authority and Tripoli wastewater networks:** With a total budget of US\$ 34 million funded by the European Investment Bank. Works were expanded to include construction of potable water reservoirs to meet the needs of the population until the year 2025. The project is currently in service.

**-Renovation of water networks and house connections in Tripoli:** with a total budget of 7.4 million euros funded by the AFD.

**-Expansion of Bahsas water treatment plant:** this project increased the capacity of Bahsas water treatment plant from 40000m<sup>3</sup> per day to 70000m<sup>3</sup> per day. The total budget of the project was US\$ 4 million funded by the AFD.

**-Minieh potable water supply:** the project aimed at supplying Minieh and surrounding villages with potable water. The total budget of the project was US\$ 1.8 million funded by the Saudi Fund for Development.

**-Equipping of two boreholes in Deir Aamar and Nabi Yousha in the north:** with a total budget of US\$ 862.000 locally funded.

**-Execution of water works in various regions of Zgharta:** with a total budget of US\$ 1.7 million, funded by the Kuwait Fund for Arab Economic Development.

**-Installation of potable water supply networks for the (ex) Batroun Water Authority and some wastewater networks:** With a total budget of US\$ 20.5 million funded by the European Investment Bank.

**-Equipping Abi Yaghi borehole in Batroun:** with a total budget of US\$860 million locally funded.

**-Execution of water supply pipe lines for water treatment station in Kousba, Koura district:** with a total budget of US\$387.000 locally funded.

**-Tripoli Water Department Management contract:** This contract was considered to be the

result of the Government's efforts to restructure the water sector and to involve the private sector in its operation. The Tripoli Water department Management contract was awarded to a French firm reached 8.9 million euro funded by the French Development Agency. The management contractor was operating and managing Tripoli Water department facilities, as well the billing and collection of water fees, in addition to operating and managing the human and its financial resources. Furthermore, the management contractor supervised the rehabilitation of Tripoli water supply networks including increasing the capacity of Bahsas water treatment plant from 40000 m<sup>3</sup> to 70000m<sup>3</sup> per day.

**-Development contract and improving performance and enlarging utilization client management program X7 for North Lebanon Water Authority:** this contract was also considered as part of the Government's efforts to reorganize and redevelop the water sector in Lebanon, with a total budget of about 400,000 Euros funded by the AFD.

**-Secondary and tertiary networks in Beddaoui:** with a total budget of US\$3.6 million financed by a grant from the Kuwait Fund.

**-Potable water and protection walls in Becharre district:** with an approximate budget of US\$2.7 million financed by a grant from the Kuwait Fund.

**-Construction of Brissa Hill Lake & dam:** the project aimed to supply drinking and irrigation water to villages in the upper parts of Minyeh-Danniyeh district. The project was funded by the Saudi Fund for Development amounting to US\$ 14.25 million.

**-Execution of potable water supply pipes between Fii' and Kousba in Koura district:** the contract amounted to US\$ 3 million financed by the Kuwait Fund.

**-Completion of water supply projects in Batroun district** the project amounted to US\$ 5.7 million funded by the Kuwait Fund for Arab Economic Development.

**-Construction of potable water distribution networks and wastewater collection networks in Ehden-Zgharta:** the US\$ 13,6 million project was financed by the Abu Dhabi Development Fund.

**-Completion of Bargash-Hrar-Kaf el Tineh and Kabeit water supply project in North Lebanon:** the project consisted of water works to complement the existing networks in these villages, with a total budget of US\$ 7.6 million

funded by the Saudi Arabia Fund and the Kingdom of Saudi Arabia. The works covered under this contract included complementary works to the existing networks in the regions of Barghash, Hrar, Kaff el Tine and Qobit.

#### **Mount Lebanon Governorate**

**-Potable water transmission to Keserwan coastal region from al-Madik spring:** with a total budget of US\$ 76 million funded by the Japanese Bank for International Cooperation (JBIC). It included the construction of a Dam to impound the water of Madik Spring and installation of main water pipe lines (through a tunnel) that transmitted the water to Keserwan coastal region; and the construction of main water reservoirs and potable water distribution networks servicing Keserwan coastal region.

**-Rehabilitation of potable water wastewater networks in Chouf and Metn districts:** With a total budget of US\$ 25 million funded by the World Bank, the project included the construction of 22 water reservoirs, installation of transmission pipelines and potable water distribution networks, in addition to wastewater networks.

**-Rehabilitation of infrastructure in displaced villages:** this included the rehabilitation of the existing potable water networks and the installation of new networks in the displaced villages of Baabda, Aley and Chouf districts. The US\$ 7.15 million project was funded by the Saudi Fund for Development.

**-Transmission of Ra'ayan spring water to Aley main water reservoir:** the purpose of this project was to transmit around 12000m3 of water daily from Ra'ayan spring to Aley main water reservoir. The contract amounted to US\$ 15 million funded by the Kuwait Fund for Arab Economic Development.

**-Execution of miscellaneous water works in Barouk region:** with a total budget of US\$ 5.25 million funded by the Kuwait Fund for Arab Economic Development.

**-Rehabilitation of wells and existing facilities for (ex) Ain el Delbe Water Authority,** with a total budget of US\$ 4.15 million funded by the Kuwait Fund for Arab Economic Development.

**-Execution of water transmission line from Nahr Ibrahim to Jbeil water treatment plant:** with an approximate budget of US\$ 2 million locally funded.

**-Qattine-Azar water supply project:** the purpose of this project was to use the water of Qat-

tine-Azar ground water to supply potable water to the upper areas of Metn, with a total budget of US\$ 4.25 million funded by the Kuwait Fund for Arab Economic Development.

**-Execution of a transmission pipeline from Nabee El Assal to Bhaness reservoirs – Phase 1:** with an approximate budget of US\$ 9.6 million funded by the Kuwait Fund For Arab Economic Development.

**-Well rehabilitation and construction new water facilities for (ex) Ain El Delbe Water Authority –** with an approximate budget of US\$ 4 million funded by the Kuwait Fund for Arab Economic Development.

#### **South and Nabatieh Governorates**

**-Rehabilitation, expansion and equipping of Taybeh potable water treatment plant (phases I and II):** the total budget of the executed works was around US\$28.40 million split into two phases: the first phase at around US\$21.00 million out of which US\$12 million funded by the Islamic Bank for Development and the remainder 9 million locally funded. . this phase consisted of constructing a water treatment in Taybeh is capable of producing 25000m3 of potable water per day and supply the potable water systems operated by the Jabal Amel Water department. The second phase cost around US\$7.40 million, and aimed at rehabilitating existing facilities, providing electric power, and performing operation and maintenance activities through local funding.

**-Drilling and equipping water wells in various regions damaged by the war in 1996:** with a total budget of US\$ 2.5 million funded by the Arab Fund (AFESD).

**-Rehabilitation and development of urban Sour potable water supply networks:** with a total budget of US\$ 20.5 million funded by AFESD.

**-Rehabilitation and development of Sour rural area potable water supply network:** with a total budget of US\$ 27 million funded by AFESD.

**-Execution of potable water pumping stations in Sour:** with a total budget of US\$ 1 million locally funded.

**-Potable water supply network for Saida Water department:** the value of this contract was US\$ 4.6 million funded by the AFESD.

**-Rehabilitation of Jezzine potable water supply system:** with a total budget of US\$ 1.25 million funded by the French Agency for Development.

**-Execution of potable water transmission lines from Nabeh al-Taseh to Nabatieh region:** This project aimed at increasing the capacity of potable water service in this region,

with an approximate budget of US\$ 7.5 million funded by the French Agency (AFD).

**-Drilling and equipping 4 wells, reservoirs and potable water networks in Nabatieh region:** with an approximate budget of US\$ 2 million funded by the European Union.

**-Execution of potable water networks in Hebarieh region in Hasbaya:** with an approximate budget of US\$ 14.8 million funded by the French Agency AFD and the CDR budget.

**-Execution of potable water works for Jabal Amel water department in Marjeyoun and Bint Jbeil** with a total budget of US\$ 12.15 million funded by the Islamic Bank for Development.

**-Drilling water wells and installation of potable water networks in Nabatieh region:** with a total budget of US\$ 1 million funded by the European Union.

**-Drilling of artesian well in Kfarhamam in Hasbaya:** with a total budget of US\$270 thousand funded by a European Union grant.

**-Drilling and equipping water wells in Douair and Klaileh:** with an approximate budget of US\$ 1.2 million funded by the Kuwait Fund.

**-Rehabilitation of water supply systems in Nabatieh district:** The project included the construction of ground water reservoirs, water towers and 6km long transmission lines, 40 km long distribution lines in the villages of Kfarrouman, Harouf, Arabsalim, Haboush and Ansar, with a total budget of US\$4,9 million funded by the Abu Dhabi Fund.

**-Drilling of two water wells in Bint Jbeil:** The project included the drilling of two artesian wells in Bint Jbeil to increase the potable water supply capacity, with an approximate budget of US\$ 1 million funded by the European Union.

**-Execution of water and wastewater networks in the Districts of Sour and Nabatieh:** The project included the installation of potable water and wastewater networks in some villages in the Districts of Sour and Nabatieh, with a total budget of US\$ 4.8 million funded and supervised by the Kuwait Fund for Arab Economic Development (KFAED).

**-Execution of water works for Jabal Amel Water department in the Districts of Marjeyoun and Hasbaya:** the project aimed to install transmission networks, main and secondary water distribution lines, and to equip the pumping stations in the following regions: Bint Jbeil, Marj el Khaoukh and Chebaa, with an approximate budget of US\$ 47.8 million funded by the Islamic Development Bank (IDB) and a treasury loan by virtue of Decree No. 6841 dated 17/11/2011 and Decree No. 7477 dated 06/02/2012 and the CDR's budget (Horizon

2000).

**-Execution of works for the replacement of the potable water supply networks** and house connections in Chebaa, Hebarieh, Kafarchouba, Ain Qania, Chwaya, Kfarhamam, Kfayr and Khalwat Kfayr – Section II with an approximate budget of US\$ 13.1 million funded locally ( Decree No. 6841/2011).

**Work progress in major ongoing projects North and Akkar Governorates:**

**-Rehabilitation and expansion of water networks in Chekka and Anfe:** the purpose of this project is to supply potable water to Chekka and Anfe areas till Hreishe by drilling artesian wells in Jaradeh area, rehabilitation and expansion of potable water networks, new house connections and construction of water reservoirs. The cost of the project is US\$ 9.6 million and is funded by the Arab Fund for Economic and Social Development. Around 90% of the work has been completed to date.

**-Water supply to remote villages supplied from the reservoirs of Hrar and Kabiit in Akkar:** This project includes the construction of water reservoirs, installation of water transmission pipes, distribution networks, and pumping stations servicing around 25 villages. The project cost is US\$ 20.4 million, and is funded by the Arab Fund for Economic and Social Development. Around 80% of the work has been completed to date.

**-Installation of potable water networks and pumping stations & wells in Koura and Batroun districts, namely:** Edde, Dhour Edde, Basbina, Abrine, Hamat, Kfarhalda, Assia, Darbashtar, Majdel, Kaftoun, Dhour el Hawa and Ram. The cost is US\$7 million and funded by the French Development Agency and the CDR budget. Around 99% of the work has been completed to date.

**-Completion of water systems in Minnieh-Danniyeh:** this project aims at complementing the water systems works that the CDR executed between 1998 and 2002. Parts of this project are still unexploited. These works are estimated at US\$ 10 million, funded by the Arab Fund for Economic and Social Development and the CDR budget. Around 19% of the work has been completed to date.

**-Rehabilitation and renovation of water systems in Becharre:** This project includes the supply of potable water from Qadisha Spring to Becharre and surroundings, the expansion of

water networks and house connections and the construction of water reservoirs. The cost of this project is estimated at US\$ 11 million, and is funded by the Arab Fund for Economic and Social Development and the CDR budget. Around 55% of the work has been completed to date.

**-Potable water and wastewater project in the region of Ehden:** The project aims to execute potable water supply systems and wastewater systems in the region of Ehden, with a total cost of US\$ 14.4 million, funded by the Abu Dhabi Fund and the CDR's budget - Horizon 2000 plan. Around 90% of the work has been completed to date.

**-Expansion of the water and wastewater network in Midan- Ehden:** The project aims to install complementary potable water and wastewater networks in Midan - Ehden to expand the current network, with a total budget of US\$ 1.3 million, locally funded. Around 90% of the work has been completed to date.

**-Execution of Qalamoun and Ras Masqa water project on the outskirts of Chekka and Anfeh and continuation of projects in Koura:** The project includes the extension of distribution and transmission lines within the vicinity of the project. The value of the works is estimated at US\$ 6.2 million, funded by the Arab Fund for Economic and Social Development and the CDR's budget (Horizon 2000). Around 16% of the work has been completed to date.

### Mount Lebanon

**-Execution of complementary works for the rehabilitation of water wells and construction of new facilities in Ain el Delbe Water Authority (formerly):** the project aims to rehabilitate wells within the range of Ain el Delbe Water Authority (formerly) and construct potable water treatment plant in Daishounieh, with an approximate cost of US\$ 3 million, funded by the Kuwait Fund for Arab Economic Development. 95% of the work has been completed to date.

**-Construction of Qaysamani Dam in Baabda district:** the project aims at supplying potable water to Baabda and Aley districts. The dam has a capacity of around 1 million cubic meter and supplies around 12000 cubic meter of water daily to both districts. The cost of the project is estimated at US\$ 21 million and around 85% of the work has been completed to date.

**-Upgrading the potable water systems in Jbeil district:** this project is the phase 1 of the

planned project. This phase is estimated at EUR 38 million (including wastewater systems). The project includes the following: Construction of 15 new water reservoirs, rehabilitation of 5 water reservoirs, installation of 61 km of transmission lines, installation of 39 km of distribution lines, drilling of 2 new wells, construction of 2 pumping stations, and construction of 10,8 km of new roads that lead to the locations of water facilities. The project is funded by the Lebanese-Italian Financial Protocol. 19% of the work has been completed to date.

**-Construction of Manzoul hill lake in Metn district:** The purpose of the Manzoul lake & Dam in upper Metn, is to increase the supply of potable water in Mtein, Aintourah, and Zaarour, ... with a 400,000 cubic meter storage capacity. The cost of this project is estimated at US\$ 15 million funded by the Kuwait Fund for Arab Economic Development and the CDR budget (Horizon 2000 plan). 5% of the work has been completed to date.

**-Greater Beirut water supply project (Awali-Beirut project) Phase I/conveyor and transmission lines:** the purpose of this project is to supply 250,000 m<sup>3</sup> of water daily to Greater Beirut. The project includes the construction of a 24 km long conveyor and a water treatment plant, two transmission lines of a diameter of 1400 mm each and 9 km long to supply 3 regional water reservoirs in Baabda district and distribution lines. The CDR is responsible for the execution and supervision of the works of the conveyor, transmission lines and regional water reservoirs at an estimated cost of US\$ 200 million, funded by the World Bank. The BML water establishment is responsible for the execution of local water reservoirs, treatment plant, and distribution lines; estimated at US \$ 140 million. Around 25% of the work has been completed to date.

**-Diversion and Rehabilitation of the water line between Nabee El Safa and Beiteddine (Mir Bashir Aqueduct):** This project includes works to divert and rehabilitate the water line between Nabee El Safa and Beiteddine including the Mir Bashir Aqueduct, with an approximate cost of US\$ 3.8 million locally funded (Council of Ministers Decision #No. 99 dated 22/05/2014). 20% of the work has been completed to date.

### South Lebanon and Nabatieh Governorates

**-Execution of complementary water networks in Jabal Amel – Bint Jbeil District:** This project complements the Jabal Amel potable water project, it includes the installation of main and secondary water networks in the villages of the District of Bint Jbeil, with a total cost of around US\$ 22 million funded by a Treasury

loan by virtue of Council of Ministers Decision No.99 dated 22/05/2014 and Decrees 12068, 3168, 2168, and 4572. Around 96% of the work has been completed to date.

**-Complementary works for the water systems project in Hebarieh – Hasbaya:** the project is intended to install potable water supply networks and transmission lines to complement the potable water systems in Hebarieh in the District of Hasbaya, with a total budget of US\$ 7.2 million funded by a Treasury loan by virtue of Council of Ministers Decision No.99 dated 22/05/2014. Around 25% of the work has been completed to date.

#### **Bekaa and Baalbeck-Hermel Governorates**

##### **-Completion of rehabilitation of water systems in the villages of East Zahle District (Part II – Section II – Groups, 1,2 and 3):**

The purpose of the works is to construct local reservoirs and install potable water distribution networks in: A'iha, Ain Harsha, Bakka, Deir el Achayer, Kawkaba, Majdel Balhis, Rashaya, Tannoura, Massa, Riit, Kousaya, Kfarzabad, Faour, Majdel Anjar, Souairi, Manara and Ain Kfarzabad. The cost of the project is estimated at US \$ 24.35 million locally funded (Decrees 11064 and 10633). Around 80% of the work has been completed to date.

##### **-Execution of complementary water and wastewater networks in the city of Baalbeck and the neighboring villages – Group I:**

Works include the installation of complementary potable water supply networks and wastewater networks in the city of Baalbeck and some neighboring villages, with a total budget of US\$ 5.9 million locally funded. Around 35% of the work has been completed so far.

**-Execution of various water works in Bkifa - Beit Lahia - Aiha - Haoush:** This project includes the installation of potable water transmission and supply pipes. The cost of this project is estimated at US \$ 2.5 million and is locally funded (Council of Ministers Decision No.99 dated 22/05/2014). Around 10% of the work has been completed so far.

#### **Major contracts signed in 2016**

**-Execution of water works in Qalamoun and Ras Masqa in the outskirts of Chekka and Anfeh, and completion of water projects works in Koura,** with a total budget of US\$ 6.4 million funded by the Arab Fund for Economic and Social Development and the Lebanese Government.

**-Complementary water works in Al Arkoub within the framework of water systems completion project in Hebarieh-Hasbaya,** with a

total budget of US\$ 2.9 million, funded by the Lebanese Government.

**-Annex to the contract pertaining to the potable water project in South Akkar-Jord,** estimated at US\$ 1.6 million, and funded by the Arab Fund for Economic and Social Development and the Lebanese Government.

**-Annex to the contract pertaining to the completion of Kaf Al Tineh potable water supply project,** with a total budget of US\$435.000 funded by the Saudi Fund for Development and the Lebanese government.

**-Annex to the contract pertaining to the execution of works of the optional section of the wastewater and potable water project in the towns of Baalbeck district,** with a total budget of US\$ 5.9 million, funded by the Lebanese Government.

**-Annex to the contract pertaining to the repair and rehabilitation of the water line between Nabee El Safa and Beiteddine (Mir Bashir Aqueduct):** with a total budget of US\$ 600.000 funded by the Lebanese Government.

**-Annex to the contract pertaining to the execution of complementary water supply works in Jabal Amel – South Lebanon:** with a total budget of US\$ 1.9 million, funded by the Lebanese Government.

#### **Major projects under preparation (2017-2019) Greater Beirut**

**-Expansion of Dbayeh potable water treatment plant:** This project aims at increasing water production in Dbayeh water treatment plant. The costs are estimated at US\$5.1 million, and are expected to be funded by the Italian Protocol. The action plan of the project is being currently re-considered with Beirut and Mount Lebanon Water Establishment and works are expected to commence in mid-2018.

**-Greater Beirut water supply augmentation project (Bisri Dam) - Phase II:** the purpose of this project is to supply 500,000 m3 of water daily to Greater Beirut. The project includes the construction of a dam & lake on Bisri River bed, the construction of a hydroelectric power plant, the installations of wastewater systems and land acquisitions, estimated at US\$617 million. The funding is expected to be secured from the Islamic Development Bank, the World Bank and the Lebanese Government. Works are expected to start in the spring of 2018.

#### **Bekaa and Baalbeck-Hermel Governorates**

**-Rehabilitation of water systems in West Bekaa and villages in East Zahle district:** the project is funded by a US\$ 32.9 million grant from the State of Kuwait. This project is complementary to the former works carried out by the Kuwait Fund (installation of potable water distribution networks in Ain Zebdeh, Tel Dnoub, Kefraya, Mansoura, Dakoueh, Salmiya, Tel el Zaazee and Sultan Yacoub al-Tahta in addition to drilling of five wells out of seven in Shamseen area). The project includes the drilling of two wells and equipping of the seven wells, building pumping stations in Shamseen, installation of pumping lines from these two stations to two central reservoirs on Mount Anjar and Mount Terbol; construction of the two mentioned reservoirs in addition to a reservoir in Majdel Anjar and another in Sultan Yacoub al-Tahta and two local reservoirs in Jeb Jenin and Kamed el Laouz, installation of transmission line from these central reservoirs to local reservoirs in West Bekaa and East of Zahle villages, construction of transmission lines from the central reservoir in Baaloul to Jeb Jenin and Kamed el Laouz reservoirs and the distribution networks in both towns. Works are expected to start by the end of 2017.

**-Rehabilitation and improvement of potable water systems in Zahle and surroundings:** The project consists of three parts: Part I includes potable water networks in Haoush el Omara and Ksara, funded, implemented and managed by USAID at an estimated cost of US\$ 5 million. Part II includes the potable water networks in the city of Zahle which are fed from the potable water treatment plant; the cost of this part is estimated at US\$ 5 million, and is implemented and managed by the Ministry of Energy and Water. Part III includes potable water systems in East Zahle, Dhour Zahle, Touaite, Mouaalaka, Karak, Madina Sinaiya, Qaa El Reem and Hezerta. Part III is estimated at US\$ 16 million and is funded by the Kuwait Fund for Arab Economic Development, the budget of the Ministry of Energy and Water, the Lebanese Government and managed by the CDR. Works are expected to start in the summer of 2017.

**-Installation of a transmission line from Mount Arab reservoir to some villages in the Rashaya District:** This project includes the installation of potable water pipelines. The cost of this project is estimated at US\$ 6.5 million and is locally funded (Council of Ministers Decision

No.99 dated 22/05/2014). Works are expected to start in the second half of 2017.

**-Supply of potable water to Hermel district:** This project includes the installation of potable water transmission pipes, construction of water reservoirs, installation of distribution networks and installation of pumping stations. The cost of this project is estimated at around US \$ 19.5 million funded by Treasury Loan No. 99 of 22/05/2014. Works are expected to start in the fall of 2017.

**-Augmentation of water sources in Baalbeck-Hermel governorate:** The project is intended to augment the water sources in Baalbeck-Hermel governorate and will be funded by a grant from the Kuwait Fund for Arab Economic Development (KFAED) within the framework of the Contribution Agreement to the Lebanon Crisis Response Plan (LCRP), as part of the third grant allocated by KFAED to contribute to the Syrian crisis response plans in the host countries, of a value of US\$ 1.5 million. Execution is expected to start in the first half of 2018.

**-Rehabilitation of water treatment station in Fallawi: to increase the production of potable water** alimentering the city of Baalbeck, through a grant from the Kuwait Fund for Arab Economic Development (KFAED) within the framework of the grant allocated for the villages hosting Syrian displaced, of a value of US\$ 1 million. Execution is expected for the first half of 2018.

**-Rehabilitation and upgrading of potable water supply systems in Wadi Dolom – Kab Elias in Zahle –Bekaa:** the funding is approved within the framework of the Contribution Agreement to the Lebanon Crisis Response Plan (LCRP), as part of the third grant allocated by KFAED to contribute to the Syrian crisis response plans in the host countries, of a value of US\$ 2.5 million. Execution is expected to start in the first half of 2018.

**-Drilling, equipping & solar powering of three water wells in El Qaa:** the value of the project is estimated at US\$ 900.000; it will be funded by a US\$ 10 million Arab Fund grant, allocated to the hosting villages of Aarsal, El Qaa, Hermel, and Wadi Khaled. Execution is expected to start in the first half of 2018.

#### North and Akkar Governorates

**-Project to supply potable water to Akkar coastal area – Lot I and II:** the project includes the construction of reservoirs, installation of potable water transmission pipes, and installation of distribution networks and pumping stations servicing all the villages of the Akkar coastal area. The costs are estimated at US\$ 53.6

million, funded by the Islamic Bank for Development. Works are expected to start in the first half of 2018.

**-Completion of potable water projects in Akkar:** works are estimated at around US\$ 20 million. The funds are approved within the framework of the Reconstruction and Development Plan of the Lebanese Republic – Paris III, awaiting the signature of the funding agreement with the Saudi Fund for Development.

**-Completion of water network projects in Qalamoun, Koura and Fouar within North of Lebanon Water Establishment:** the costs are estimated at around US\$ 4.4 million funded by an Italian Government grant. Works are expected to start in the first half of 2018.

**-Renovation of water systems in Minnieh-Danniyeh:** this project aims at complementing the water systems works that the Ministry of Energy and Water had executed between 1998 and 2002. 7 parts of this project are still unexploited, awaiting their completion. After the Italian Government expressed willingness to finance these works estimated at US\$ 7.5 million the CDR started the preparation of related studies. Works are expected to start in the second half of 2017.

**-Drilling & equipping of water wells in Nabi Yousha, Deir Nbouh and Ain el Tineh:** through a grant from KFAED within the framework of the Contribution Agreement to the Lebanon Crisis Response Plan (LCRP), as part of the third grant allocated by KFAED to contribute to the Syrian crisis response plans in the host countries. This project is under study by the CDR and execution is expected to start in the second half of 2017.

**-Upgrading of potable water supply systems in Akkar governorate– the funding is approved within the framework of the Contribution Agreement to the Lebanon Crisis Response Plan (LCRP),** as part of the third grant allocated by KFAED to contribute to the Syrian crisis response plans in the host countries. This project includes the drilling and equipping of five water wells and is divided into two sections. The first section includes two water wells in Kherbet Daoud and El Bireh, and the second section includes three wells in Fnaideq, Beit Mellat and Tekrit. The project is estimated at US\$ 4.5 million. Execution is expected to start in the second half of 2017.

**-Drinking and Irrigation Water Supply Project in Bcharre District:** this project is intended to upgrade the potable water systems in the villages and towns of Bcharre District in order to improve livelihoods and protect public health. The project covers all the villages and towns of

Bcharre District: Bane, Beit Monzer, Barhalyoun, Blaouza, Briset, Diman, Hasroun, Mazraat Assaf, Mazraat BaniSaab, Moghr al Ahwal, Qaniour, Tourza, Hadchit, Bekaa Kafra, Bqarqasha, Kanate and Hadath el Jebbeh. It is worth noting that the potable water supply system for the towns of Bcharre and Al Arz is being currently executed with funding from the Arab Fund for Economic and Social Development. The project includes the execution and equipping of 11 water wells, and the construction of 13 water pumps and 18 water storage tanks, with capacities ranging between 100 and 2000 cubic meters, as well as the construction of water transmission and distribution lines (200 km long). The Project also includes the rehabilitation of Qadisha Spring existing facilities and the construction of a reservoir for surface water in Ouadi Ech Chech with a capacity of about 200,000 cubic meters for irrigation. The cost of the project is estimated at US\$ 37 million, and is expected to be funded by the Kuwait Fund for Arab Economic Development (KFAED). Works are expected to start in the second first half of 2018.

#### Mount Lebanon Governorate

**-The catchment of the Barouk spring in Chouf District:** this project aims at increasing the potable water supply in Chouf and Aley regions. The cost of the project is estimated at US\$ 1 million and is funded by the Arab Fund for Economic and Social Development. Works are expected to start during 2018.

**-Water supply augmentation projects in Iqlim el Kharroub in Chouf district – Mount Lebanon governorate:** the funding is approved within the framework of the Grant Contribution Agreement to the Lebanon Crisis Response Plan (LCRP), as part of the third grant allocated by KFAED to contribute to the Syrian crisis response plans in the hosts countries, of a value of US\$ 2.5 million. Execution is expected to start in the second half of 2017.

**-Completion of water projects in Chouf and Aley districts:** funded by the Saudi Development Fund. The project is intended to complete the potable water systems in the Chouf and Aley districts in Mount Lebanon governorate, with a value of US\$ 15 million. Execution is expected to start in the first half of 2018.

#### South Lebanon and Nabatieh Governorates

**-Execution of complementary water works within the area of the South of Lebanon Wa-**

**ter Establishment:** the purpose of the project is to execute works to install complementary potable water supply network and transmission lines within the area covered by the South of Lebanon Water Establishment. The cost of this project is estimated at around US\$ 6 million and will be funded by the Arab Fund for Economic and Social Development. Works are expected to start in the second half of 2017.

**-Execution of complementary potable water works in the area covered by Jabal Amel Water Department (Phase 3):** The project includes the installation of complementary potable water supply networks and transmission lines within the framework of the potable water project at the Jabal Amel water department, with a total budget of US\$ 73 million, funded by the CDR (Horizon 2000 plan) and by the Islamic Bank. Works are expected to start in the second half of 2017.

**-Execution of complementary water works in Kfarrouman in Nabatieh –** The project includes the execution of complementary water networks in Kfarrouman in Nabatieh, with an approximate budget of US\$ 2.5 million, funded by the Abu Dhabi Fund. Works are expected to start in the first half of 2018.

**-Drilling & equipping of a water well and completion of potable water network in Chebaa:** This US\$ 2.1 million project falls under the Lebanon Host Communities Support Programme (LHSP) (Grant # 12135). This project is in the detailed studies phase. Execution is expected to start in the second half of 2017.



Greater Beirut Water Supply Project



Greater Beirut Water Supply Project



Construction of Kaisamani Dam

**Major contracts signed during 2016**

Project name	Contract amount (US\$)	Funded by	Execution starting date	Expected delivery date
Execution of Qalamoun and Ras Masqa water project on the outskirts of Chekka and Anfeh and complimentary projects in Koura	6,236,969	Arab Fund for Economic and Social Development, CDR (Horizon 2000)	April 2016	April 2018
Complementary water works in Al Arkoub within the framework of water systems completion project in Hebarieh-Hasbaya	2,923,663	Lebanese Government	June 2016	June 2017
Annex to the contract pertaining to the potable water project in South Akkar-Jord	1,553, 280	Arab Fund for Economic and Social Development & the Lebanese Government	June 2016	June 2017
Annex to the contract pertaining to the completion of Kaf Al Tineh potable water supply project	435, 499	Arab Fund for Economic and Social Development & CDR (Horizon 2000)	Octobre 2016	December 2016
Annex to the contract pertaining to the execution of works of the optional section of the wastewater and potable water project in the towns of Baalbeck district.	5,900,606	Lebanese Government	December 2016	March 2018
Annex to the contract pertaining to the repair and rehabilitation of the water line between Nabee El Safa and Beiteddine (Mir Bashir Aqueduct)	600,588	Lebanese Government	November 2016	January 2018
Annex to the contract pertaining to the execution of complementary water supply works in Jabal Amel – South Lebanon.	1,892, 831	Lebanese Government	October 2016	July 2017

**Major projects under preparation (2017-2019)**

Project name	Contract amount (US\$)	Funded by	Execution starting date	Expected delivery date
Greater Beirut water supply augmentation project –Phase II (Construction of Bisri Dam & Lake)	617,000,000	World Bank/Islamic Bank/Lebanese Government	May 2018	May 2023
Rehabilitation and improvement of potable water systems in Zahle and surroundings	16,018,416	Kuwait Fund for Arab Economic Development & the Lebanese Government	August 2017	August 2019
Project to supply potable water to Akkar plain – Lot 1 & 2	53,668,000	Islamic Bank for Development	May 2018	May 2021
Completion of potable water projects in Akkar	20,000,000	Saudi Fund for Development	September 2018	December 2020
Renovation of water systems in Minyeh - Danniyeh	7,425,000	Grant from the Italian Government	December 2017	December 2018
Completion of water networks in Qalamoun, Koura and Fouar regions within North of Lebanon Water Establishment	4,400,000	Grant from the Italian Government	April 2018	April 2020
Project for the catchment of Barouk spring in Chouf district	1,000,000	Arab Fund for Economic and Social Development	July 2018	July 2019
Execution of complementary water supply works in Jabal Amel – South Lebanon.	73,000,000	CDR's Budget (Horizon 2000) + Islamic Bank	September 2017	September 2022
Expansion of Water treatment plant in Dbayeh	5,100,000	Italian Protocol + CDR's Budget (Horizon 2000)	June 2018	June 2019
Installation of a transmission pipeline from Mount Arab reservoir to some villages in the district	6,500,000	Treasury loan No.99 of 2014/05/22	December 2017	December 2018
Execution of complementary water works within the range of the South of Lebanon Water Establishment	5,880,000	Arab Fund for Economic and Social Development and CDR's budget (Horizon 2000)	October 2017	October 2018
Supply of potable water to Hermel district	19,500,000	Treasury loan No.99 of 2014/05/22	November 2017	November 2018
Execution of complementary water works in Kfarrouman – in Nabatieh	2,450,000	Abu Dhabi Fund	May 2018	May 2019
Rehabilitation of water systems in West Bekaa and villages in East Zahle district	32,900,000	Grant from Kuwait Government	December 2017	December 2020

Augmentation of water supply project in Baalbeck-Hermel governorate	1,500,000	Kuwait Fund for Arab Economic Development	May 2018	May 2019
Rehabilitation of water treatment station project in Fallawi	1,000,000	Kuwait Fund for Arab Economic Development	June 2018	June 2019
Rehabilitation and upgrading of potable water supply systems in Wadi Dolom – Kab Elias in Zahle –Bekaa	2,500,000	Kuwait Fund for Arab Economic Development	June 2018	June 2019
Drilling & equipping of water wells in Nabi Youha, Deir Nbouh and Ain el Tineh	350,000	Kuwait Fund for Arab Economic Development	May 2018	May 2019
Upgrading of potable water supply systems in Akkar governorate	4,500,000	Kuwait Fund for Arab Economic Development	December 2017	December 2018
Drinking and Irrigation Water Supply Project in Bcharre District	37,000,000	Kuwait Fund for Arab Economic Development	February 2018	February 2020
Water supply augmentation projects in Iqlim el Kharroub in Chouf district – Mount Lebanon governorate	2,500,000	Kuwait Fund for Arab Economic Development	December 2017	December 2019
Completion of water projects in the districts of Chouf and Aley	15,000,000	Saudi Fund	February 2018	February 2019
Drilling and Equipping of a water well and completion of potable water network in Chebaa	2,120,000	Kuwait Fund for Arab Economic Development	December 2017	December 2018
Drilling, equipping & solar powering of three water wells in El Qaa	900,000	Arab Fund	June 2018	December 2018

# Water Supply Completed & Ongoing Projects



- 40 Qoubaiyat
- 41 Akroum - Kfartoun
- 42 Ain Yaacoub
- 43 Beit Mellat
- 44 Tripoli Network & Water Treatment Plant
- 45 Batroune
- 46 Nahr Ibrahim Jbeil
- 47 Meten
- 48 Raayan - Aley
- 49 Iqim El Kharroub Central Region
- 50 Saida System
- 51 Jezzine
- 52 Sour
- 53 Sour Rural Region
- 54 Baalbeck - Nabi Chit
- 55 Chemistar
- 56 House Connections Yammouneh
- 57 Yammouneh
- 58 Ouyon Orgoche
- 59 Nabi Youshaa & Deir Amar Well Equipments
- 60 Rehabilitation of Water Networks In Nabatiyeh
- 61 Secondary and Tertiary Networks in Beddawi
- 62 Water supply Project in Becharre
- 63 Purchase and installation of a vertical pump at Ras Al Ain pumping station. Part of Pumpin Stations Rehabilitation Project In Sour
- 64 Rehabilitation of Water Systems in CHEKKA and ANFEH in the coastal area of BATROUN and KOURA.
- 65 Complete Supply of Water for the area of BARGHASH, HRAR, KAF EI Tine and QUABIIT
- 66 Execution of Water Supply Networks and Boreholes and Pumping Stations in the Cazas of KOURA and BATROUN.
- 67 Installation of Additional Water Supply Networks in AIN ED DELBE Water Establishment (previously).
- 68 Rehabilitation of Water Systems in WEST BEKAA and the Villages of EAST ZAHLE and RACHAYA - Lots 2 & 3.
- 69 Complete Supply of the Villages from HRAR and QUABIIT water Reservoirs in SOUTH AKKAR.
- 70 Project for Upgrading of Potable Water System in Jbeil Caza.
- 71 Construction of AL MANZOUUL Dam
- 72 Greater Beirut water supply project
- 73 Construction of Bisri dam
- 74 Diversion and rehabilitation of water pipeline from NabeeEsSafa and Beteddine
- 75 Complementary works for the water supply project in Hebbarye
- 76 Drilling of two boreholes and water supply works in BintJbeil
- 77 Additional water works in the caza of BintJbeil
- 78 Various water works in some villages in the caza of Rachaya
- 79 Conveyor 800



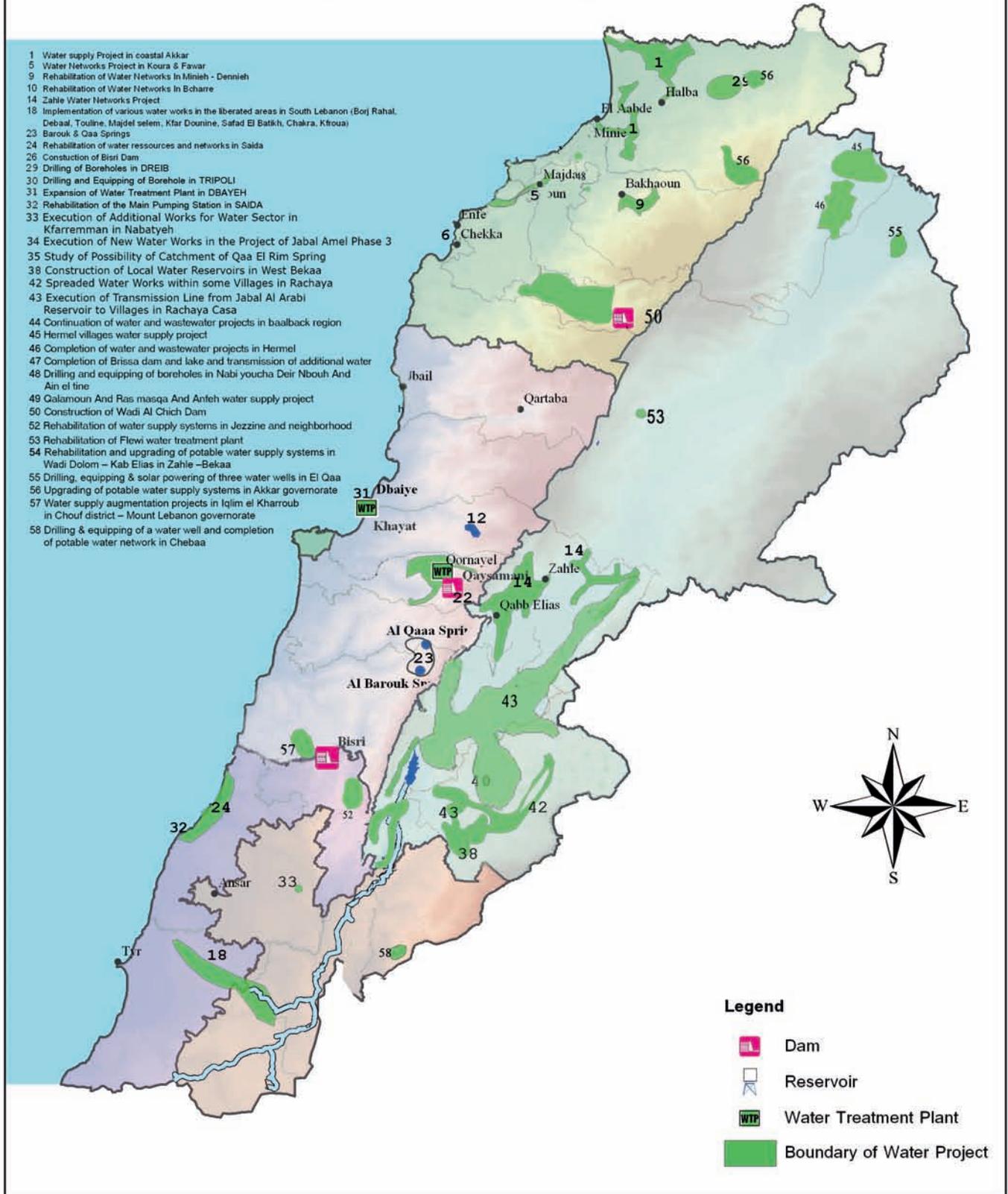
- 1 Water supply project in Akkar El Aatiqa villages
- 2 Water supply project in El Bergosh - Hrar & Kaf El Tineh & Kabit
- 3 Brisa dam construction (North)
- 4 Completion of water supply project in the villages of El Minnieh - Dinnieh caza
- 5 Implementation of various water works in Zaghrta
- 6 Secondary and tertiary networks in Tripoli + Add nb 1
- 7 Extension of Bahsas water treatment plant + Add nb 1
- 8 Implementation of water works in Koura & Tripoli
- 9 Construction of a new drinking water distribution network & sewerage system for Ehdn
- 10 Completion of water supply project works in Batroun
- 11 Equipping of Jaran & Aabdy water plants with electric generators
- 12 Rehabilitation of Mounseh well pumping station (Caza of Akkar)
- 13 Keserwan coastal area water supply project + Add nb 1 & 2
- 14 Construction of main waterline in Bhanne - Nabaa El Assal - Section 1
- 15 Construction of Raayan Spring - Aley water conveyor
- 16 Implementation of various water works in the region of Barouk
- 17 Drilling and equipping wells for drinking water project in a number of Southern Lebanese damaged areas
- 18 Construction of a water reservoir, water distribution networks and drilling of two new boreholes in Nabatieh, Lot 1
- 19 Construction of Nabah El Tasseh spring - Nabatieh water conveyor
- 20 Implementation of water supply and wastewater works in the caza of Sour
- 21 Drilling and equipping wells for drinking water project in a number of southern Lebanese damaged areas
- 22 Construction of a water reservoir, water distribution networks and drilling of two new boreholes in Nabatieh, Lot 2
- 23 Rehabilitation project of Taybeh water treatment plant : works + Add nb.1
- 24 Execution of potable water works in the region of Jabal Amel
- 25 Construction of water supply networks in Hebbariyeh
- 26 Rehabilitation of West Bekaa water systems & villages of east zahle Lot 1
- 27 Execution of potable water transmission lines, networks and reservoirs in the region of Bekaa
- 28 House connections construction in Baalbeck city and the villages of (Khoder, Nabi shit & Khoraybi)
- 29 Construction of service connections and additional distribution network for 17 cities in Baalbeck + Add.nb 1
- 30 House connections water supply project in Baalbeck and Aamshki
- 31 North Baalbeck region water supply project - Lot III - Phase 1 + Add nb.1
- 32 North Baalbeck - Potable water supply project - Lot 1 & 2
- 33 Drilling and equipping of water wells in Bekaa, South, Doueir & Qlaile
- 34 New water supply distribution service connections in Yammouneh and Ouyon Orgoch regions
- 35 Drilling and equipping of water wells in Bekaa, South, Doueir & Qlaile
- 36 Execution of potable water transmission lines, networks and reservoirs in the region of Bekaa
- 37 Implementation of the works of irrigation canals within the project of potable water supply the area of Hermel
- 38 QAISSAMANI Dam Project.

## Legend

-  Dam, Completed
-  Water Treatment Plant, Completed
-  Boundary of Water Project, Completed
-  Boundary of Water Project, Ongoing

# Water supply Projects Under Preparation

- 1 Water supply Project in coastal Akkar
- 5 Water Networks Project in Koura & Favar
- 9 Rehabilitation of Water Networks in Minieh - Dennieh
- 10 Rehabilitation of Water Networks in Bchare
- 14 Zahle Water Networks Project
- 18 Implementation of various water works in the liberated areas in South Lebanon (Boj Rahat, Debaal, Touline, Majdel selem, Kfar Dounine, Safad El Batikh, Chakra, Kfroua)
- 23 Barouk & Qaa Springs
- 24 Rehabilitation of water resources and networks in Saida
- 26 Construction of Bisri Dam
- 29 Drilling of Boreholes in DREIB
- 30 Drilling and Equipping of Borehole in TRIPOLI
- 31 Expansion of Water Treatment Plant in DBAYEH
- 32 Rehabilitation of the Main Pumping Station in SAIDA
- 33 Execution of Additional Works for Water Sector in Kfarremman in Nabatyeh
- 34 Execution of New Water Works in the Project of Jabal Amel Phase 3
- 35 Study of Possibility of Catchment of Qaa El Rim Spring
- 38 Construction of Local Water Reservoirs in West Bekaa
- 42 Spreaded Water Works within some Villages in Rachaya
- 43 Execution of Transmission Line from Jabal Al Arabi Reservoir to Villages in Rachaya Casa
- 44 Continuation of water and wastewater projects in baalback region
- 45 Hermel villages water supply project
- 46 Completion of water and wastewater projects in Hermel
- 47 Completion of Brissa dam and lake and transmission of additional water
- 48 Drilling and equipping of boreholes in Nabi youcha Deir Nbouh And An el tine
- 49 Galamoun And Ras masqa And Anteh water supply project
- 50 Construction of Wadi Al Chich Dam
- 52 Rehabilitation of water supply systems in Jezzine and neighborhood
- 53 Rehabilitation of Flewi water treatment plant
- 54 Rehabilitation and upgrading of potable water supply systems in Wadi Dolom – Kab Elias in Zahle –Bekaa
- 55 Drilling, equipping & solar powering of three water wells in El Qaa
- 56 Upgrading of potable water supply systems in Akkar governorate
- 57 Water supply augmentation projects in Iqlim el Kharroub in Chouf district – Mount Lebanon governorate
- 58 Drilling & equipping of a water well and completion of potable water network in Chebaa



## Legend

-  Dam
-  Reservoir
-  Water Treatment Plant
-  Boundary of Water Project

# WASTE WATER

## Sector Overview

Until early nineties, the wastewater facilities were limited to old networks disproportionately distributed across the country. The major cities were equipped with incomplete wastewater networks with no treatment facilities, while smaller communities lacked both waste water networks and treatment plants. As a result, the ground and surface water pollution exacerbated day after day (free discharge polluting the sea and the shores, inappropriate septic tanks, surface water channels and streams polluting the aquifers...), yet creating health-threatening and environmental problems.

The insufficiency of wastewater service in the Lebanese territory is due to many reasons, mainly:

- 1) The insufficient spending in the sector, in other terms the lack of investments required to improve and develop the wastewater facilities up to an appropriate service and environmental levels.
- 2) The absence of a convenient management and executive structure that responds to the increasing need for wastewater service and adopt new management methods and modern wastewater disposal techniques.

To face this hazardous situation, the CDR has intervened since 1992 through the following waste water development strategy:

- 1) The execution of urgent repairs and renovations of the existing wastewater networks and pumping stations, and tackling the new challenges faced.
- 2) Completion of the unfinished projects that were interrupted by force-majeure, and expanding/rehabilitating networks according to needs.
- 3) Implementation of two programs aimed at protecting the Lebanese coasts and water Resources from pollution.

In other words, the target of this strategy is to address the pollution problem and the wastewater disposal across all Lebanese territory. Meanwhile, the Lebanese Government is still working on the re-organization of the sector and the improvement of the public wastewater service.

At the institutional level, the promulgation of Law No. 221/2000 constituted a primordial step towards the restructuring and modernization of the sectors of water and wastewater; the public water properties were delimited (surface and underground) and water management (potable, irrigation, and wastewater) was completely vested in four independent public institutions (except irrigation in South Lebanon and West Bekaa which remained under the management and exploitation of the Litani River Authority). Moreover, all the water utilities became affiliated with these institutions, under the tutelage of the Ministry of Energy and Water.

In 2001, the administration boards for the water institutions were appointed. In 2005, organizational decrees were issued in order to achieve many goals, mainly rehabilitating and improving the level of service rendered by the water and wastewater utilities, extending their coverage, and assure the maintaining their administrative functionality and financial sustainability.

## Achievements between 1992 and 2016

The aggregate value of projects implemented to date in the wastewater sector totaled US\$ 714\* million; the main projects are the following:

### •Rehabilitation of wastewater networks (within the framework of National Emergency Recovery Program NERP1-first year):

Achievements under NERP include the urgent rehabilitation and construction of sewer networks in different areas of Lebanon, in addition to the rehabilitation of two wastewater-pumping stations in Al Mina (Tripoli) and Jounieh, and the construction of 1000 kilometers of sewer networks and channels.

### •Completion of Al Ghadir Wastewater

**Pre-treatment Plant:** The construction and equipment of the wastewater pre-treatment plant were completed in Ghadir, South of Beirut, as well as the rehabilitation of the associated sea outfall with a total budget of US\$ 10 million. This plant will serve the southern part of the Districts of Baabda and Aley, the west-southern part of Greater Beirut and the northern parts of the District of Chouf. This plant was put in service in November 1997.

### •Beirut coastal wastewater collector project:

The purpose of this project is to protect the coastal strip extending from the District of Metn

to the District of Chouf and eliminate all sea outfalls along this area by collecting and conveying the wastewater to the Dora and Ghadir pre-treatment plants. The conveyor line comprises two sections: the northern section and the southern section.

**The northern section includes the 17 km coastline extending from Dbayeh to Dora and from Ras Beirut to Dora**, in addition to five pumping and lifting stations. All works were completed in 2000 (with an approximate budget of US\$ 48 million), to serve 1.5 million residents living in the Beirut River catchment area.

\*the amount includes a number of active contracts, exclusive of the costs of land acquisitions.

The southern section includes the Carlton-Al Ghadir collector line, with a total budget of US\$ 15 million. It is designed to serve 750,000 residents in the south western part of Beirut city and part of its southern suburbs, and a part of the District of Baabda, while the Damour-Al Ghadir line, with an approximate budget of US\$ 9.5 million funded by the Islamic Bank, is designed to serve a major part of the District of Aley and part of the District of Chouf (more than 100,000 residents). It includes 30 km long collection pipes and three pumping stations.

**•Execution of the first phase of rehabilitation of Beirut infrastructure, including the wastewater network (sections 1 and 2) with an approximate budget of US\$ 25 million.**

The project aims mainly at constructing a new independent rainwater drainage network separated from the wastewater network.

**•Execution of the second phase of rehabilitation of Beirut infrastructure, including the wastewater network**, with an approximate budget of US\$ 38.5 million funded by Islamic Bank for Development; and the execution of first component of phase III in Ashrafieh and Rmeil, with an approximate budget of US\$ 10 million, funded by the Arab Fund for Economic and Social Development.

**•Completion of the pre-treatment plant in Saida and its sea outfall** with an approximate budget of US\$ 21 million funded by the Japan Bank for International Cooperation (JIBC), and the execution of the first phase of wastewater networks rehabilitation in Saida and its suburbs, as well as phase 2 of wastewater collection networks in the coastal area of Sidon, with an approximate budget of US\$ 22 million, funded by

Japan Bank for International Cooperation (JIBC). This is a preparatory step to connect these networks with the lines extending to the completed treatment plant.

**•Completion of the works in Tripoli wastewater treatment plant**, with a total budget of EUR 92 million, and completion of works in the connected sea outfall with a total budget of EUR 6 million. Both projects were funded by the European Investment Bank (EIB). The project serves Tripoli coastal area, Al Qalamun, some sections of the Districts of Koura and Zgharta, in addition to the coastal areas of Beddaoui, Deir Aamar and Minnieh.

**•Northern wastewater coastal collector section extending over the coast of Tripoli (Bared-Beddaoui sections)**. It includes the main collector, the lifting stations, and the main, secondary and subsidiary sewer lines connected to the main collector, serving more than 100,000 residents, with a total budget of EUR 12 million funded by a grant from the German Government. The donor implemented and managed the project in collaboration with the Council for Reconstruction and Development (CDR).

**•Southern wastewater coastal collector section extending over the coast of Tripoli, serving regions in Koura, Qalamoun, Bohsas and Tripoli**, with a total budget of US\$ 13.50 million, funded by a loan from the European Bank for Investment and the Lebanese Government.

**•Construction of a secondary wastewater treatment plant in the coastal area of Tyre, to serve around 300,000 residents**, with a total budget of US\$ 40 million, funded by the European Bank for Investment. In addition, wastewater networks were installed within the framework of this project, with a total budget of US\$ 9.30 million, funded by the Lebanese Government.

**•Completion of the works stipulated in the Lebanese-French Protocol Agreement on Waste Water Treatment with a total budget of EUR 56 million**; the works included the construction of waste water treatment plants and sea outfalls (for the coastal plants) in the following regions: Chouf coast (Ras Nabi Younes), Nabatieh (Sharqiyeh), Chekka, Batroun (sea outfall under construction) and Jbeil. The first plant is designed to serve the coastal villages

and cities of Iqlim el Kharoub; the second plant serves Nabatieh and a number of neighboring villages and towns, and the third and fourth plants serve the coastal towns and villages of the District of Batroun, whereas the fifth serves the coastal area of the District of Jbeil.

•**Project for the construction of wastewater networks and pumping/lifting stations in the villages and towns of coastal Chouf**, connected to the waste water treatment plant located in Ras Nabi Younes, with a total budget of US\$ 19 million, funded by the Arab Fund for Economic and Social Development and the Lebanese Government.

•**Project for the construction of wastewater networks and pumping/lifting stations in the villages and towns of coastal Chekka**, connected to the waste water treatment plant located in Chekka, with a total budget of US\$ 18 million, funded by the French Development Agency and the Lebanese Government. Work is underway to make the Chekka treatment plant operational.

•**Completion of the wastewater networks in the villages of the Chouf Es Souayjani Municipalities federation**, with a total budget of US\$ 5.75 million, locally funded.

•**Construction of a wastewater treatment plant in Baalbeck (laat)**, with a total budget of US\$ 6.35 million funded by the IBRD, to serve the city of Baalbeck and several neighboring villages.

•**Completion of the sewer lines and additional drinking water distribution lines in Khodor, Khraibeh, Nabi Shit and Baalbeck**, with a total budget of US\$ 5.3 million, funded by the World Bank.

•**Implementation of a pilot project for wastewater treatment in Bcharre in the North of Lebanon, through the adoption of bamboo filtering technique**, with a total budget of US\$ 700.000, funded by the French Development Agency.

•**Maintenance and upgrading of wastewater and rain water networks in main cities:** The works started in 1997 upon a Council of Ministers resolution. The works included periodical

maintenance, repair of wastewater and rain-water lines in main cities, in addition to limiting the overflows and preventing breakdowns in the existing networks. The works also included the cleaning of wastewater and rainwater lines, the installation of pipes and other necessary supplies to improve the efficiency of these networks. The project covered Greater Beirut with its southern and northern suburbs, Tripoli, Zahle, Jounieh, Saida, Tyre, Nabatieh and their suburbs. This project was implemented in coordination with the Ministry of Interior and Municipalities.

#### **Progress of the ongoing projects:**

1. **Coastal Pollution Control Program:** Lebanon signed several agreements to protect the Mediterranean waters against pollution, namely the Barcelona Convention. These agreements stressed on the necessity of treating wastewater before it is discharged in the sea in cities and towns with populations exceeding 100,000 residents. Accordingly, preparations were made to execute several wastewater collection and treatment systems in the coastal areas of Lebanon. To date, the aforementioned treatment plants and affiliated collection networks were completed. The following projects are underway:

-**The construction of main wastewater lines and sewer networks in a number of mountainous villages of Aley and Baabda** located within the water basin of Al Ghadir Wastewater Treatment Plant, with an approximate budget of US\$ 17 million, funded by the Government of Germany. 75% of the work has been completed to date.

-**The waste water collection and treatment project in the northern coastal area of Greater Beirut serving 1.3 million residents** has started by implementing phase-1 installation of main wastewater lines and sewer networks in the suburbs and a number of villages in the District of Metn located within the Beirut River Water Basin (Dora), with a total budget of US\$ 22 million, funded by the European Investment Bank. 90% of the work has been completed to date.

-**The complementary wastewater networks connected to the wastewater treatment plant of the coastal area of Tyre** with a total budget of US\$ 21 million funded by the European Investment Bank (EIB); 90% of the work has been completed to date. Also, the installation of complementary wastewater networks connected to the treatment plant is underway, with a total budget of US\$ 26 million funded by the Leba-

nese Government, with 30% completion to date.

**-Execution of the sea outfall connected to the wastewater treatment plant in the coastal area of Tyre**, with a total budget of US\$ 12 million funded by the European Investment Bank (EIB); 70% of the work has been completed to date.

**-The installation of wastewater networks and pumping/lifting stations in villages and towns in Batroun region**, with a total budget of US\$ 24 million, funded by the French Development Agency and the Lebanese Government. 95% of the work has been completed to date.

**-The installation of wastewater networks and pumping stations for villages and towns in Koura coastal and mid region – Phase I**, with a total budget of US\$ 16.50 million, funded the French Development Agency and the Lebanese Government. 95% of the work has been completed to date.

**-The installation of house connections related to the sewer networks in Koura (Phase I)**, with a total budget of US\$ 4 million, locally funded. 95% of the work has been completed to date.

**-Moreover, the Council for Development and Reconstruction launched the potable water and wastewater networks project in Jbeil coastal area**, with a total budget of EUR 38 million project funded by the Government of Italy for, with EUR 19 million allocated to wastewater. 35% of the work has been completed to date.

### **Water Resources Protection Program**

In 1994, the Ministry of Environment conducted a study to update the Wastewater Master Plan of 1982. This study defined water gravity basins and priority areas for the construction of new wastewater treatment plants to protect water Resources from pollution. Later on, the Ministry of Energy and Water developed in 2010-2011 a Waste Water Strategy that was subsequently adopted by the government.

Since the nineties, and with the aim to protect these basins, funds have been secured to implement new wastewater systems in main inland cities (Zahleh, Baalbeck, Nabatieh, and others); and in villages/towns close to water Sources and springs (Laboueh, Qaraoun Lake, Anjar, Hermel, Mechmech, Becharre, Bakhoun, Chebaa, Jbaa, Hasbaya, Chakra, Hrajel and Kartaba).

The Construction of the Baalbeck wastewater treatment plant, funded by the World Bank, was

completed in the summer of 2000; the wastewater collection and treatment works in the from the regions of Jebb Jannine and Saghbine and neighboring villages were completed, with a total budget of US\$ 39 million funded by the Islamic Development Bank. Similarly, the construction a wastewater treatment plant in Zahle and its associated lines, with a total budget of US\$ 29 million funded by the Lebanese-Italian Financial Protocol, is completed and is expected to become operational soon.

In Mount Lebanon Region, a project was launched to construct a wastewater treatment plant for the region of Khenchara and its neighboring villages (Khenchara, Baskinta, Marjaba, Ghabet Bolonia, Mrouj, Dhour Choueir and others), with a total budget of US\$ 9 million funded by the Abu Dhabi Development Fund. In addition the CDR completed the rehabilitation, operation and maintenance works in 3 sewer treatment plants in the district of Chouf (Jdeidet el Chouf, Ainbal & Gharifeh) with local funds amounting to US\$ 1.75 million. The CDR also installed and put in service sewers lines and a treatment plant in Kfar Katra with local funds amounting to US\$ 1.40 million

In the South of Lebanon, the CDR completed three treatment plants and their associated sewer networks in Yohmor, Kfar Sir, and Zaoutar, with a total budget of US\$ 15.20, funded by the European Union.

The CDR recently implemented a pilot project in Becharre through the installation of a waste water treatment plant, adopting the “Filtre a Roseaux” technique, with a total budget of US\$ 625,000 funded by the French Government.

On the other hand, the construction of two wastewater treatment plants and networks in Barouk, Freidis, AinZhalta, Nabaa el Safa, Al Aazouniye and Ain Dara is underway, with a total budget of US\$ 20 million funded by the Arab Fund for Economic and Social Development (80% of the work has been completed); the construction of wastewater networks in the villages of the Union of Municipalities of Chouf-Souaijani is also underway, with a total budget of US\$ 12.50 million locally funded. 80% of the work has been completed; similarly, the execution of sewer networks started in the region of Upper Chouf, with a local funding of US\$ 7.25 million. 25% of the work has been completed.

**Main contracts signed during 2016**

• **Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Chekka- Anfeh**, with a value of US\$ 110.000 funded by the French Development Agency and the Lebanese Government.

• **Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Batroun**, with a value of US\$ 7 million funded by the French Development Agency and the Lebanese Government.

• **Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Koura**, with a value of US\$ 3.30 million funded by the French Development Agency and the Lebanese Government.

• **Addendum to the contract related to the installation of wastewater networks in the northern area of Greater Beirut – Phase I**, with a value of US\$ 2.40 million funded by the European Investment Bank (EIB).

• **Addendum to the contract related to the execution of main waste water lines in a number of coastal areas in the districts of Aley and Baabda, located within the catchment of Al Ghadir River**, with a total budget of US\$ 4 million funded by the German Development Agency (GIZ) and the Lebanese Government.

• **Addendum to the contract related to the execution, operation and maintenance of the Treatment Plant in Nabatieh**, with a total estimated value of US\$ 400.000, locally funded.

• **Addendum to the contract related to the execution of wastewater networks in the coastal region connected to Tyre secondary treatment plant**, with a total budget of US\$ 5.50 million, funded by the European Investment Bank (EIB) and the Lebanese Government.

• **Execution of additional wastewater networks in the coastal regions connected to Tyre secondary treatment plant**, with a total value of US\$ 25.80, funded by the Lebanese Government

• **Addendum to the contract related to the construction of wastewater networks and pumping stations in the villages and towns in coastal Chouf to be connected to Ras Nabi Younes Treatment Plant**, with a total budget of US\$2.50 million funded by the Arab Fund for Economic and Social Development and the Lebanese Government.

• **Addendum to the contract related to the execution of wastewater house connections in Zawtar, Kfar Sir and Yohmor**, with a total budget of US\$ 0.167 million locally funded.

**Main Projects under Preparation (2017-2019)****1-Coastal Pollution Control Program:**

The Ministry of Energy and Water previously conducted a comprehensive study for the district of Akkar. As a result, a Master Plan for Waste water Collection and Disposal in Akkar was developed and outlined, among others, the construction of waste water networks and a treatment plant on the Abdeh coast. To implement this scheme, the CDR obtained a loan from the Arab Fund, and preparations are underway to launch the tenders.

The CDR secured also a EUR 70 million financial assistance from the European Investment Bank to construct two wastewater treatment stations on the Kesrwan coastal zone, and another EUR 70 million financial assistance from the French Development Agency to install the associated networks. Work is underway to update the studies and develop the tender documents pertaining to this project.

Similarly, the CDR is also preparing to launch the project for wastewater pre-treatment plant in Dora (northern Beirut) and its associated remaining networks after securing a EUR 60 million financial assistance from the European Investment Bank. The execution of the waste water networks component for this project is underway.

Also, the feasibility study for the upgrading of Al Ghadir Wastewater Pre-treatment Plant (South of Beirut city) was recently updated. The CDR secured necessary funds to cover the costs of Phase I works which includes the construction of the complementary wastewater networks, and the upgrade of the existing pre-treatment plant with a total budget of US\$ 173 million through negotiations held with the European Investment Bank and the Islamic Development Bank.

On the other hand, the CDR obtained a US\$ 100 million additional funding for the continuation of water and wastewater projects in a number of coastal and inland Lebanese regions, including

the Akkar coastal area, where the cost of the project and the of wastewater collection and treatment is estimated at around US\$ 40 million. Preparations are underway to release the first associated call for tenders, and to continue the construction and installation of waste water networks in the Chouf coastal area connected to Ras Nabi Younes treatment Plant.

The CDR recently initialed a US\$ 65 million loan, with the Kuwait Fund, to fund the execution of Sarafand system in the district of Saida for the collection and treatment of waste water in the coastal areas extending from Zahrani to Qasmieh River.

Also the CDR obtained a US\$ 5 million grant from the Kuwait Fund to complete the waste water network in El Mina in Tripoli and connect it to the coastal line extending to the existing treatment plant, and a US\$ 7 million grant to complement the waste water network in Dekerman area in Saida and connect it to the coastal line extending to the existing pre-treatment plant.

The CDR is also working on acquiring the required funds for the upgrade of the existing Saida Waste Water pre-treatment Plant.

**II-Water Resources Protection Program:** The Ministry of Energy and Water and the CDR have identified around 20 inland wastewater projects to protect water sources (springs, rivers, lakes, etc.). Detailed studies are completed for many projects that mostly fall within the framework of the financing agreements (Italian Protocol, Islamic Development Bank and Arab Fund for Economic and Social Development). A special focus is directed towards the West Bekaa area, Qaraoun Lake and the Litani River, where the high level of water pollution requires an urgent intervention through the installation of wastewater collection lines and treatment facilities.

The CDR had also secured funds to implement the wastewater project in the upper basin of the Litani River through a US\$ 85 million loan agreement signed with the Arab Fund for Economic

and Social Development (AFESD) to finance water and waste water projects in a number of Lebanese areas. Chebaa, Becharre, Safa and Barouk areas also benefit from this loan. The CDR obtained an additional loan of US\$ 100 million to fill the financial gap and continue the implementation of these projects.

The CDR also obtained a EUR 27 million loan from the German Agency KfW to implement a project estimated at US\$ 38 million to protect the Jeita spring from pollution. The related studies are underway. The project is divided into three phases aiming at collecting and treating wastewater generated from towns and villages situated within the catchment area of Daraya, Kleiat, Bekaata, Bkaatouta, Kfardebian and neighboring cities in the District of Kessrouan.

Moreover, the CDR is conducting the necessary studies prior to launching two wastewater collection and treatment projects in Mechmech – Akkar and Hrajel – Keserwan, estimated at around US\$ 55 million funded by the Italian Protocol. The CDR is also preparing to launch the bidding for the waste water collection and treatment project in a number of villages in Central Bekaa (Anjar – Majdel Anjar- Souairi-Bar Elias-Kab Elias-Marj...) funded by the Italian Protocol.

The CDR also received a US\$ 46 million loan from the Kuwait Fund for Arab Economic Development to implement wastewater collection and treatment systems in the villages in Marjeyoun and Bint Jbeil in Nabatieh governorate. In addition, the CDR received a EUR 15 million grant from the European Union to complement waste water networks in Koura (Wadi Hab/Dahr El Ain – Bohsas line, and Wadi el Nakhle Abou Halka/Batroumin-Ras Masqa line) and in Tripoli (Qalamoun- Bohsas connector), and connect them to the existing plant in Tripoli, and complement the waste water network and connect it to the existing plants in Ablah and Forzol in the District of Zahle.



**Waste Water Treatment Plant - Tebnin**

**Schedule of main contracts signed in the wastewater sector during 2016**

Project	Estimated value (US\$ million)	Source of Funding	Start Date	Scheduled Completion Date
Execution of additional wastewater networks in the coastal regions connected to Tyre secondary treatment plant	25,80	Local funding	December 2016	December 2018
Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Chekka- Anfeh	0,11	French Development Agency & the Lebanese Government	April 2016	March 2017
Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Batroun	7	French Development Agency & the Lebanese Government	March 2016	September 2017
Addendum to the contract related to the installation of wastewater networks and a pumping station for the towns and villages of Koura	3,30	French Development Agency & the Lebanese Government.	December 2016	August 2017
Addendum to the contract related to the installation of wastewater networks in the northern area of Greater Beirut – Phase I	2,40	European Investment Bank	July 2016	April 2017
Addendum to the contract related to the execution of house connections within the framework of the project intended to construct 3 treatment plants and their wastewater networks in Zawtar, Kfar Sir and Yohmor	0,167	Lebanese Government	February 2016	June 2016
Addendum to the contract related to the project intended to execute main sewer lines in a number of coastal areas in the districts of Aley and Baabda, located within the catchment of Al Ghadir River	4	German Development Agency & the Lebanese Government	November 2016	October 2017
Addendum to the contract related to the execution, operation and maintenance of the treatment plant in Nabatieh	0,40	Local funding	September 2016	April 2017
Addendum to the contract related to the execution of additional wastewater networks in coastal areas connected to the secondary wastewater treatment plant in the district of Tyre	5,50	European Investment Bank & the Lebanese Government	January 2016	November 2016
Addendum to the contract related to the project on the installation of wastewater networks and pumping stations for the towns and villages of coastal Chouf connected to the treatment plant located in Ras Nabi Younes	2,50	Arab Fund for Economic and Social Development & the Lebanese Government.	July 2016	December 2016

**Schedule of main projects under preparation in the wastewater sector (2017-2019)**

Project	Estimated value million US\$	Source of Funding	Expected start date	Expected completion Date
<b>Coastal pollution Control Program</b>				
Construction of sewer networks and a treatment plant with sea outfall in Akkar coastal area	62	Arab Fund + Local Funding	February 2018	November 2020
Construction of sewer networks and two wastewater treatment plants in Keserwan coastal region	175	European Investment Bank +French Development Agency + EU + NIF	December 2018	December 2022
Construction of additional sewer networks and a preliminary treatment plant in Beirut River catchment area	45	European Investment Bank	December 2017	December 2020
Execution of additional sewer networks in Ghadir River catchment area	86	European Investment Bank	December 2019	December 2023
Extension & upgrade of Al Ghadir Wastewater Treatment Plant, south of Beirut	85	Islamic Development Bank	December 2018	December 2022
Construction of sewer networks and a treatment plant with its sea outfall in the region of Sarafand in saida Caza	67	Kuwait Fund	December 2017	December 2020
Execution of additional sewer networks in Sour coastal area – Phase II	29,50	Locally funded	May 2017	December 2019
<b>Water Resources Protection Program</b>				
Construction of sewer networks and a treatment plant for Mechmech –Akkar	31	Italian Protocol	February 2018	December 2020
Construction of sewer networks and treatment plant for Bakhoun - Dannieh	19	Italian Protocol	December 2019	December 2021
Construction of sewer networks and treatment plant for Hrajel-Keserwan	24	Italian Protocol	February 2018	December 2020
Construction of sewer networks and treatment plant for Jeita-Keserwan (Sections 2 , 1 and 3)	38	German Agency KFW + local funding	December 2018	June 2021
Construction of sewer networks in Chahhar - District of Aley	5	Local Funding	December 2017	December 2018

Construction of wastewater networks for Manasef and Jisr el Kadi in the district of Chouf	64	Kuwait Fund + local funding	January 2019	March 2022
Completion of sewer networks in Jezzine	5	Local Funding	December 2016	December 2017
Construction of sewer networks and treatment plant for Bint Jbeil	11	Italian Protocol	December 2019	December 2022
Construction of sewer networks and treatment plant for Hasbaya	8	Italian Protocol	December 2019	December 2022
Construction of sewer networks and treatment plant for Arqoub region	30	Arab Fund + Local Funding	July 2018	December 2020
Construction of sewer networks and treatment plant for Jbaa–Nabatieh	7	Italian Protocol	May 2018	September 2019
Construction of collection networks and treatment plant for Hermel	20	Italian Protocol	July 2019	December 2022
Construction of sewer networks and treatment plant for Laboueh	15	Local funding	March 2018	December 2020
Construction of a treatment plant and sewer networks in central and northern Bekaa in the Litani basin	30	AFESD + Local Funding	September 2017	December 2020
Construction of a treatment plant and sewer networks in Anjar, and Majdal Anjar area ( Phase- I)	26	Italian Protocol	January 2018	December 2021
Construction of a treatment plant and sewer networks in Anjar, and Majdal Anjar area (Phase- II)	26	World Bank	December 2018	December 2021
Wastewater collection and treatment in towns of Marjeyoun and Bint Jbeil districts in Nabatieh	58	Kuwait Fund	September 2017	December 2021
Construction of sewer networks connected to the two treatment plants in Ablah and Forzol	5	European Union	July 2018	July 2019

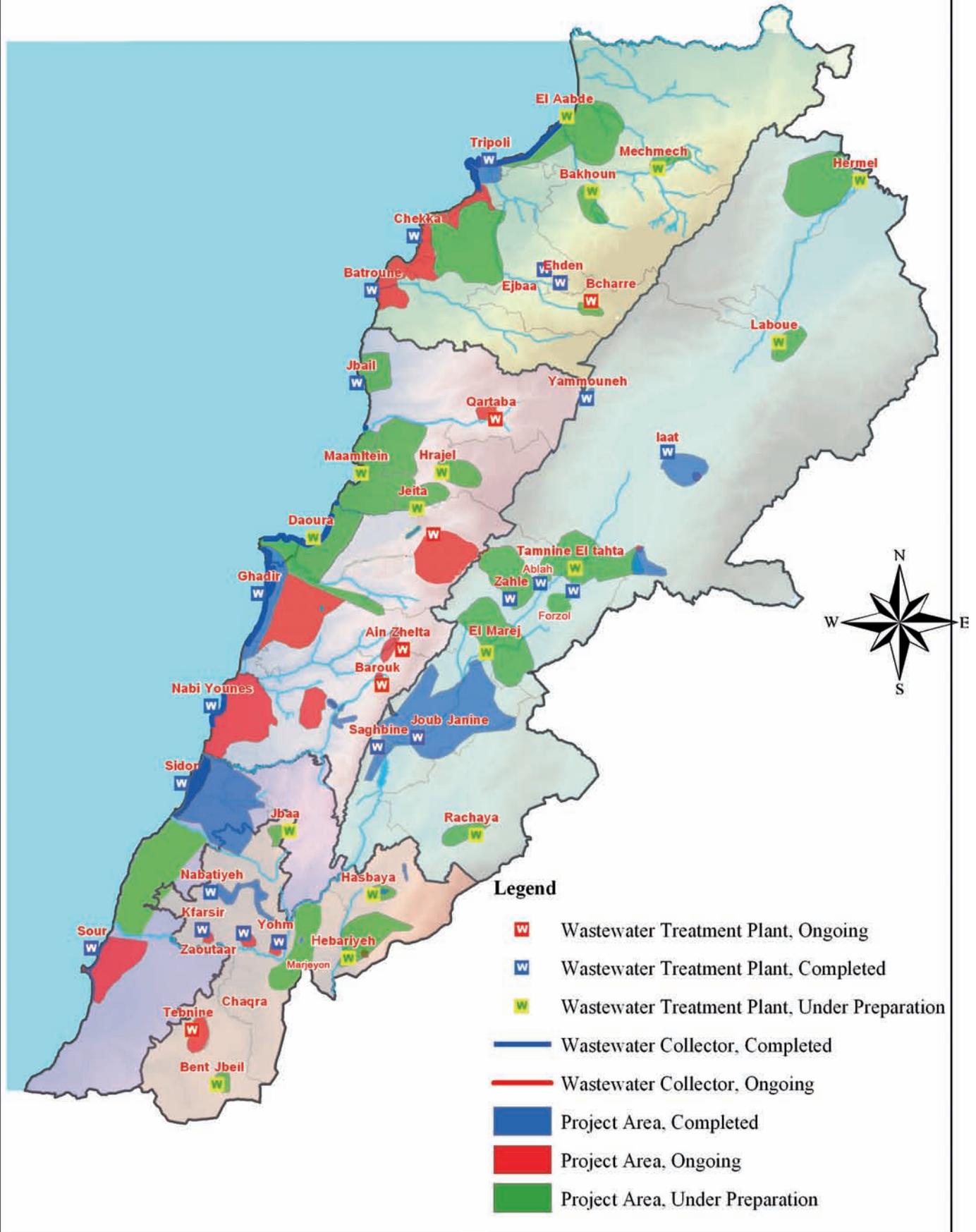


Waste Water Treatment Plant - Barouq



Waste Water Treatment Plant - Nabaa Al Safa

# Wastewater Completed, Ongoing & Under Preparation Projects



## Household Solid Waste

### Overview of Household Solid Waste Sector

In a general sense, waste is a broad term that refers to items consumed by the public or materials left behind by a human activity or process, and which, due to their physical and/or chemical and biological properties become of no value and therefore neglected and intended to be discarded or disposed of. In Lebanon, the current legislations governing waste, the waste management practices and the majority of CDR's projects and contracts all tackle domestic solid waste commonly known as Municipal Solid Waste (MSW). Other types of waste should be treated by the private entities producing such waste, under the guidance and full supervision of the concerned ministries, based on the "polluter pays" principle, as stipulated by applicable laws and regulations.

Current situation: Concerned authorities in Lebanon are working towards the promotion of an integrated waste management plan that is aligned with the socio-political situation and that translates into concrete actions the desired waste management expectations, in synergy with sustainable development principles embedded in other national programs and policies, which will ultimately reduce environmental degradation.

The Council of Ministers' decision No.1 dated 30/03/2010 established a committee headed by the Prime Minister and composed of the Minister of Displaced, The Minister of State for Administrative reform, the Minister of Interior and Municipalities, the Minister of Environment, the Minister of Energy and Water and the President of Council for Reconstruction and Development (CDR). This committee was commissioned to develop an integrated waste management plan proposal covering all Lebanese regions, and tackling in particular the following:

- Techniques and methods to be adopted for the implementation of the plan;
- Suggested sites for the implementation of the plan;
- Fundraising mechanisms;
- The authority to be in charge of the plan.

The said committee is also in charge of making recommendations concerning the measures and

procedures to be taken with regard to Naameh temporary landfill.

**On 01/09/2010, the Council of Ministers issued decision No. 55, to endorse the recommendations of the inter-ministerial committee summarized as follows:**

- 1-Adopt thermal decomposition and waste-to-energy technologies in large cities;
- 2-Adopt the 2006 master plan and study the possibility of adoption of thermal decomposition in the remainder of the country;
- 3-Engage the private sector and facilitate its tasks in the provision of Solid Waste Management Services, either on a turnkey basis (from collection to final treatment) or by handling one of the following options:
  - a.Collection
  - b.Treatment

4-Mandate the Ministry of Environment (MoE) and the CDR to merge their respective proposed plans, in synergy with what is agreed upon above;

5-Mandate the Ministry of Energy and Water to propose a legislation that entitles the private sector to produce and sell energy generated from waste;

6-Offer incentives to the municipalities that will host waste treatment facilities: thermal decomposition plants, processing stations, composting stations and landfills;

7-Mandate the CDR, in coordination with the MoE, to contract an international consulting firm to:

- Select the most appropriate and proven solutions adapted to the Lebanese case (based on the spirit of the plan);
- Develop the Request for Proposal (RFP) for the preliminary shortlisting of the thermal decomposition companies (Due diligence to short list only proven technologies);
- Assess and classify companies;
- Draft the RFP for the final tender;
- Perform bids appraisal;
- Monitor the implementation

8-Mandate the Ministry of Environment to contract an international consulting firm to control the workflow quality in accordance with the spirit of the plan and ensure good work progress;

9-Mandate the Ministry of Environment to hire a local consulting firm to conduct an awareness and guidance campaign to gain public support for the thermal decomposition technique;

10-Vest the Cabinet with the power to oversee the work progress and secure necessary funds, and to learn from successful experiences and best practices of neighboring countries.

#### **Main Challenges:**

- One of the biggest challenges facing the household waste in Lebanon lies in landfill locations, whether they are ordinary dumps or landfill sites for final dumping following sorting and recycling; another challenge is dealing with waste before reaching the dumps. Therefore, the emphasis should be moved towards recycling and composting.

- Solid waste management constitutes also a great challenge from a financial perspective, in particular in a developing country like Lebanon, due to the absence of sufficient adequate regulatory legislations.

- The legislations on household solid waste management in Lebanon are shallow, contradictory and unclear, especially with respect to the role and tasks distribution between the concerned departments and ministries. A draft law on integrated waste management is currently underway.

- The Union of Municipalities, upon the administrative and technical support of the Ministry of Environment and the Ministry of Interior and Municipalities, should consolidate the efforts for the selection of locations for dumps and sorting and composting facilities. This will be achieved through the establishment of a constructive dialogue and consultation process with the civil society, who would obstruct projects implementation, if not involved.

#### **Main achievements of the (1992-2014) period**

The Lebanese governments did not adopt a central policy or a unified management strategy for the treatment of solid waste in Lebanon, due to the fact that waste management used to fall within the prerogatives of municipalities, acting as the administrations overseeing the proper execution of these services. However, the Lebanese civil war negatively impacted the municipalities' financial, administrative and technical capacities, which jeopardized the continuity of their operations. In the beginning of 1992, the government assigned the management of this sector in Beirut and suburbs to CDR, due to the incapacity of municipalities to deal with this issue. Since that date, CDR has been working, in coordination with the concerned ministries, to put in place an integrated policy that provides the best solutions for Lebanon.

**Emergency plan for the treatment of solid waste in Greater Beirut:** Following the closure of the Bourj Hammoud dumpsite in January 1997,

the government decided to implement an urgent plan for the treatment of solid waste in Greater Beirut. A contract was signed with SUKOMI to expand and raise the capacity of the Amrousieh and Qarantina solid waste treatment plants, upgrade the sorting process, separate recyclable material and extract compost material. This plan also included the construction of sanitary landfills for Greater Beirut and its suburbs. Two sanitary landfills were established in Naameh and Bsalim. Both are currently in operation.

**Rehabilitation of Tripoli dumpsite:** The uncontrolled dumpsite located on Tripoli coastline has been rehabilitated. A sea wall was constructed around it to reduce environmental risks. Moreover, the necessary equipment for operating the dumpsite in an environmentally friendly way was procured in order to upgrade solid waste management in Tripoli region. The dumpsite has been in operation since 1998.

**Construction of Zahleh sanitary landfill:** The new sanitary landfill serving Zahleh caza has been completed and the required vehicles and equipment for its operation have been procured. The works and procurements were financed by the World Bank. This dumpsite has been in operation since 2001.

**Construction of a sanitary landfill and a solid waste treatment plant in Baalbek caza:** under the integrated waste management plan.

**Procurement of waste collection equipment for various regions:** Within the framework of the urgent program, the World Bank funded the procurement of waste collection equipment, including vehicles, street sweeping equipment and special containers. These were distributed across all Lebanese regions. In the second phase of this project and within the framework of the Household Solid Waste Management Plan (SWEMP), the World Bank funded the procurement of waste collection and street sweeping equipment for the regions where construction works of sanitary landfills or rehabilitation of uncontrolled dumpsites were completed, such as Beirut, Zahleh and Tripoli.

**Hospital waste treatment:** In 1998, the CDR awarded the hospital waste treatment study, funded by the World Bank, to ERM. Several phases of the study have been completed. This has al-

lowed concerned parties to take decisions regarding the most appropriate means for hospital waste treatment. The Ministries of Environment and Public Health together with CDR have decided to build a central incinerator, which complies with international standards and operates at a minimum temperature of 1200°C, as a possible means of hospital waste treatment. The environmental impact assessment and the design study have not been prepared because the appropriate construction site has not been identified yet.

**Marketing of compost and recyclable material:** The feasibility study for marketing organic compost and recyclable materials generated by the Quarantina, Amroussieh and other treatment plants was completed by ARCADIS/ EUROCONSULT in December 2003. The study was financed by the World Bank within the framework of SWEMP.

**Financial audit of amounts due to SUKLEEN and SUKOMI:** According to the Council of Minister's Decision No. 16 dated 14/8/2003 concerning the launching of an international tender for constructing and operating the solid waste treatment plants and landfills for a period of ten years, and in order to ensure the success of this tender, CDR was assigned to audit the amounts due to SUKLEEN and SUKOMI. Accordingly, the audit contract was awarded on 18/9/2003 to PRICE-WATERHOUSECOOPERS, which is an international audit firm.

**Technical Assistance for identification of treatment plants and landfill locations and preparation of environmental impact assessment:** To implement the Council of Minister's directives concerning the identification of treatment plant and landfill locations, CDR awarded the impact assessment to Consultant Rafic Khoury who started his mandate in the third quarter of 2003. The Consultant prepared the environmental impact assessment of the locations identified by the technical committee commissioned with this task.

**The comprehensive Household Solid Waste Management Plan:** The CDR put in place an integrated plan that was approved by the Council of Ministers in 2006. The plan is based on the following principles:

1-Recycling and composting to the greatest extent in order to minimize the quantity of dumped waste; and distribution of recycling, sorting and composting plants on all cazas, with one or more sanitary landfills in each service area.

2-For this purpose, Lebanon shall be divided into four service areas:

- The North and Akkar governorates
- The Bekaa and Baalbek-Hermel governorates
- The South and Nabatiyeh governorates
- Mount Lebanon and Beirut governorates

3-Create an incentives scheme for the municipalities that will host sorting stations, composting plants, sanitary landfills or incinerator centers. These municipalities will be paid a certain amount per every ton of solid waste, as proposed in the plan and according to laws and decrees that will be issued in this respect.

4-Municipalities shall deal with sweeping, collection and transport of waste to sorting stations and composting plants at their own expenses.

5-The contractor shall be responsible for financing the relevant study, executing and preparing the sanitary landfills, incinerator centers, sorting stations and composting plants. The contractor shall also be charged with the management of these facilities for ten years on the basis of a certain fee per each ton of transported and treated waste.

**Maritime and back-filling works in Saida waste mountain area:** the Council of Ministers issued Decision No. 37, dated 26/5/2009, directing the CDR to develop the necessary studies and draft decrees, and to implement the maritime and back-filling works in Saida waste mountain area. Funding is secured through the US\$ 20 million grant donated by the Kingdom of Saudi Arabia, and the remainder of the cost is financed by the Lebanese government.

**Construction of several solid waste management and treatment plants and supply of their necessary equipment, by the Office of State for Administrative reform (OMSAR) with the financial assistance of the European Union:** Since 2004, in the framework of ARLA (EUR 14.2 million) and SWAM1 (EUR 14 million), funded by the European Union, OMSAR, implemented several projects in the field of solid waste management: These projects include the following:

**-Under the umbrella of ARLA:** Construction and equipping of sorting and composting plants in the following regions: Ain Baal (Sour), Nabatiyeh, Ansar, Khiyam, Kabrikha, Chouf-Souaijani, Baalback, Jbeil, Tripoli, Minnieh, Mechmech (Akkar), and a medical waste treatment plant in Abbassiyeh.

**-Under the umbrella of SWAM1:** Rehabilitation and expansion of waste management plants in the following regions: Srar –Akkar (sorting, composting and sanitary landfilling), Baalback (sorting and sanitary landfilling), Zahle (sorting and composting), Jib Jannin (sorting, composting and sanitary landfilling).

#### **Progress during 2015 and 2016:**

Construction of several solid waste management and treatment plants and procurement of their necessary equipment, under the execution of the Office of State for Administrative reform (OMSAR) and with the financial assistance of the European Union: on 27/08/2015, the Council of Ministers approved the European Union grant intended to finance SWAM 2 (EUR 21 million), which includes the implementation of several solid waste management projects distributed as follows:

**•Sorting and composting in the following regions:** Dannieh, Zgharta, Koura, Batroun, Bint Jbeil.

- Sanitary landfilling in Bint Jbeil and Nabatiyeh.
- Rehabilitation of Ras Al Ain dumpsite.

OMSAR manages also a US\$ 50 million Lebanese government budget allocation, to operate and supervise afore-mentioned solid waste treatment plants.

**Expropriation and rehabilitation of the Ras el Ain waste dumpsite in Sour:** On 22/05/2014, the Council of Ministers issued decision No. 99 regarding the approval of a list of projects suggested by the Ministry of Finance among which the expropriation of the Sour – Ras el Ain garbage mountain (US\$ 2 million). On 09/09/2015 the Council of Ministers issued decision No.1 regarding the elaboration of the solid waste treatment plan, which mandated the CDR to prepare the necessary studies in partnership with the Ministry of Environment to rehabilitate the Ras Al Ain waste dumpsite and award the related contract. Based on this decision, the CDR commissioned the Consultant MORES to develop an environmental impact assessment for the rehabilitation of Ras Al Ain waste dumpsite and prepare an expropriation file. This study was completed during

the second half of 2016.

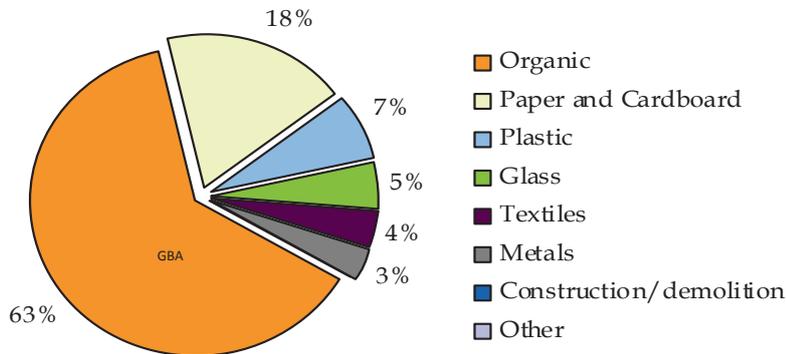
**Tenders to outsource the Management of Solid Waste (sweeping, collection, treatment and landfilling) in five service areas and a forced shutdown of the Naameh landfill:** On 30/10/2014 the Council of Ministers' decision No.46 mandated the CDR to prepare an RFP to outsource a) the garbage sweeping and collection works and b) the garbage treatment and landfilling works. The decision identified five service areas across the Lebanese territories. Subsequently, the CDR released the tenders for the five service areas.

After the bids have been submitted and evaluated, the Ministry of Environment suggested the rejection of the bids results. On 25/08/2015, the Council of Ministers approved this suggestion (Decision No.1). The closure of Naameh landfill was forced as of 17/07/2015 which resulted in the accumulation of garbage in Beirut and Mount Lebanon.

On 27/08/2015, the Council of Ministers approved to commission the Ministry of Interior and Municipality to request from municipalities and unions of municipalities to announce their preparedness and plans to bear responsibility for the treatment of solid residential waste, each within its geographical jurisdiction.

On 09/09/2015, the Council of Ministers backed Agriculture Minister's waste management plan which called for the decentralization of waste treatment, and the restoration of the role of local municipalities and unions of municipalities in handling garbage, and as a first phase, to take necessary measures to transfer the garbage piled up since the closure of the Naameh Landfill (i.e on 17/07/2015) as well as the generated waste, to many landfills that will be prepared for this purpose, for a period not exceeding 18 months. And after negotiations regarding the location of the sanitary landfills failed, the Council of Ministers decided on 21/12/2015 to export garbage and initially approved to contract out the 2 companies selected following the tender process, and emphasized the Council of Ministers' decision No. 55 of /01/09/2010 stipulating the use of waste-to-energy technology and mandating the CDR to prepare the tender document within a period not exceeding two months.

**Proportion of organic solid waste in Greater Beirut and in Lebanon**



**Greater Beirut**

Whereas, the Council of Ministers approved by Decision No. (1) dated 12/03/2016 amended by Decision No. (1) dated 17/3/2016, to mandate the CDR to conduct the tender for the outsourcing of waste services and their associated facilities, and the outsourcing of studies and supervision over works, within a period of two months.

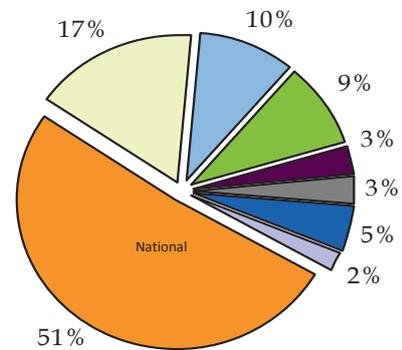
The distribution of waste services and their associated facilities has been distributed into five independent tenders related to the following projects:

- Project for the setup of a temporary sanitary landfill near the mouth of Al Ghadir River (with marine protection works).
- Project for the setup of a temporary sanitary landfill center in Bourj Hamoud area, Jdeide - Bouchrieh- Al Sadd (with marine protection works and treatment of the waste mountain).
- Project for the sorting and treatment of solid household waste for Beirut administrative areas and Mount Lebanon, excluding Byblos.
- Project for household solid waste collection and transport for the following two service areas (two independent bids):
  - 1 - Metn and Keserwan districts.
  - 2 - Baabda, Chouf and Aley districts.

**First: Regarding the status of each of the above-mentioned projects:**

**1-Project for the setup of a temporary sanitary landfill near the mouth of Al Ghadir River:**

- On 22/07/2016, the CDR signed with «Al Jihad Group for Commerce and Contracting» Contract



**Lebanon**

No. 19682 related to the implementation of the project intended to setup a temporary landfill near the mouth of Al Ghadir River. On 25/07/2016, the above-mentioned contractor was instructed to commence the implementation of the marine protection works observed in this project. And on 25/08/2016, the contractor was instructed to commence landfilling works.

- On 16/08/2016, the CDR signed with the merger group «Dar Al-Handasah Nazih Taleb & Partners (SES)» Contract No. 19697 related to the supervision over the implementation of the project for the setup of a temporary sanitary landfill near the mouth of Al Ghadir River.

- On 02/12/2016, the CDR signed with the technical inspection bureau «Socotec» Contract No. 19750 related to the provision of technical supervision services over the project for the setup of a temporary sanitary landfill near the mouth of Al Ghadir River.

- The capacity of the landfill is 1,000,000 tons of waste.

**2- Project for the setup of a temporary sanitary landfill station in Bourj Hammoud area, Jdeide - Bouchrieh- Al Sadd:**

-On 03/08/2016, the CDR signed with «Khoury Contracting Company LLC», Contract No. 19687 related to the implementation of the project for the setup of a temporary sanitary landfill center in Bourj Hamoud-Jdeide - Bouchrieh- Al Sadd, noting that on 11/08/2016 the contractor was instructed to start the implementation of the maritime protection works observed in the scope of this project. Also on 08 /10/2016, instructions were given to start landfilling works.

-On 05/09/2016, the CDR signed with the consultant «Rafik Al-Khoury and Partners», Contract No.

19702 related to the supervision over the implementation of the project for the setup of a temporary landfill in Bourj Hamoud- Jdeide – Bouchrieh – Al Sadd.

-On 05/12/2016, the CDR signed with the technical inspection bureau «Apave», Contract No. 19751 related to the provision of technical inspection services with regard to the project for the setup of a temporary landfill in Bourj Hamoud- Jdeide- Bouchrieh- Al Sadd.

-The capacity of the landfill is 1,250,000 tons of waste.

#### **Notes on the sanitary landfill contracts:**

In this context, it is worth noting that the Government's plan adopted in March 2016 was based on the fact that it was a transitional four year period (which is the timeline required for the completion of the sustainable plan if approved) and that the quantities required to be landfilled during the four-year period were estimated at around 3 million tons distributed on three sanitary landfills (Al Ghadir, Bourj Hamoud - Jdeide, and a third site servicing the Chouf, Aley and part of Baabda). Back then, the ministerial committee estimated this amount (i.e 3 million tons to be landfilled within four years) on the basis that some municipalities and federations would implement their decentralized projects and exit the centralized plan.

In fact, the Council of Ministers has not yet decided on the third site of sanitary landfill, and municipalities and federation of municipalities have not withdrawn from the centralized plan, which has resulted in the use of Al-Ghadir and Bourj Hamoud-Jdeide, at a higher capacity than the capacity noted in the plan.

#### **3- Project for the sorting and treatment of solid household waste for Beirut administrative areas and Mount Lebanon, excluding Byblos:**

- On 23/09/2016, the CDR signed with the merger group «Al-Jihad Group for Commerce and Contracting/SORIKO, Contract No. 19706, related to the sorting and treatment of solid household waste for Beirut and Mount Lebanon (excluding Byblos), knowing that this project's works started on 01/01/2017.

- The CDR Board of Directors approved the assignment of the consultant Laceco to supervise the implementation of the project for the sorting

and treatment of solid household waste for the areas of Beirut and Mount Lebanon (excluding Byblos).

#### **4- Project for household solid waste collection and transport:**

- On 14/12/2016, the CDR signed with the merger group «Aramco/Altas» Contract No. 19765, related to the collection and transportation of solid household waste in the districts of Metn and Keserwan (Lot 1), and this project's works started on 15/05/2017.

- On 03/01/2017, the CDR signed with the merger group «Mouawad-Edde/SORIKO» Contract No. 19772, related to the collection and transportation of solid household waste in the districts of Baabda, Chouf and Aley (Lot 2), and this project's works started on 04/06/2017.

-The CDR's Board of Directors, at the request of the Municipality of Beirut, agreed to extend the term of the contract signed with Sukleen for the cleaning, collection and transportation of solid household waste within Beirut administrative area until 31/12/2017, a date on which the Municipality of Beirut expects to be able to outsource the sweeping, collection and transportation of solid waste within its area.

-The CDR will release the tender for the outsourcing of the supervision tasks over the collection and transport of solid household waste, noting that the consultant D.G. Jones & Partners is currently in charge of overseeing the implementation of all the above-mentioned solid waste collection and transport activities. It is preferable that the consultant D.G. Jones & Partners continue to perform its functions until the termination of the Sukleen contract, as it prepares a consolidated report showing the distribution of waste weights in the areas served under the above-mentioned contracts.

# Agriculture and Irrigation

## 1-Overview of the Agriculture Sector

### •Current situation of the agricultural sector

Agriculture in Lebanon relies on individual initiatives, under a liberal and open economic system. This sector has witnessed major changes during the past three decades, namely:

- An increase of 36% in the number of farm holders working in agriculture to 195 thousand agricultural investors;
- An increase of 155% of the size of irrigated lands to 142 thousand hectares out of 277 thousand hectares of cultivated lands;
- Fragmentation of agricultural lands, whereby the size of 75% of agricultural areas do not exceed 1 hectare and represent only 20% of the total cultivated area.

The agricultural sector, though contributing only to 6.3% of the GDP, represents 17% of the value of exports, and constitutes either the sole source of income or an additional source of income for a large portion of the Lebanese rural population.

85% of available water supplies are consumed by the agricultural sector. This increasing water demand puts additional stress on irrigated farming, leading to an increase in the number of abandoned lands due to the lack of water or to a decline in investment opportunities and agricultural profits for smallholders.

The Lebanese agricultural production is mainly characterized by high production costs and limited competitiveness, with a long-standing openness to global markets strengthened by trade agreements.

Nevertheless, Lebanon's geographical location and its climate and crop diversification remain a major strength if only the country can seize available opportunities, make rational use of its natural resources, namely water, overcome the obstacles limiting its competitiveness, and preserve the environment.

### • Main Challenges

There are two types of agriculture in Lebanon: commercial agriculture, generally efficient, modern, depending on adequate financial resources

for investment and exploiting every potential profit. This type of agriculture is practiced in around 35 thousand farming units and covers about 25% of total agricultural holdings. It is based on the integration of pre-production and post-production agricultural activities, and on openness to foreign markets. The second type is an agriculture mainly devoted to the preservation of cultural and family heritage. It is practiced in smallholdings with no investment or profit opportunities, and considered as extra income and as subsistence agriculture. Most rural farmers practice this type of agriculture.

It is therefore important to distinguish between means intended to support the rural community, and those destined for the economic activation of the agricultural sector, and which target farms able to respond effectively.

As for agricultural markets, they are unstable and have an adverse effect on farmers' income due to the weakness and lack of transparency of marketing operations. This is also due to the marketing policies of operators in the agribusiness which are not usually in the farmer's interest. Therefore, structures for three types of markets should be established: (1) a local market for fresh produce, (2) a market for products intended for processing, (3) a market for fresh agricultural products and processed products intended for export.

The agricultural and rural cooperative movement is characterized by a lack of transparency and a disparate application of laws, and is thus far from the desired goals of collaborative work.

Another disadvantageous aspect of the agricultural sector is the absence of the government's active role in keeping abreast of technical breakthroughs in agricultural research, training and extension, and using a participatory approach to secure the ownership and commitment of the different administrations involved in the agricultural sector. Similarly, the agricultural technical and marketing information is insufficient, despite some achievements made within the framework of the "Assistance to Agricultural Census" project, and the support provided by IDAL to regulate the production intended for export under "Export Plus", a national agricultural export support program.

In the upcoming years the growing water demand will require (1) securing additional water sources by building dams, lakes and facilities for water storage, (2) rehabilitating and upgrading surface

water and groundwater facilities, and (3) regulating water use in order to make it more efficient, coupled with an adequate legislative framework.

The burden of the Israeli July 2006 war fell on all sectors of the Lebanese economy and the agricultural sector was one of the hardest-hit, because it was already facing difficulties marketing its produce. This additional stress resulted in heavy losses that exhausted agricultural laborers and exacerbated the Lebanese farmers' frustration. To face all these challenges, it was imperative to assess damages, put a quick contingency plan in place and secure the necessary funding for it, simultaneously with the initial plan designed for this sector.

#### •A Vision for the Future

To address the growing water needs in the future, an integrated development strategy will have to be implemented to use the available water resources more efficiently and sustainably by rehabilitating the existing water facilities, finding additional water sources including the construction of dams and lakes, rationalizing water use, and applying good water management, maintenance and operation techniques.

The implementation of irrigation projects will increase the area of irrigated lands to around 36 to 50 thousand hectares in the next thirty years, which will increase the agricultural production and improve farmers' income. It all depends on the competitiveness of agricultural products in terms of production and marketing factors e.g. 1) selecting agricultural products that have an added value and are processed 2) ensuring continuous market supply of quality products in sufficient quantities and on time, and 3) considering the development of investable farming units.

Due to the fact that technical, statistical and marketing data play a pivotal role in agricultural development, it is expected that management facilities and professional organizations will attach a great importance to the creation of an information system that allows all actors involved in the agriculture sector, farmers in particular, to obtain the information they need in a timely fashion.

In the future the Lebanese government will have to develop strategies and action plans, coupled with a supportive regulatory and legislative framework, and to create an efficient monitoring and evaluation mechanism in consultation with the private sector stakeholders. In this context, the 2010-2014 strategy of the Ministry of Agriculture focused on the main sectors with high growth

potential (such as olives, grapes, certified seeds, flowers, organic farming and fishing industry), and on projects aimed at modernizing production and exports chains. The strategy also placed an emphasis on the upgrading of laws that regulate the exploitation of agricultural lands, the laws on quality assurance and quality control, as well as the laws regulating the activities of agricultural and marketing companies, with due regard to the importance of agricultural extension at all levels and across all agricultural areas, in coordination with local authorities.

On another note, rural development has become important in balanced development, and is centered on integrated anti-poverty programs that take into consideration the particularities of rural areas, target social sectors development, provide minimum living standards and create job opportunities. All these factors combined necessitate a) an integrated comprehensive plan that works towards the preservation of the environment and the natural resources in synergy with the stakeholders engaged in this field, and b) a collaborative and participatory approach with local civil communities.

#### 2- Main achievements until 2016

The CDR initiated the implementation of agricultural projects that have been prepared over the past years within the scope of sectoral development programs such as the National Emergency Rehabilitation Plan (NERP), in collaboration with the concerned ministries.

Before putting the agricultural strategy in place, the CDR implemented urgent projects that are likely to contribute to the development of the agriculture and irrigation infrastructure, in particular the rehabilitation of agricultural schools (Fanar, Ghazir, Abdeh, Baaqleen, Nasriyet Rizk and the Kfarshima silk factory) through a loan secured from the Saudi Fund for Development (SFD).

In view of the Ministry of Agriculture's need for technical assistance in conducting sectoral studies and agricultural surveys, the CDR sought a grant from the European Union to finance and implement a project intended to support agricultural planning. As a result, the key elements and the master plan of the agricultural policy were set out, in coordination with the "Assistance to the Agricultural Census" project implemented by the CDR under a contract signed with the FAO and

partially funded by a World Bank loan. The project led to the creation of the agricultural strategy and a five-year agenda for the Ministry of Agriculture (2005-2009).

As for irrigation, around 27 thousand hectares of agricultural lands were rehabilitated through a World Bank's loan allocated for the rehabilitation of irrigation projects in Qasimiya (3600 ha), West Bekaa (2000 ha), Yammouneh (4500 ha), Danniyeh (4400 ha), Akkar el Bared (1500 ha) in addition to medium and small projects in the North and Mount Lebanon (7500 ha) and in the South (3200 ha). This loan also served to finance the capacity building of the Ministry of Hydraulic and Electric Resources and the Litani River Authority, and to provide vehicles, equipment, instruments, advisory contracts, training and studies that facilitated the implementation of these projects. A part of the advisory functions pertaining to the "Canal 800 Project" aimed at transporting water from the Litani River to the South of Lebanon to be used in irrigation and drinking water supply— Phase I., was completed.

In addition to the above, the CDR contributed to securing foreign funds to implement the Agricultural Infrastructure Rehabilitation project as part of the Green Plan/Ministry of Agriculture, which includes land reclamation, construction and rehabilitation of agricultural roads and retaining walls. The CDR also appropriated funds from its annual budget to the project on the Rehabilitation of Livestock Production for smallholders in the Bekaa.

The CDR also participated, through liaison committees, in the implementation of several projects, among which the Agricultural Support Project falling under the Italian/Lebanese Protocol (1997) and (1998-2000) signed with the CDR, of which a part was allocated to the Baalback- Hermel Agricultural Development Project and to the Certified Plant Production project.

The CDR also followed up on several projects including the Lebanon Olive Oil Project in marginalized areas implemented with the assistance of the Mediterranean Agronomic Institute of Bari, through a grant awarded by the Italian government.

Moreover, a loan from the International Fund for Agricultural Development (IFAD) financed the implementation of projects aiming at building

the capacities of the Ministry of Agriculture and its affiliated institutions (the Green Plan and the Agricultural Research Center). In this regard contracts were signed a) to procure the vehicles and necessary equipment and instruments needed by the said projects, b) to rehabilitate agricultural extension centers in Sour and Abdeh, and c) to rehabilitate and equip the laboratories and greenhouses of the research institutes of Sour, Fanar and Tal Amara. Also technical assistance, studies, training and maintenance necessary for these institutions were provided through advisory services contracts.

Also through the IFAD loan, agricultural extension services were provided across all areas of irrigated farming, through advisory contracts signed with NGOs, as well as the construction of small mountain lakes in locations specified by the Green Plan in Bcharre, Mechmech, Bkaasfreen, Bkoufa, Hermel, Deir el Ahmar and Kfarmishki. As for the mountain lakes already constructed by the CDR through the IFAD loan, all related works concerning lakes in Bkaasfreen (Minieh-Danniyeh Caza) and the lake of Bkoufa (Zgharta Caza) were completed. Concerning the lake of Mechmech (Akkar-Caza), the CDR conducted the study related to the necessary repair works.

In 2012, the construction of an irrigation line in Khiam was completed, in addition to the construction of a rainwater drainage network in Nabatiyeh, rehabilitation of a water pond in BintJbeil (Nabatiyeh District), and construction of agricultural roads in Aarkoub, Yohmor and Taibeh (Nabatiyeh District). The CDR had initiated these works in 2010 under an EU grant (Grant ENP/2007/018-882).

Furthermore, the CDR continued to provide oversight over the implementation of the Water Development Project in Marjeyoun that has been officially launched in mid May 2010. This project prepared the infrastructure and facilitated the installation of an irrigation distribution system in the northern part of Marjeyoun, into which water will be supplied from Canal 800. The project also conducted trainings on modern irrigation techniques and cropping patterns that have socio-economic impacts. The project targets 522 hectares and is expected to benefit 1259 farmers in the area. This initiative is funded by the Government of Spain through the "Lebanese Recovery Fund" established after the July 2006 War and managed by the United Nations Development Program (UNDP) in close collaboration with the Litani River Authority and the Association of Friends of Ibrahim Abed Al Aal (AFIAL).

Regarding the Canal 800 Project aiming at transporting water from the Litani River to the South of Lebanon, to be used in irrigation and in drinking water supply— Phase I:

- The CDR signed a consultancy contract with the LahmeyerInt.GmbH/ JBJ Gauff/ingénieur/D.A.H “Shair& Partners” Group, whereby the completion of the executive studies of all contracts is awarded to the Group. The consultant group also provided technical assistance in awarding the contract related to the execution of works. After eliminating the administrative barriers faced by the project, the final draft of the contract was approved by the Arab Fund and the consulting group in terms of the supervision of the works execution until 2017.

- In 2012, the CDR awarded the implementation of the project to Kharafi/Veziroglu/Guris until 2017.

- Also in 2012, the CDR completed the contract related to the provision of institutional support and technical assistance to the Litani River Authority to provide oversight over the project that has commenced in 2007.

- Moreover, the CDR has initiated the implementation of the “Local Development Project in Northern Lebanon” ADELNORD, on the date of signature of its financing agreement on 06/07/2009. This project is funded by a grant from the EU delegation to Lebanon.

- As an initial phase, the CDR sought the assistance of a delegation of technical experts from the European Union (Framework Agreement I and II) to identify a list of priority projects related to agricultural infrastructure and prepare the social development component of the project and its requirements. In a second phase, the CDR signed a technical assistance contract with the merger group (GFA-ELARD) on 18/10/2010 for a period of 33 months. The technical assistance staff continued the implementation of the project’s agricultural and social components under the supervision of the CDR.

It is worth mentioning that the technical assistance staff operates from a MoA’s office in Abdeh in the region of Akkar, according to a Memorandum of Understanding signed between the CDR and the MoA, stipulating that the latter puts a part of its Abdeh office under the project’s disposition. In return, the project committed to rehabilitate and equip the building in order to allow its technical staff to implement the project’s activities and constantly interact with local authorities.

The CDR also appointed a field supervisor who is present daily at the project station in Abdeh, to oversee the management of the project, under the direct guidance of the CDR.

Within the framework of the same project, the CDR has awarded in 2011 the feasibility studies and the detailed designs related to the infrastructure component, which includes the repair of agricultural roads, as well as the repair and renovation of irrigation channels and the construction of water collection lakes. These projects were planned in the Framework Agreement I and examined by the technical assistance staff; these projects target all rural areas situated 400m above sea-level in the Akkar District as well as the mountainous areas of the Cazas of Hermel and Danniyeh, namely: Akroum, WadiKhaled, Kobayat, Dreib, Joumeh, Al-Qayteh and Al-Jurd, Hermel and Danniyeh.

With regard to the award of contracts for feasibility studies and supervision tasks, the projects were merged into 6 groups, each including a list of agricultural projects, whereby group No.6 consists only of preparation of detailed studies and supervision of agricultural roads repair and renovation projects. Whereas groups 1 to 5 include the preparation of feasibility studies as a preliminary step, and the preparation of detailed studies and supervision of construction of agricultural roads, irrigation canals and hill lakes as a second step, in all the project targeted areas.

In 2012, feasibility studies and detailed plans were completed and delivered to the CDR.

Also in 2012, the CDR awarded the works for the infrastructure component composed of 6 groups of projects aimed at rehabilitating agricultural roads and irrigation canals and constructing water collection lakes to a group of contractors after releasing calls for tenders in due form of law and in accordance with the EU delegation norms. Also the CDR extended the contracts awarded to the consultants to design the detailed plans for the supervision of implementation works in various areas covered by the project.

In 2015, the CDR received the works of supervisory tasks over the execution works in different areas covered by the project. The CDR started also receiving works of the tasks of infrastructure component composed of six project groups to repair agricultural roads, as well as the repair and reno-

vation of irrigation channels and the construction of water collection lakes.

Furthermore, within the framework of the local development component of the ADELNORD project, nine village clusters were identified in 2011 distributed across the project target areas. The elaboration of a Local Development Plan for each cluster has been initiated through a participatory approach between local authorities and civil society organizations, with the support of the ADELNORD technical assistance team and under the supervision of the Economic and Social Fund for Development (ESFD).

In 2012, Local Developments Plans were completed for 9 clusters, and culminated in nine so-

cio-economic development projects that respond to the needs of these rural areas. Based on this, contracts were signed between the CDR and each cluster represented by official local actors to implement these nine projects.

The environment component of the ADELNORD Project:

In the context of setting out the requirements (terms of reference) related to the development of a Sustainable Strategic Plan for the Cazas of Akkar, Hermel and Danniyeh, the ADELNORD project - in coordination with the Ministry of Interior and Municipalities, and in cooperation with the public administrations involved in the development sector - launched an initiative to establish a

In 2015, the CDR continued the execution of the nine socio-economic development projects under the supervision of ESFD in nine clusters distributed on the project targeted areas and summarized as follow:

Cluster	Proposed Project
Fnaideq	Construction of a waste treatment station
Mashta Hassan	Provision of equipment to a health center
Hrar	- Rehabilitation of irrigation canals - Provision of equipment to a vocational training center - Establishment of a socio- cultural municipal complex
Bait Younes	Rehabilitation of irrigation canals Purchase of waste containers and waste collection vehicles
WadiKhaled	Equipping and improving the services at Al Makased Health Center Equipping schools and improving the academic and vocational education Provision of equipment to a vocational training center
Akkar El Atika	Installation of an integrated system for sewage treatment
Kafarbibnin – Al Danniyeh	Rehabilitation of potable and irrigation water network Provision of equipment to a medical center Establishment of a school playground Development of capabilities and qualifications of the civil societies in the region
South Hermel	Drilling wells, rehabilitation of networks and storing potable water Support agricultural cooperatives
North Hermel	Drilling wells, rehabilitation of networks and storing potable water

standard methodology for regional development plan studies, after several donors expressed their readiness to finance regional development plans studies.

In 2014, ADELNORD started to put in place the Strategic Sustainable Regional Development Plan for Akkar, in cooperation with a team of subject matter experts in environmental sciences, economics, urban planning and social development. The experts were assigned by the technical assistance (GFA–ELARD) according to the above mentioned terms of reference. In this context, the Diagnostic mission and the draft plan were completed in cooperation with local authorities.

**And as part of the technical assistance provided for the establishment of a national park in the mountainous areas of Akkar,** the ADELNORD project agreed with the Ministry of Environment to set forth the requirements to award a technical study on the establishment and management of regulated natural reserves in Lebanon as a preparatory step for the establishment of a national park in Akkar. In 2012, as part of ADELNORD's activities, the said technical study was initiated in close cooperation with the Ministry of Environment. The study resulted in a detailed technical report and a draft law on natural reserves, which have been presented to the Ministry of Environment for review and approval.

In 2013, the Ministry of Environment approved the above mentioned draft law on natural reserves prepared by the CDR and it was ratified by the concerned parliamentary committees. Moreover, in 2014 the CDR completed the draft decree on natural reserves and presented it to the Ministry of Environment.

Within the context of fire suppression and forest protection and management, ADELNORD initiated in 2012 as a first phase the preparation of two management plans for the forests of Andkit-Akkar and Safira-Danniyeh, that would culminate in the elaboration of the terms of reference relating to forest management including pruning, in close collaboration with the Ministry of Agriculture. In 2013, the CDR presented to the Ministry of Agriculture a final report encompassing two management plans and two terms of reference related to the forests of Andkit-Akkar and Safira-Danniyeh, awaiting the approval of the Ministry of Agriculture.

Upon the request of the Ministry of Agriculture, the CDR initiated the Phase II of the mission, which includes:

- Implementation of a training program for forests guards and local activists.

- Procurement of private forest management equipment and accessories.

- Suggestion of a follow-up and monitoring mechanism for the implementation of two management plans for the forests of Andkit-Akkar and Safira-Danniyeh.

Also contracts were signed with suppliers to purchase communication and advertising materials within the framework of ADELNORD Project, through the release of a call for tenders in accordance with applicable laws and under the supervision and upon the approval of the European Union Delegation.

The CDR also allocated US\$ 8.4 million of the OPEC loan to the “Green Plan” with a view to finance the Hilly Areas sustainable Agricultural Development Project “Hasad” aiming at constructing hills lakes to promote agricultural development as an additional irrigation source during summer in poor rural areas where water is scarce. In this context:

- In 2014, the CDR signed a Memorandum of Understanding with the “Green Plan” regarding the implementation mechanism and the disbursement from the OPEC Fund for International Development (OFID) number 1337PB determined for the implementation of this project.

- An agreement was reached with regard to the location of 20 hill lakes expected to be implemented as part of the project in the following areas: Bouday, Younin, Amiri al Moudwi, Barka, Al Zarazir, Ain Al Biniyeh, Nahle (Bekaa), Ayta Al Shaeb, Aytaroun, BaytLif, Chibaa, Kfarchouba, MajdelSalem (Nabatiyeh), Ehmej, Baadran, Kfarmata, Kornayel, Mechmech (Mount Lebanon), Karam Al Mohr (North), and Mounjez (Akkar).

- As a first phase, the Execution and supervision works were awarded with regard to 8 hilllakes: Bouday, Ain Al Biniyeh, Nahle (Bekaa), Ayta Al Shaeb, Aytaroun, BaytLif, Chibaa (Nabatiyeh), and Ehmej (Mount Lebanon).

In the framework of the “Technical Assistance to the Local Development Support Project in North Lebanon” ADELNORD, funded by the European Union Delegation and implemented by the CDR in coordination with the technical assistance staff (GFA-ELARD) and the field supervisor, as well as the Economic and Social Fund for Development (ESFD). The CDR continued during 2015 to receive the works of the infrastructure component composed of 6 groups of projects i.e rehabilita-

tion of agricultural roads, restoration of irrigation canals and construction of water collection lakes.

As for the local development component of ADELNORD, in 2015, the nine development and social projects were delivered to the ESFD, in nine clusters of villages across the projected target area.

Concerning the environmental component of ADELNORD Project, the following was achieved in 2014:

1) The final version of the “Development of a Sustainable Strategic Plan for Akkar, Hermel and Danniye” was completed in coordination with a team of subject matter experts in environment sciences, economics, urban planning and social development, assigned by the technical assistance (GFA -ELARD) established for this purpose in coordination and consultation with local authorities.

2) Within the framework of Fire Suppression and Forest Protection and Management, the CDR continued to follow up on Phase II of this mission, upon the request of the Minister of Agriculture, in particular the following:

1. Implementing a training program targeting forests guards and local activists;
2. Supplying of forest management tools and supplies;
3. Proposing a follow up mechanism to implement the two management plans of the Forest of Andkit and Safira.

Regarding the Hilly areas Sustainable Agricultural Development Project “HASAD”, the CDR continued to provide the necessary funds to complete the 8 hill lakes in the following regions: Bouday, Ain Al Biniyeh, Nahle (Bekaa), Ayta Al Shaeb, Aytaroun, BaytLif, Chibaa (Nabatiyeh), and Ehmej (Mount Lebanon) as well as continuing the works in collaboration with the “Green Plan”.

The French Development Agency (AFD) showed an interest in the National Afforestation Program “40 Million Tree”, a program prepared and implemented by the MoA in collaboration with different local bodies and donors, and constituting a cornerstone of the MoA’s current work plan.

To that end, AFD dedicated a special delegation that elaborated an Aide Memoire to describe the current situation and identify the current related initiatives and major needs. In light of the findings of the Aide Memoire, a plan was presented to outline the scope of a term of reference aiming at

preparing:

- Preliminary studies (Avant-Projet Sommaire (APS))
- Detailed studies (Avant Project Detaille; APD)
- Tender document (Dossiers de Consultation des Entreprises; DCE)
- Socio-environmental impact assessments (Etudes d’impact Environnemental et Social; EIES):

These studies will have to be subcontracted by the CDR in close collaboration with the Ministry of Agriculture and with the financial assistance of AFD.

Based on the above, the CDR in collaboration with the stakeholders in the Ministry of Agriculture and AFD prepared the above-mentioned studies tender document within the framework of contributing to the National Afforestation Program “40 Million Tree” funded by the AFD, with a budget of EUR 300,000.

These services are two-phased:

- Phase 1: preparation of the Preliminary studies (Avant-Projet Sommaire (APS)) and the Socio-environmental impact assessments (Etudes d’impact Environmental et Social (EIES)), with a budget not exceeding EUR 150,000.
- Phase 2: preparation of the Detailed studies (Avant Projet Detaille (APD)) and the tender document (Dossiers de Consultation des Entreprises (DCE)), with a budget not exceeding EUR 150,000, on an optional basis for CDR. Phase 2 will kick off in the light of the findings of Phase 1.

A call for tenders was released to carry out this mission.

On a different note, the CDR prepared the draft for the Sustainable Socio-economic Development of Lebanese Coastal Communities, in close collaboration with the Ministry of Agriculture and the Italian Development Cooperation, with a view to develop the agricultural sector and the Fisheries industry in five Lebanese Coastal cities.

It is worth noting that 160 contracts of a value of USD 45.96 million were signed in the agriculture sector between 1992 and the end of 2016, of which 135 contracts have been already executed and 25 are underway.

### 3- Work progress during 2016:

Regarding the Canal 800 Project aiming at transporting water from the Litani River to the South of Lebanon, to be used in irrigation and in drinking water supply— Phase I, Kharafi/Veziroglu/Guris continue works execution and LahmeyerInt.

GmbH/JBJ Gauff/ingenieur/D.A.H “Shair& Partners” Group, continue works supervision.

Currently, many agriculture and irrigation projects of municipal nature are underway, through “the Social Development Fund”, with funding from the European Union and the contributions of concerned municipalities especially in the South and Akkar regions.

In the framework of the “Technical Assistance to the local development support project in North Lebanon” ADELNORD, funded by grant n° ENPI/2008/019-623, the CDR will continue to:

- Continue supervision of the delivery of priority local development projects in the different village clusters under the supervision of the Economic and Social Fund for Development (ESFD).
- Coordinate with the Ministry of Environment with regard to the approval and enforcement of the draft implementing decree on natural reserves.
- Coordinate with MoA with regard to the validation of the two management plans of the forests of Andkit in Akkar and Safira in Danniyeh, and the two terms of reference for forest management including pruning, in the framework of fire suppression and forest protection and management.

With regard to the Hilly Areas sustainable Agricultural Development Project “Hasad”, the CDR continued securing the necessary funds for the execution of eight mountainous lakes in each of the following areas: Bouday, Ain Al Biniyeh, Nahle (Bekaa), Ayta Al Shaeb, Aytaroun, Bayt-Lif, Chibaa (Nabatiyeh), and Ehmej (Mount Lebanon). The CDR also continued following up on the work progress in collaboration with the Green Project. In addition the CDR participated in the tendering process for six new lakes in Karm Al Mohr (North), Mounjez (Akkar), MajdelSelem (Nabatieh), Kfarchouba (Nabatieh) Younin, (Baalback), and Moudwi (Hermel).

Within the framework of contributing to the National Afforestation Program “40 Million Tree”, funded by the AFD with a total budget of EUR 300,000, a call for tender was released and the tender was awarded to the consultant FRM France to execute the first phase of this project which includes an Avant Projet Sommaire and an Environmental Impact Study (of a value not exceeding EUR 150,000). FRM France will perform this mission in cooperation with ECOCENTRA and ID Green Land Consulting.

The CDR continued coordinating with the Ministry of Agriculture and the Italian Development Cooperation to come up with a final draft of the

Sustainable Socio-Economic Development of Lebanese Coastal Communities project, aiming at developing the Agriculture sector and fisheries in five Lebanese coastal cities.

The CDR, through its participation in liaison committees, follows up on projects implemented by the Ministry of Agriculture:

- 1.The committee to address the issue of prohibited crops and propose alternative crops in the Bekaa.
- 2.The National Committee on the development of efficient land use policies and improvement of living standards.
- 3.The National Committee to Combat Desertification, Climate Change, and Biodiversity.
- 4.The coordination committee for the “Economic and Social Development Project for Olive Producers in Poor Areas”.
- 5.National Food Security Program committee in cooperation with the Food and Agriculture Organization of the United Nations (FAO).
- 6.The steering committee of the Hilly Areas Sustainable Agricultural Development Project “HASAD”.
- 7.The steering committee of the Lebanese Observatory for Agricultural Development.
- 8.The steering committee for the Coordination Project between the Ministry of Agriculture and Italy.
- 9.The steering committee of Promoting the Production and Marketing of Lebanese Agricultural Production.
- 10.The coordination committee for the Agricultural and Rural Development Project (ARDP) funded by the European Union.
- 11.The national coordination committee for the United Nations Food and Agriculture Organization (FAO).

These committees provide insights into the major results of completed projects and planned activities as well as the problems and challenges encountered.

#### 4- Main projects under preparation for 2017

In the context of the Hilly Areas Sustainable Agricultural Development project “HASAD”: The CDR will continue to provide oversight over the completion of works in the eight lakes previously sub-contracted; the CDR will also continue to secure funding from the OPEC loan to construct the remaining planned lakes, in close collaboration with the “Green Plan – المشروع الأخضر”.

In the framework of the “Technical Assistance to the local development support project in North Lebanon” ADELNORD, funded by grant n° ENPI/2008/019-623, the CDR will continue to:

- Supervise the delivery of priority local development projects in the different village clusters under the supervision to the Economic and Social Fund for Development (ESFD).
- Coordinate with the Ministry of Environment with regard to the approval and enforcement of the draft implementing decree on natural reserves.
- Coordinate with MoA with regard to the validation of the two management plans of the forests of Andkit in Akkar and Safira in Danniyeh, and the two terms of reference for forest management including pruning, in the framework of fire suppression and forest protection and management.

As for the Canal 800 Project (Transportation of Litani River Water to the South of Lebanon) – Phase I:

- The CDR will continue the implementation of the project subcontracted to Kharafi/Veziroglu/Guris in 2012.
- The CDR will continue overseeing the implementation of the project through the advisory contract with the merger group LahmeyerInt.GmbH/JBJ Gauff/ingenieur/D.A.H “Shair& Partners.
- In 2017, the CDR will seek to subcontract the Supervisory Control and Data Acquisition (SCADA), with the technical assistance of the consultant and in agreement with the Arab Fund.
- The CDR will also seek to secure the necessary loan (approximately US\$ 18,000,000) to implement Phase II of the project, scheduled from 2017 to 2020, inclusive of studies, supervision and works phases.

It is worth mentioning that the implementation of this project will result in providing 90 million m<sup>3</sup> annually by gravity irrigation for around 13,000 ha between the 800 m and 400 m levels of the Qaraoun Lake, in addition to providing 20 million m<sup>3</sup> annually of drinking water. The project is financed through two approved loans, the first provided by the Arab Fund for Economic and Social Development (AFESD) and the second by The Kuwait Fund for Arab Economic Development (KFAED).

Concerning the locally funded project on the restoration of the lake of Mechmech in Akkar, the CDR completed the tender document awaiting initiation of the bidding process.

Within the framework of contributing to the National Afforestation Program “40 Million Tree”, the CDR, through the consultant FRM France, will launch the Phase 1 of the studies (APS,APD/DCE, and EIES) funded by AFD with a total budget of EUR 300,000, in coordination with the Ministry of Agriculture stakeholders.

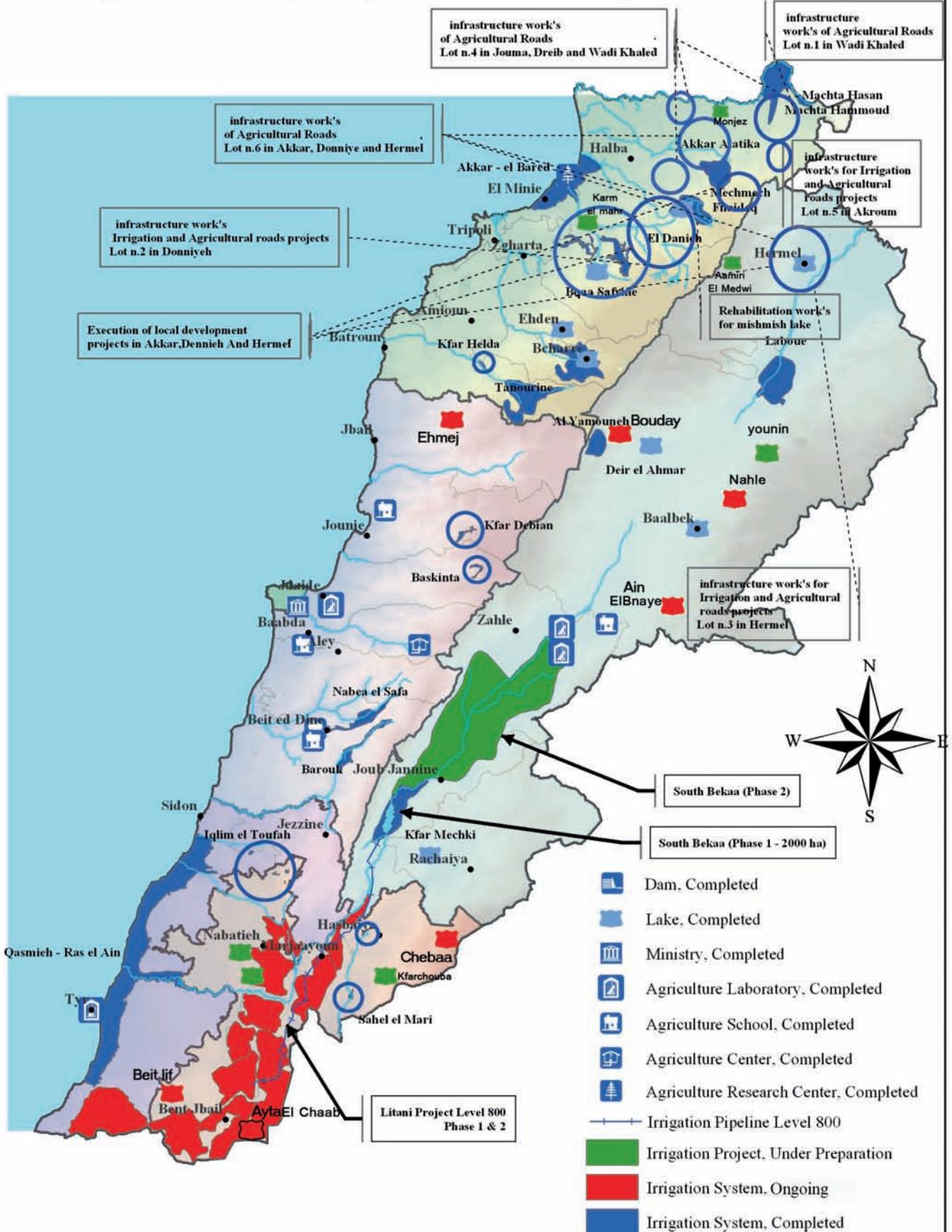
The CDR will work towards developing a final draft of the Sustainable Socio-Economic Development of Lebanese Coastal Communities project, in close collaboration with the Ministry of Agriculture and the Italian Development Cooperation, in order to subcontract works in the near future.

The CDR will continue following up on the works of the liaison committees with the Ministry of Agriculture, to monitor their different agricultural projects and get an insight of the main results of completed works, upcoming activities and the problems and challenges encountered.

### Main Projects under preparation for 2017

Project	Estimated value (US\$)	Source of Funding	Expected date to resume work	Scheduled completion
Restoration of the lake of Mechmech	300, 000	CDR	June 2017	September 2017
Water transfer from Litani River to the South of Lebanon for drinking water and irrigation–(Subcontracting of the Supervisory Control and Data Acquisition Contract SCADA) – under Phase I	2,242,000	- AFESD	February 2017	February 2018
Water transfer from Litani River to the South of Lebanon for drinking water and irrigation (Canal 800) – Phase II: Studies, supervision and works	18,000,000	- KFAED - CDR	June 2017	July 2021

# Agriculture & Irrigation Completed, Ongoing & Under Preparation Projects



## Sovereign Services

### General Overview of the Sovereign Services Sector

The Administration of the Council for Reconstruction and Development (CDR) aims at addressing the needs of the Lebanese public institutions focusing primarily on the construction of new government facilities and the improvement of existing facilities. Within this framework, the CDR plans and implements, construction, repair, maintenance and operation projects. This plan reflects the Lebanese government's desire to construct ministries and public administrations facilities on state-owned real property, with a view to decrease rental costs of buildings actually used by the Lebanese public institutions and to improve the administrative performance of such buildings.

Main projects completed within the reporting period (1992 – 2016)

Up until 2014, a number of construction and facility improvement projects were planned, and completed. Three new governmental Sarays were constructed in Jezzine, Tebnine and Hermel. A Justice Palace was constructed in Saida. Two Qaiimaqamiya buildings were constructed in Minnieh and Sir el Dannieh. Also, a building for the Ministry of Finance in Aadliyah – Corniche el Nahr region was constructed. A showroom was added to the National Museum which underwent also enlargement and water treatment works.

In addition, the UNESCO Palace, the historic building of the Grand Saray of Beirut as well as several border crossings were renovated and repaired; Renovations and repairs were completed on the building for the Ministry of Media and Tourism in Sanayeh, the building of the Lebanese Embassy in London, as well as on a number of other government facilities including municipalities. These projects were completed at a total cost of US\$ 200.00 million. Preparatory work was initiated to conduct a study on the construction of a consolidated building for the Customs Administration at the Port of Beirut.

### Work progress in 2016, regarding contracts signed before 2016

Among the current active projects, a number of urgent projects were completed on the border crossings in Aaboudiye – Bqaiya – Aarida –

Masnaa; in Roumieh prison a new building was constructed, and a new court room was added; a new fruit and vegetable souk was constructed in Tripoli. The total budget allocated for these projects is US\$ 20.00 million.

### Projects under preparation

Studies are being developed to implement additional renovation and repair projects at the borders points in Masnaa, Aaboudiyeh, Aarida, and Bqaia, and to add facilities to the Justice Palace of the city of Beirut. A study is also being developed to build a new facility for Basel Fleyhan Financial and Economic Institute. Other government construction and infrastructure studies in the pipeline: Construction of a big facility that will include the office of the Minister of State for Administrative Reform, the Civil Service Board and the Central Inspection; the construction of a new building for the Ministry of Foreign Affairs in Solidere, the construction of a new building complementing the existing facility of the Industrial Research Institute (IRI) in Hadath. In the studies pipeline also: the renovation and rehabilitation of the governmental Saray in Baabda; the maintenance and rehabilitation of the facility of the National Institute for Administration; the outsourcing of studies to build prisons across all Lebanese territories, Sarays in Halba, Baalback, Sour, a justice palace in Nabatiyah and a pilot prison in Majdalia.



Rehabilitation of Roumieh Prison

## Sovereign service projects (under preparation)

Project name	Contract value (USD)	Funding Source	Initiation Date	Scheduled Completion
Study for site works execution at Halba Saray	174,000.00	Lebanese Government	February 2018	February 2019
Study for site works execution at Halba Saray	6,800,000	Lebanese Government	June 2019	June 2021
Study for site works execution at Baalback Saray	172,260	Lebanese Government	February 2018	February 2019
Execution of site works at Baalback Saray	6,800,000	Lebanese Government	June 2019	August 2018
Study for site works execution at Nabatiyeh Justice Palace	174,000	Lebanese Government	January 2016	February 2017
Execution of site works at Nabatiyeh Justice Palace	6,800,000	Lebanese Government	February 2018	February 2020
Updating the study pertaining to the execution of site works at Sour Saray	90,000	Lebanese Government	March 2018	March 2020
Execution of site works at Sour Saray	6,800,000	Lebanese Government	January 2016	June 2019
Construction of a building complex in shhim	5,000,000	Lebanese Government	March 2016	March 2018
Establishing a unified customs building on a land annexed to Beirut port	20,000,000	Lebanese Government	July 2018	July 2020
Renovation of customs building in Aarida	7,000,000	Lebanese Government	July 2018	July 2018
Renovation of customs building in Bqayaa	2,000,000	Lebanese Government	July 2018	July 2018
Renovation of customs building in Kaa	7,000,000	Lebanese Government	July 2018	July 2020
Rehabilitation of customs buildings in Aaboudiye	7,000,000	Lebanese Government	July 2018	July 2020
Construction of Bypass at Sheik Aiash for Trucks (common Lebanese Syrian borders)	22,000,000	Lebanese Government	July 2018	July 2020
Rehabilitation of customs buildings in Sour	1,000,000	Ministry of Public Works Budget pursuant to Decree 2002/7606	August 2018	December 2019
Construction of the Ministry of Foreign Affairs in "Solidere"	8,000,000	Lebanese Government	June 2018	June 2020
Construction of Ministry of Finance building in Baabda	30,000,000	Lebanese Government	June 2018	June 2020
Project to renovate the CDR building	800,000	CDR Budget	February 2018	February 2020
Renovation of the section rented out by the Ministry of Finance in property No. 1383 in the Port cadastral area	1,000,000	Lebanese Government	February 2018	February 2019
Construction of a prototype jail in Majdalia	60,000,000	Lebanese Government	November 2017	November 2020

## Funding of the Reconstruction Program

### Funds awarded

The funds awarded to the Lebanese Reconstruction Program are made under loan agreements approved by the government and ratified by the Parliament, and grant agreements enforced by governmental decrees. The total value of foreign funds received between 1992 and end of 2016 reached US\$ 11,850 million (grants and loans), calculated at the exchange rates recorded at the end of 2016; the following table details out the total foreign funds received:

	Grants	Loans	Total
Amount in million USD	3,365	8,485	11,850
% of total	28%	72%	100%

The Council for Development and Reconstruction (CDR) adopts a general policy to secure soft loans for social services sectors and commercial loans for high profitability sectors and projects (productive sectors). However, the CDR is not the only governmental body mandated to implement the Reconstruction Program, there are other ministries and government administrations that contribute to the implementation of other parts of this program.

Awarded foreign funds by source: Around 47 funding sources have contributed to the Reconstruction Program, of which 23 main foreign sources contributed to more than US\$ 10 million each, as detailed out in Chart 1. It is noteworthy that 11 main foreign funding sources have contributed to more than 90% of the total foreign funds, i.e: the International Bank for Reconstruction and Development (IBRD) (16.63%), the Arab Fund for Economic and Social Development (AFSED) (12.77%), the Islamic Development Bank (IDB) (12.46%), Kuwait Government and the Kuwait Fund for Arab Economic Development (KFAED) (11.74%), the European Investment Bank (EIB) (8.87%), the Kingdom of Saudi Arabia and the Saudi Fund for Development (7.96%), the European Union (EU) (6.58%), the Republic of Italy (5.00%), the Republic of France (3.71%), Qatar (2.76%), commercial banks (2.44%). The total value of the funds recorded reached US\$ 11,849,40 million, an increase of US\$ 610 million compared to the total value of funds recorded by the end of 2015.

Distribution of awarded foreign funds by sector: Chart 2 details out the distribution of the total foreign funding received to date by the main sectors. The share of foreign funds obtained by basic infrastructure sectors reached 33%, mainly targeting electricity, telecommunications, and air, land, and sea transportation. The share of social sectors amounted to 24%, targeting education, public health, housing compensations, youth affairs and sports, land arrangement and environment. The share of basic services sectors stood at 26% distributed among potable water supply, wastewater and solid waste sectors. The productive sectors and other sectors such as agriculture, irrigation, industry, tourism, private sector services, local and central administration and other sectors, accounted for 17% of the foreign funds.

Distribution of awarded foreign funds by sector: Chart 2 details out the distribution of the total foreign funding received to date by the main sectors. The share of foreign funds obtained by basic infrastructure sectors reached 33%, mainly targeting electricity, telecommunications, and air, land, and sea transportation. The share of social sectors amounted to 24%, targeting education, public health, housing compensations, youth affairs and sports, land arrangement and environment. The share of basic services sectors stood at 26% distributed among potable water supply, wastewater and solid waste sectors. The productive sectors and other sectors such as agriculture, irrigation, industry, tourism, private sector services, local and central administration and other sectors, accounted for 17% of the foreign funds.

### New Funds

The foreign funds obtained during 2016 reflects the efforts made by the CDR to translate foreign funds promises into awarded funds, which would only require completion of certain legal and administrative procedures to become effective. The total value of foreign funds secured in 2016 reached US\$ 720 million approximately: US\$ 681 in the form of loans and of US\$ 39 million in the form of grants. Below are summarized the main loan and grant agreements signed and ratified in 2016:

Chart 1  
Percentage Share of Loans & Grants  
Ratified Signed & Approved Foreign Financing  
Distribution by Fund

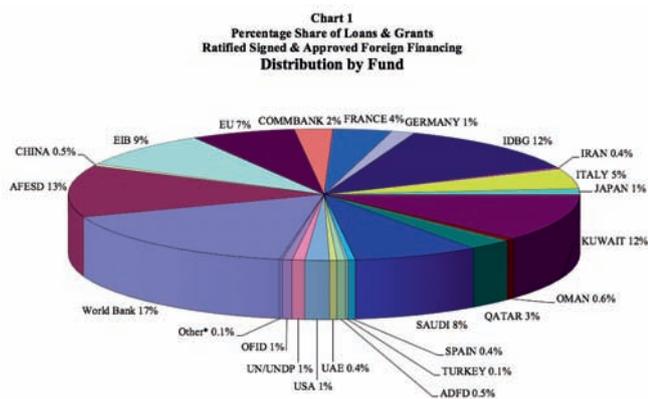
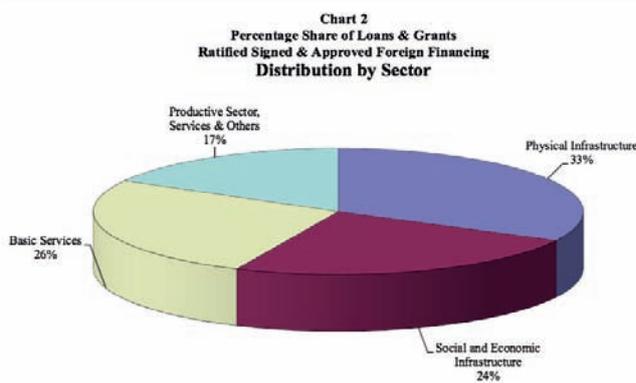


Chart 2  
Percentage Share of Loans & Grants  
Ratified Signed & Approved Foreign Financing  
Distribution by Sector



\* Other Funds financing less than USD 5 Millions in Loan & Grants are the following : AGFUND, ARAB LEAGUE, ARGENTINA, BELGIUM, GREECE, IRELAND, KOREA, METAP, NETHERLANDS, SWEDEN, GEF, HRC and Private Donors.

**World Bank (WB)**

1. Project on Combatting Pollution in the area surrounding the Litani River Basin (Qaraoun Lake) in the Bekaa:

In 2016, a US\$ 55 million agreement was approved to finance the project on the protection of the Qaraoun Lake from pollution; the agreement was signed with the World Bank in September 2016; the agreement was concluded on 27/10/2016 and entered into force on 13/12/2016.

2. Roads and Employment Project:

Following the approval of the World Bank and the Bank-administered Concessional Financing Facility (CFF) approval, and following the approval of the Council of Ministers, a US\$ 200 million funding agreement was signed on 21/06/2017 to finance the Roads and Employment Project (US\$ 45,400,000 grant portion and US\$ 154,600,000 soft loan portion). Currently, a list of the roads that will be repaired and upgraded is being prepared to be presented to the Council of Ministers. Afterwards, the agreement will be submitted to the Parliament for authorization to ratify.

**European Investment Bank (EIB)**

In 2016, preparations for the following projects were made with the EIB:

1. A EUR 380,000 draft grant-in-kind to conduct a feasibility study for the project intended to upgrade and expand the wastewater collection and treatment in Saida, to pave the way for financing the project.

2. Preparations were made for co-financing 50% of the cost of the project aimed at constructing three new industrial zones in Baalback and Terbol – Kousaya and Jaliliya, in the form of a soft loan under a private public partnership. The value of the project is estimated at US\$ 118.6 million.

3. Preparations were made for co-financing the Roads and Employment Project in the form of US\$ 200 million soft loan.

4. Preparation of a Euros 68.5 million draft soft loan agreement to finance the renovation of the waste water networks in Al Ghadir basin (part of Beirut City and its western southern suburbs).

**Islamic Development Bank (IDB)**

In 2016, a number of financing agreements were signed after they have been approved by the Islamic Development Bank (IDB). The status of these agreement is summarized as follows:

1. Jabal Amel Water Project (Phase III)

On 08/03/2015, the Islamic Development Bank

(IDB) approved to provide a US\$60.97 million financial assistance of to the Jabal Amel Water Project. The project aims at supplying drinking water to a number of towns and villages in Jabal Amel, through the installation of pumping stations and water networks.

On 14/01/2016, the Council of Ministers approved the funding agreement (istisna'a and wakala) and mandated the CDR's president to sign on behalf of the Lebanese government. The agreement was signed during the visit of IDB's chairman to Lebanon on 24/03/2016.

2. Financing of the project on the Reconstruction of Bir el Heith –Qartaba road (Phase III)

On 06/12/2015 the IDB approved to finance the project aimed at re-constructing the Bir el Heith – Qartaba road (Phase III), with a total budget of US\$ 20.7 million. The project is intended to complete the road leading to Qartaba. On 13/10/2016, the Council of Ministers approved the funding agreement (istisna'a and wakala) and mandated the CDR's president to sign on behalf of the Lebanese government. The agreement was signed on 26/10/2016.

3. Construction of North Expressway – (Eastern Ring of Tripoli) – Phase I

On 30/11/2014, the Islamic Development Bank (IDB) approved to finance (US\$ 69.5 million) the Road Network Improvement Project in Lebanon intended to construct the north expressway (Eastern Ring of Tripoli) – Phase I, within the Framework Agreement for the Reconstruction of Lebanon. The IDB prepared the draft funding agreement (istisna'a and wakala) to finance the project. The Council of Ministers approved it on 14/1/2016 and mandated the CDR's president to sign on behalf of the Lebanese Government. The agreement was signed during the visit of the IDB's chairman to Lebanon on 24/03/2016.

4. The Greater Beirut Water Project (Bisri Dam)

On 19/10/2014, the Islamic Development Bank (IDB) agreed to finance the Greater Beirut Water Supply Project (Bisri Dam) (US\$128 million). The Council of Ministers approved the funding agreement (istisna'a and wakala) on 14/01/2016 and mandated the CDR's president to sign on behalf of the Lebanese Government. The agreement was signed during the visit of the IDB's chairman to Lebanon on 24/03/2016.

5. Financing the Completion and Development of Al Ghadir Water Treatment Plant for the Collection and Treatment of Waste Water

On 22/6/2014, the Islamic Development Bank (IDB) approved the financing of Al Ghadir Waste

Water Collection and Treatment Plant Project. The project will be co-funded by the European Investment Bank and the Islamic Development Bank. The contribution of IDB to this project is US\$ 87.5 million. The IDB prepared the draft funding agreement (istisna'a and wakala) to finance the project. The Council of Ministers approved it on 14/1/2016 and mandated the CDR's president to sign on behalf of the Lebanese Government. The agreement was signed during the visit of the IDB's chairman to Lebanon on 24/03/2016.

#### 6. Southern Coastal Road Project (Burj Rahal – Sour)

On 24/08/2014 the Islamic Development Bank (IDB) approved the financing of the Southern Coastal Road Project (Burj Rahal – Sour) (US\$ 26.7 million). The Council of Ministers approved the funding agreement (istisna'a and wakala) on 14/01/2016 and mandated the CDR's president to sign on behalf of the Lebanese Government. The agreement was signed on 07/02/2016.

#### 7. Construction of Sir Road and Tripoli Eastern Ring – Phase II

On 31/07/2016 the Islamic Development Bank (IDB) approved the financing of the Program intended to upgrade Lebanon's road network (US\$ 81.3 million), related to the Construction of Sir Road and Tripoli Eastern Ring Project – Phase II. The Council of Ministers approved the financing agreement on 13/10/2016 and mandated the CDR's president to sign on behalf of the Lebanese Government. The agreement was signed on 26/10/2016.

**In 2016, two financing agreements were prepared and approved by IDB. The status of these two agreements is summarized as follows:**

#### 1- Upgrading and Extension of Tripoli Port Project

On 26/03/2016 the Islamic Development Bank (IDB) approved the financing of the project intended to upgrade and extend the Tripoli Port (US\$ 86 million). The matter was submitted to the Council of Ministers for approval and mandate of signature.

#### 2- Providing Support to the Health Sector in Lebanon Project

On 02/07/2017 the Islamic Development Bank (IDB) approved the financing of the project intended to provide support to the health sector in Lebanon (US\$ 5.9 million grant portion and US\$24.1 million loan portion), within the frame-

work of the Global Concessional Financing Facility. The matter was submitted to the Council of Ministers for approval and mandate of signature.

#### Arab Fund for Economic and Social Development (AFESD)

The housing loan entered into force and was fully implemented.

The CDR has requested the AFESD to develop a program to finance the construction of a new power station in Jiyeh (Jiyeh 2) and present it to the Arab and Islamic funding sources liaison group. The CDR is currently conducting a feasibility study to remove the old power station and explore the possibility of constructing a new substitute station.

#### Kuwait Fund for Arab Economic Development (KFAED)

On 15/12/2016, a KD 18 million loan agreement (US\$ 60 million) was signed with KFAED, to co-finance the Sarafand Waste Water Project.

On 12/01/2016, a US\$ 30 million second grant agreement was signed with KFAED to contribute to the Lebanon Crisis Response Plan (LCRP). The agreement has entered into force and is being implemented.

On 15/12/2016, a US\$ 25 million third grant agreement was signed with KFAED to contribute to the Lebanon Crisis Response Plan (LCRP). Preparations are underway to pave the way for the entry into force of this agreement.

In 2016, preparations were made for a loan agreement with KFAED to co-finance the project on the supply of drinking and irrigation water in Bcharre. The agreement was signed on 25/03/2017 and was referred to the Parliament for ratification on 24/04/2017.

In 2016, preparations were made with KFAED for a loan agreement to co-finance the project intended to construct two wastewater systems in Chouf. The signature of this agreement is scheduled for the second half of 2017.

#### Agence Française de Développement (AFD)

During 2016 and the beginning of 2017, the AFD financed the preliminary studies of two new projects:

- The Wadi Qadisha Wastewater Project which will be funded through a Eur 34 million loan. The approval of this loan by the Council of Ministers and the signature of the loan agreement are expected during the last quarter of 2017.

•The National Reforestation Plan, which covers infrastructure in rural areas through a EUR 15 million grant. The approval of this grant by the Council of Ministers and the signature of the grant agreement are expected during the last quarter of 2017.

In addition, a EUR 21 million soft loan agreement was concluded on 10/02/2017 to finance the construction and equipping of the National Arts and Profession Institute and support the program on the development the Institute in Lebanon. Also, a EUR 700.000 grant was approved to finance the preparatory studies for the projects during the first half of 2017.

#### **Delegation of the European Union to Lebanon**

In February 2016, a EUR 5,5 million grant agreement was signed, to provide technical support to a number of public administrations and the CDR.

#### **Republic of Italy**

On 16/11/2016, a Framework Agreement was signed between the government of the Republic of Lebanon and the government of the Republic of Italy: this Agreement covers projects in the waste water sector, project for the modernization of the industrial sector in Lebanon, an eco-tourism project, and a project for the support of coastal communities in Lebanon. This agreement was referred to the Parliament for approval.

#### **United Nations Development Program in Lebanon (UNDP)**

In 2016/2017, the CDR signed a series of project documents, funded through grants from the United Nations organizations and other donors and implemented by the United Nations Development Program (UNDP), amounting to US\$ 42 million (US\$36 million funded by the Government of Lebanon and US\$ 6 million funded by other donors). The projects are summarized below:

- Sustainable Land Management in the Qaraoun Catchment Lebanon, funded by the Global Environment Fund (US \$ 3,187,671) and the United Nations Development Program (UNDP) (US\$ 300,000).
- Initiation of the HPMP phase out management plan phase II, funded by the Multilateral Fund of the Montreal Protocol, at a value of US\$ 2,410,000;
- Lebanon's Second Biennial Update Reporting (BURII), funded by the Global Environment Fund, with a value of US\$ 352,000.
- Institutional Support for Economic Stabilization

and Trade Development, funded by the Ministry of Economy and Trade, valued at US\$ 3,250,201.

- The Institutional and Technical Support to the Ministry of Education and Higher Education towards Accessible and Quality Education, funded by the Ministry of Education and Higher Education, valued at US\$ 12,525,530.

- Support to Civil Service Reform and Management Capacity of Public Administration Phase II, funded by the Ministry of State for Administrative Development Affairs, valued at US \$ 7,801,164.

- The Fiscal Policy Advisory and Reform, funded by the Ministry of Finance, with a value of US\$ 7,800,000.

- Institutional Strengthening of the Ministry of Environment, funded by the Ministry of Environment with a value of US \$ 4,450,000.

- Support to the implementation of the Sustainable Development Plan for 2030 (SDGs in Lebanon: Analyzing Gaps and Reporting Progress), funded by the Council for Development and Reconstruction in the amount of US \$ 200,000 and the United Nations Development Program (UNDP) in the amount of US\$ 100,000.

#### **-People's Republic of China:**

On 27/10/2016, a CNY 50 million zero-interest loan agreement was concluded with the People's Republic of China by virtue of Law no. 85 dated 27/10/2016. This agreement was signed on 10/09/2015 and will cover projects that will be agreed upon at a later stage between the governments of China and Lebanon.

Also, two zero-interest loan agreements (CNY 70 million) were signed on 13/01/2017 to provide assistance to the Syrian displaced and to their Lebanese host communities, implemented by the Ministry of Social Affairs.

Within the context of assistance to the construction of the Lebanese National Higher Conservatory of Music, the government of China offered a CNY 100 million grant as first payment.

Loans Ratified Signed and Approved Distribution matrix by Sector and Funding Source (In Millions of USD - Starting 1992 Untill 31/7/2017)																
Sector/Funding Source*	World Bank (IDA, IBRD, LSCTF)	AFESD	CHINA	EIB	COM-MBANK	FRANCE (AFD, French Protocols, CRIF)	GERMANY	IDBG (ICD, ITFC, IDB)	IRAN	ITALY	JAPAN (JICA/ JBIC)	ADFD	USA	IFAD	OFID	Total
Physical Infrastructure																
Electricity	104.73	423.19		126.38	288.23	59.62	40.31	131.47	18.82	258.04	143.04					1,593.82
Fixed lines (Telecom)	12.70					1.25		7.82			37.30					59.08
Public & Private Land Trans (Roads)	175.88	186.43		167.32				379.05			167.03	10.00			35.00	1,259.22
Air Transportation				84.47		21.71					51.23					157.40
Maritime Transportation				107.91	0.35	2.60										110.86
Multisectorial Infrastructures		83.93	12.07					116.27								212.27
Sub Total	293.31	693.56	12.07	486.08	288.58	85.18	40.31	634.61	18.82	258.04	0.00	10.00	0.00	0.00	35.00	3,392.65
Social and Economic Infrastructure																
Public education	84.01	21.73		6.21		0.46		32.98			74.79	16.08				236.26
Vocational & Tech. Education	59.54	48.99				3.32		30.46							4.00	146.31
Culture & Higher Education		99.78				26.68		202.40		10.69		29.47				369.02
Housing	13.27	137.85				0.00						25.00				176.13
Health	33.25			1.00		4.61		122.34				47.13			14.93	223.26
Social & Economic Development	20.00															20.00
Sub Total	210.07	308.34	0.00	7.22	0.00	35.07	0.00	388.18	0.00	10.69	0.00	25.00	0.00	0.00	18.93	1,170.98
Basic Services																
Solid waste	31.92															31.92
Water Supply	852.74	62.92		78.37	6.27	68.53		256.68	10.26	11.91	88.18	34.46	10.00	5.00		1,622.63
Waste Water	10.33	141.74		313.95	31.60	156.45		164.49	5.13	106.92	53.33	17.50				1,104.31
Sub Total	894.99	204.66	0.00	392.31	0.00	224.97	37.87	421.17	15.40	118.83	141.51	34.46	27.50	0.00	5.00	2,758.87
Productive Sector, Services & Others																
Agriculture	21.51		5.55			1.67								6.00	22.88	71.01
Irrigation	56.29	205.75											4.00			399.93
Industry				39.73	0.89	0.95										59.53
Tourism	31.50			37.12		15.90										84.52
Private Sector Services	45.00			84.30												129.30
Management and Implementation	105.26	29.39									14.67					149.32
Public information						27.73										27.73
Fuel								25.00								25.00
Administration	126.17	20.86	0.48													153.83
miscellaneous	26.93					21.96			12.83							61.72
Sub Total	412.66	256.00	6.04	161.15	0.89	68.21	0.00	25.00	12.83	0.00	14.67	6.32	0.00	26.88	13.40	1,161.90
Total	1,811.03	1,462.56	18.11	1,046.76	289.47	413.43	78.18	1,468.96	47.05	387.56	156.18	271.97	62.50	26.88	72.33	8,484.40

Grants Ratified Signed and Approved Distribution by Sector and Funding Source (In Millions of USD - Starting 1992 Until 31/7/2017)

Sector/Funding Source*	World Bank (IDA, IBRD, LSCTF)	AFESD	CHINA	EU	FRANCE (AFD, CRIF, French Protocols)	GERMANY (KfW, GIZ)	IDBG	ITALY	JAPAN (JBIC/JICA)	KUWAIT (KFAED, KUWAIT)	OMAN	QATAR	SAUDI (KSA, SFD)	SPAIN	TURKEY	UAE	USA (USA, USAID)	UN/ UNDP/ IFAD	Other*	Total
Physical Infrastructure																				
Electricity	7.54	0.33		3.91	7.81					25.12				6.62				0.05		51.38
Fixed lines (Telecom)			6.02	0.84														0.04		6.90
Public & Private Land Trans (Roads)				1.03	0.64		8.02	1.09		40.62			109.71				30.00	2.35	1.49	192.60
Air Transportation					0.54					2.29										5.17
Maritime Transportation				3.14	0.37															3.51
Multisectoral Infrastructures	10.00	30.81	22.94	47.80		4.18	0.25	5.03		28.40			60.00						0.63	210.04
Sub Total	17.54	31.14	28.96	56.71	9.36	4.18	0.25	13.05	1.09	96.42	0.00	0.00	169.71	6.62	0.00	0.00	30.00	2.44	2.12	469.60
Social and Economic Infrastructure																				
Public education	32.00	0.98		12.93		6.06	1.91	1.34	0.52	23.21			29.03					0.96	6.40	115.34
Vocational & Tech. Education			1.21	0.09	0.38	16.86		0.54	0.95	4.00	10.00							0.03		34.05
Culture & Higher Education	0.03	0.59	1.21	3.14	2.63		1.66			0.06	1.79	25.00	6.58					2.43		45.12
Youth & Sports				0.73			0.04			21.98			10.44							33.19
Land use & Environment			0.50	37.81	0.11	10.35		13.34			7.00					50.00	0.13	13.35	2.21	134.80
Housing				1.33						135.00	40.00	211.14	325.00					5.31		717.78
Health	15.80		4.23	1.05	0.96			21.97		61.59			44.13		20.00			1.95	5.34	177.01
Social & Economic Development	47.83	1.57	7.14	57.07	4.07	33.27	1.91	38.89	1.47	245.83	58.79	236.14	415.17	0.00	20.00	50.00	0.13	24.03	13.95	1,257.28
Sub Total																				
Basic Services																				
Solid waste				38.97																
Water Supply	15.00			12.95		23.56		2.61	0.23	8.60			23.01						0.17	73.59
Waste Water				63.67	0.23	24.08	0.16	12.46	0.96	64.65			16.53				20.00		0.24	166.34
Sub Total	15.00	0.00	0.00	115.58	0.23	47.64	0.16	15.23	1.94	107.09	0.00	0.00	39.54	0.00	0.00	0.00	20.00	0.01	0.41	362.83
Productive Sector, Services & Others																				
Agriculture				33.35	3.20	0.06		9.09	0.28	3.16							15.00	19.53		83.67
Irrigation		1.00			0.19			1.31	0.45	0.60								1.85		5.40
Industry				11.95	0.86	0.27				0.00								1.08		14.16
Tourism		1.14			0.62			2.85	0.30	41.73								0.37	2.39	49.41
Private Sector Services	15.00			107.02	0.15			0.12										0.38		122.67
Management and Implementation	1.39	4.73	223.65	6.58		6.99	5.02	8.70	1.38	0.98	13.50							13.44	1.41	287.77
Public information		0.17	0.18		0.27															0.35
Fuel																				0.27
Administration	35.68	0.29	3.03	56.78				4.20	0.56	15.73		91.00	35.76			5.00		0.84		248.87
Miscellaneous	26.70	10.37	1.89	121.10	0.73	5.23		110.95		13.60			10.80	46.35			110.00	4.37	0.61	462.71
Sub Total	78.77	17.71	5.10	553.84	12.61	12.55	5.02	137.22	2.97	75.79	13.50	91.00	46.56	46.35	0.00	5.00	125.00	41.87	4.42	1,275.27
Total	159.14	50.42	41.20	783.21	26.27	97.65	7.34	204.39	7.47	525.14	72.29	327.14	670.98	52.98	20.00	55.00	175.13	68.36	20.90	3,364.99

\* Other Funding Sources contributing with less than 5 Millions in Grants are : AGFUND, ARABLEAGUE, ARGENTINA, BELGIUM, GREECE, IRELAND, KOREA, METAP, NETHERLAND, SWEDEN, GEF, OFID, HRC and Private Donors.

Loans and Grants Ratified Signed and Approved Distribution by Sector and Funding Source (in Millions of USD - Starting 1992 Until 2017/7/31)																										
Sector/Funding Source*	World Bank (IDA, IBRD)	AFESD	CHINA	EIB	EU	COMMERCIAL BANKS	FRANCE (AFD, French Protocols, CRIF)	GERMANY (KfW, GIZ)	IDBG (ICD, IDA, ITFC)	IRAN	ITALY	JAPAN (JICA, JBC)	KUWAIT (KFAED, KUWAIT)	OMAN	QATAR	SAUDI (KSA, SFD)	SPAIN	TURKEY	ADFD	UAE	USA (USAID, USA)	UN/ UNDP/ IFAD	OFID	Others*	Total	
Physical Infrastructure																										
Electricity	112.27	423.52		126.38	3.91	288.23	67.43	40.31	131.47	18.82	288.04		168.16				6.62					0.05				1,645.20
Fixed lines (Telecom)	12.70		6.02		0.84		1.25		7.82				37.30									0.04				65.98
Public & Private Land Trans (Roads)	175.88	166.43		168.35			0.64		379.05		8.02	1.09	207.65			248.22			10.00		30.00		35.00	1.49		1,451.81
Air Transportation				84.47			22.25						53.52									2.35				162.58
Maritime Transportation				107.91	3.14	0.35	2.96						28.40			60.00									0.63	114.37
Multisectoral Infrastructures	10.00	114.74	35.01		47.80		4.18		116.52	5.03																422.31
Sub Total	310.85	724.69	41.04	487.11	55.68	288.58	94.53	44.49	634.86	18.82	271.09	1.09	495.02	0.00	0.00	308.22	6.62	0.00	10.00	0.00	30.00	2.44	35.00	2.12		3,862.25
Social and Economic Infrastructure																										
Public education	116.01	22.71			19.14		0.46	6.06	34.88	1.34		0.52	98.00			45.11						0.96			6.40	351.59
Vocational & Tech. Education	59.54	48.99	1.21		0.09		3.70	16.86	30.46	0.54		0.95	4.00	10.00								0.03	4.00			180.36
Culture & Higher Education	0.03	100.37	1.21		3.14		29.31		202.40	12.36			0.06	1.79	25.00	36.05						2.43				414.14
Youth & Sports					0.73					0.04			21.98			10.44										33.19
Land use & Environment	27.28		0.50		37.81		22.06	10.35		13.34				7.00							50.00	13.35			1.86	183.69
Housing	13.27	137.85			1.33								135.00	40.00	211.14	325.00			25.00			5.31				893.91
Health	49.05		4.23		2.05		5.57	5.23	122.34	21.97			61.59			91.26		20.00				1.95	15.12	5.15		400.27
Social & Economic Development	46.70	10.37	1.89		83.64					108.98			13.59									4.37			0.61	408.74
Sub Total	311.89	320.29	9.03	0.00	147.93	0.00	61.10	36.50	390.08	0.00	158.56	1.47	334.21	58.79	236.14	507.85	46.35	20.00	25.00	50.00	87.13	28.41	19.12	14.02		2,865.89
Basic Services																										
Solid waste	31.92				38.97								8.60			23.01									0.17	105.51
Water Supply	867.74	62.92		85.16	6.16		68.53	29.83	256.68	10.26	24.36	89.13	201.96			50.98			10.00		20.00		5.00	0.24	1,788.97	
Waste Water	10.33	141.74		317.26	60.35		156.68	55.68	164.65	5.13	107.08	54.08	136.72						17.50			0.01				1,227.22
Sub Total	909.99	204.66	0.00	402.43	105.47	0.00	225.21	85.52	421.33	15.40	134.06	143.45	347.28	0.00	0.00	73.99	0.00	0.00	27.50	0.00	20.00	0.01	5.00	0.41		3,121.70
Productive Sector, Services & Others																										
Agriculture	21.51		5.55		33.35		4.87	0.06			9.09	0.28	3.16								21.00	42.41	13.40			154.68
Irrigation	56.29	206.75					0.19			1.31		0.45	134.50									5.85				405.33
Industry				39.73	11.95	0.89	1.81	0.27					17.96									1.08				73.69
Tourism	31.50	1.14		37.12			16.52			2.85		0.30	41.73									0.37		2.39		133.93
Private Sector Services	60.00			84.30	107.02		0.15			0.12												0.38				251.97
Management and Implementation	106.64	34.12			223.65		6.58	6.99	5.02	8.70	16.05		0.98	13.50								13.44		1.41		437.08
Public information		0.17	0.18				27.73																			28.09
Fuel							0.27		25.00																	25.27
Administration	161.85	21.16	3.51		56.78					4.20		0.56	15.73		91.00	42.08						0.84				402.70
Miscellaneous					37.46		0.73			12.83	1.97					10.80										86.80
Sub Total	437.79	263.34	9.25	161.15	470.20	0.89	58.86	7.32	30.02	12.83	28.24	17.64	214.06	13.50	91.00	52.88	0.00	0.00	0.00	5.00	44.00	64.38	13.40	3.80		1,999.55
Total	1,970.52	1,512.98	59.31	1,050.69	779.28	289.47	439.70	175.83	1,476.30	47.05	591.95	163.65	1,390.56	72.29	327.14	942.94	52.98	20.00	62.50	55.00	181.13	95.24	72.52	20.36		11,849.40

\* Other Funds financing less than USD 5 Millions in Loan & Grants are the following : AGFUND, ARAB LEAGUE, ARGENTINA, BELGIUM, GREECE, IRELAND, KOREA, METAP, NETHERLANDS, SWEDEN, GEF, HRC and Private Donors.

FUND	Acronym
Abu-Dhabi Fund for Development	ADFD
Agence Française de Développement	AFD
Arab Fund for Economic & Social Development	AFESD
The Arab Gulf Program for United Nations Development Organizations	AGFUND
League of Arab States	ARAB LEAGUE
Argentina	ARGENTINA
Le Gouvernement Du Royaume de Belgique	BELGIUM
People's Republic of China	CHINA
Various Commercial Banks	Comm. Banks
Conseil Regional d'Ile de France	CRIF
European Investment Bank	EIB
European Union	EU
Republic of France, (AFD), French Protocols, CRIF	FRANCE
Global Environment Fund	GEF
Republic of Germany	GERMANY
Deutsche Gesellschaft fur Technische Zusammenarbeit	GTZ
High Relief Commission (Lebanon)	HRC
International Bank for Reconstruction & Development (The World Bank)	IBRD
Islamic Corporation for the Development of the Private Sector (IDBG member)	ICD
Islamic Development Bank (IDBG member)	IDB
Islamic Development Bank Group	IDBG
International Fund for Agricultural Development	IFAD
Islamic Republic of Iran	IRAN
The Republic of Ireland	IRELAND
Republic of Italy	ITALY
International Islamic Trade Finance Corporation (IDBG member)	ITFC
Japan	JAPAN
Japan International Cooperation Agency (previously known as JBIC)	JICA
Kuwait Fund for Arab Economic Development	KFAED
Kreditanstalt fur Wiederaufbau	KFW
State of Kuwait	KUWAIT
Mediterranean Environmental technical Assistance Program	METAP
The Netherlands	NETHERLANDS
OPEC Fund for International Development	OFID
Sultanate of Oman	OMAN
State of Qatar	QATAR
Kingdom of Saudi Arabia	SAUDI
Saudi Fund for Development	SFD
Kingdom of Spain	SPAIN
Swedish International Development Cooperation Agency (ASDI)	SWEDEN
Republic of Turkey	TURKEY
The United Arab Emirates	UAE
United Nations Secretariat (including country pledges) + Agencies	UN/UNDP
United States of America	USA
US Agency for International Development	USAID
Hellenic Republic of Greece	GREECE

