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## List of Annexes

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Annex 2: Focus group discussions

### 3.7 Infrastructure

The community of Bar Elias suffers from improper management of solid waste. Wastes are collected by the municipality, and carried to a dumpsite inside the village to be burned, causing high level of air pollution. Despite the availability of waste bins in all places, the community is lacking for additional ones to collect all waste.



**Table 3: Quantity of solid waste generated per day and year**

Tons/day Before the crisis	Tons/day After the crisis
30-35	40-50
Tons/year Before the crisis	Tons/year After the crisis
11,000	16,500

As shown in table 3, the amount of daily wastes was around 30 to 35 tons per day. After the Syrian crisis, the quantity of wastes per day increased to around 45 tons per day. The municipality gets rid of wastes three times per day through three vehicles for waste collection. The amount of wastes removed from the community varies between 40 and 50 tons per day following the Syrian influx, while the total remaining wastes in the community is 15,000 tons per year.



### 3.8 Natural Environment

Wastewater is discharged in the course of the Litani River, resulting in an environmental disaster and large water pollution.

Air pollution resulting from burning solid wastes is creating the most common types of air pollution. Other major source of pollution is transmitted through polluted air from Kob Elias landfill.

Pollution in the Litani River that surrounds the main agricultural lands in Bar Elias had a negative impact on agriculture and contributed in reducing profits. Agricultural lands have been affected by pollution and the area surrounding the river has become inappropriate for cultivation.

Irrigation by the polluted water stored in the Litani River is leading to the transmission of germs, contaminants and bacteria to agricultural products, affecting public health. The majority of the conducted medical tests showed the presence of increased injuries in bacteria typhoid, viral hepatitis, high nitrate levels, stomach and digestive system' infections.

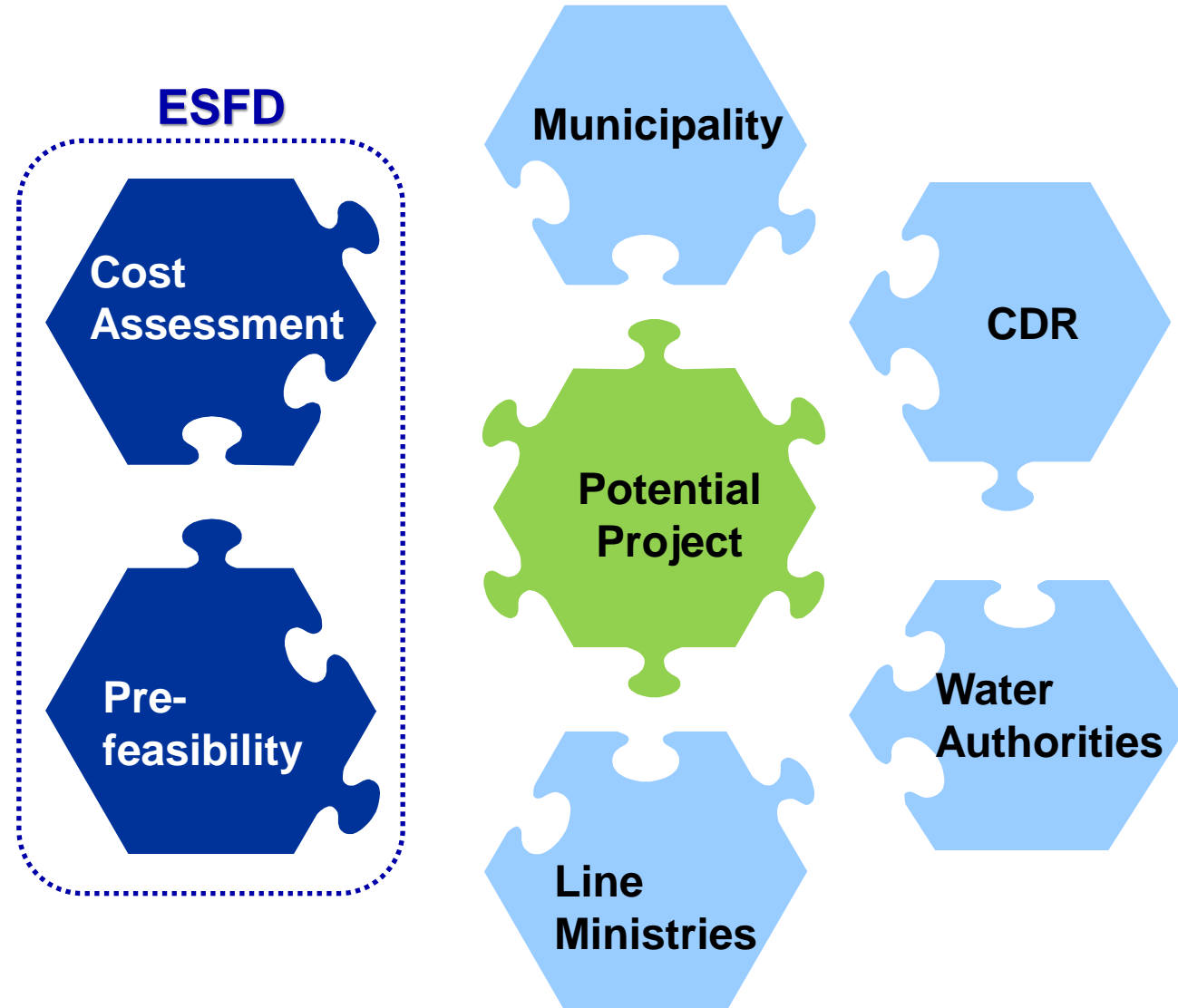
Another source of water pollution lies in the disposal of wastes released by processing factories such as dairy industries.

Another aspect of pollution lies in soil pollution as a result of constant use of pesticides, fertilizers and agricultural medicines that directly contribute to increasing the rate of nitrogen and heavy metals in the soil.

### 3.9 Social Context

The high number of refugees is representing enormous challenges for the hosting communities, and the gap between required needs and available resources is increasingly expanding.





## EVALUATION GRID

Financing Agreement- Support to Municipal Finance in Lebanon (MUFIN)  
Project No. ENPI/2011/22-758- Addendum # 1

# North

### ● Evaluation criteria:

- Voluminous impact
- Expected Quick implementation and impact
- Percentage of Syrian Refugees to local population

North			Criteria / Rates				
			Voluminous impact (Number of Communities & No. of Population	Expected Quick implementation and impact	Percentage of Syrian Refugees to local population	Total	
Project N°	Community Name	Project	40	40	20	100	
1	Wadi Khaled	Rehabilitation, filtration and conducting of Al Safa spring and implementation of needed networks and facilities.	35	25	20	80	
2	Akroum	Akroum	1. Conducting the potable water from Shkiff spring to the main reservoir in Akroum	23	38	16	77
		Kfartoun	2. Rehabilitating and equipping existing well in Kfartoun	21	38	17.5	76.5
		Qonieh	3. Rehabilitating and equipping existing well in Qonieh and construction of pumping line in Qonieh	20	38	19	77
		Al Sahleh	4. Rehabilitation of 2 Existing wells and lift line to reservoir in Al Sahleh	20	38	12	70



- Outsource design and supervision
- Launch procurement procedures (EU rules)
- Follow-up on **execution** of works
- Contract management



Handing over projects to the relevant public stakeholder

## Water Projects

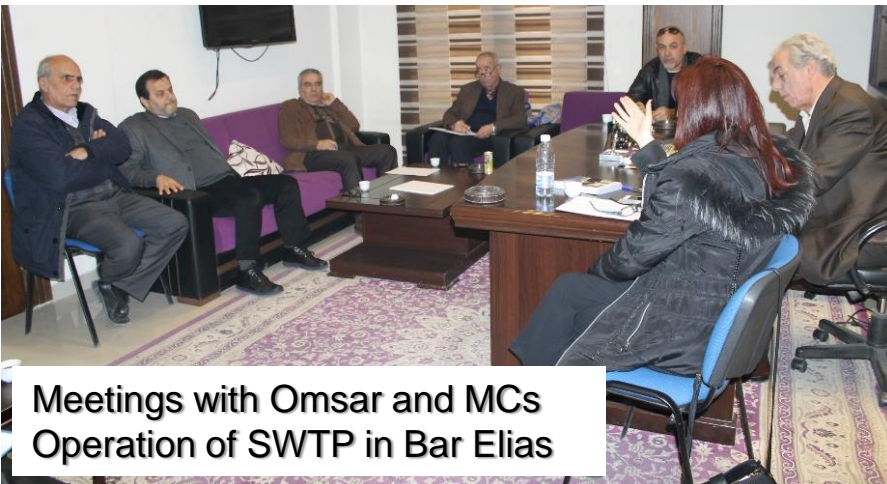
- Water Authorities

## Solid Waste

- Municipalities

## Waste Water

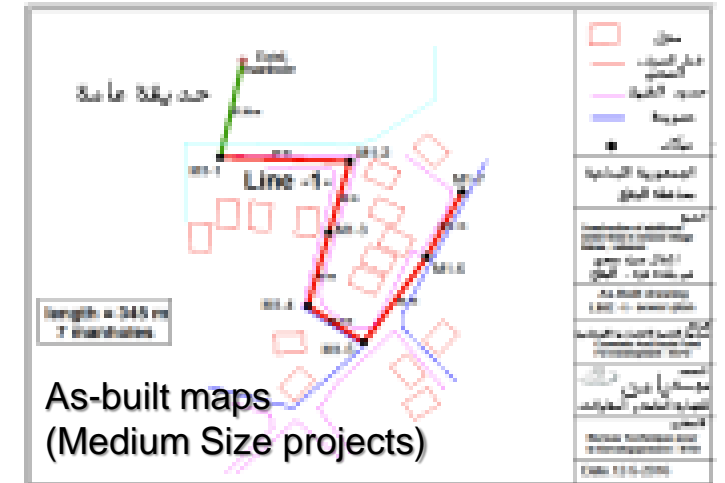
- Municipalities
- Water Authorities



Meetings with Omsar and MCs  
Operation of SWTP in Bar Elias



Final acceptance signatures



# **WATER, WASTE WATER AND SOLID WASTE PROJECTS**





Project improved sewage network in GhazzeH by 20%



Installation network of 2Km length conveyed to Jeb Jennie  
Waste Water Treatment Plant



Serve a school and neighbourhood,  
approx. 10,000 people

# POTABLE WATER NETWORK IN SAADNAYEL – BEKAA

## VALUE: 760,000 EUR

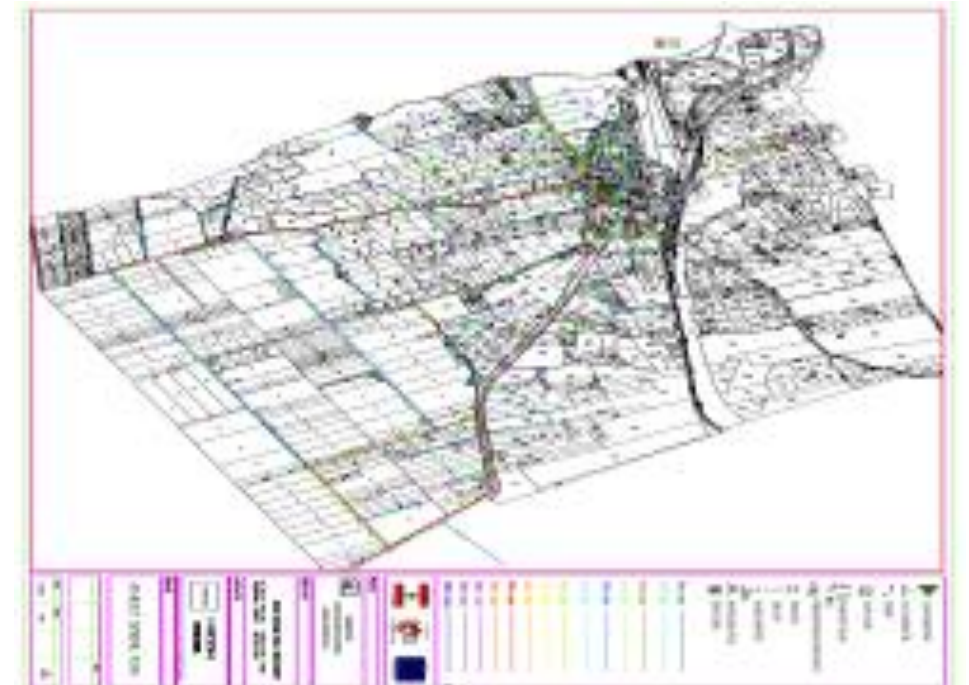
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Installation of 13.8 km water distribution lines and house connections.



Saadnayel is hosting 18000 Syrian refugees, while the registered habitants is 16,000 individuals.



Handover to Bekaa Water Establishment with all GIS data and as-built maps.



# CONSTRUCTION OF SOLID WASTE TREATMENT FACILITY

## BAR ELIAS – BEKAA VALUE: 4.2M EUR

After

Before

New Solid Waste Treatment plant:

- 150 T/day
- Bar Elias, EL Marj and Qob Elias
- Serve 180,000 (Lebanese) and 205,000 (Syrian & Palestinian)
- Area of 67,000 m<sup>2</sup>
- Operation funded by Lebanese Government
- Operator by Municipality
- Direction by ESFD – Sustainability Unit

Open dumping and burning of commingled solid waste treatment

