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ANNEX VI
FINAL NARRATIVE REPORT

- This report must be completed and signed by the Contact person of the Coordinator.
- The information provided below must correspond to the financial information that appears in the financial report.
- Please complete the report using a typewriter or computer (**you can find this form at the following address <Specify>**).
- Please expand the paragraphs as necessary.
- **Please refer to the Special Conditions of your grant contract and send one copy of the report to each address mentioned.**
- The Contracting Authority will reject any incomplete or badly completed reports.
- Unless otherwise specified, the answer to all questions must cover the reporting period as specified in point 1.6.
- Please do not forget to attach to this report the proof of the transfers of ownership referred to in Article 7.5 of the General Conditions.

Table of contents

ANNEX VI..... 1
FINAL NARRATIVE REPORT 1
1. Description 2
2. Assessment of implementation of Action activities 3
3. Beneficiaries/affiliated entities and other Cooperation..... 39
4. Visibility 41
5. Location of records, accounting and supporting documents 42

List of acronyms used in the report

- CIL: CARE International in Lebanon
- DG: Director General
- EU: European Union
- FGD: Focus Group Discussion
- IPTT: Indicator Performance Tracking table
- KII: Key Informant Interview
- MEAL: Monitoring, Evaluation, Accountability, and Learning
- MOU: Memorandum of Understanding
- MoWE: Ministry of Water and Energy
- OSM: On-Spot Monitoring
- SLWE: South Lebanon Water Establishment
- ToT: Training of Trainers
- WaSH: Water, Sanitation, and Hygiene

1. <i>Description</i>

- 1.1. Name of Coordinator of the grant contract: CARE France
- 1.2. Name and title of the Contact Person: Margaux SAILLARD, Emergency Officer (Saillard@carefrance.org)
- 1.3. Name of Beneficiary(ies) and affiliated entity(ies) in the Action: CARE France; Development for People and Nature Association – DPNA; T.E.R.R.E. Liban Association
- 1.4. Title of the Action: Enhancing Safe Water Supply and Solid Waste Management for the Vulnerable population affected by the Syria crisis in south Lebanon
- 1.5. Contract number: ENI/2015/364-146
- 1.6. Start date and end date of the Action: 17 September, 2015 to 16 September, 2017
- 1.7. Target country(ies) or region(s): Lebanon, South Lebanon Governorate (Municipalities of Saida, Ghazyeh, Loubie, Bissarieh, Aabra, Bqosta and Darb Es Sim)
- 1.8. Final beneficiaries &/or target groups¹ (if different) (including numbers of women and men): **194,242 people (97,121 women and 97,121 men)** ²
- 1.9. Country(ies) in which the activities take place (if different from 1.7): Not applicable

¹ ““Target groups”” are the groups/entities who will be directly positively affected by the project at the Project Purpose level, and ““final beneficiaries”” are those who will benefit from the project in the long term at the level of the society or sector at large.

² The estimate is based on Lebanon Demographic Profile 2016 (http://www.indexmundi.com/lebanon/demographics_profile.html), based on which the ratio is around 50/50.

2. <i>Assessment of implementation of Action activities</i>

2.1. Executive summary of the Action

Please give a global overview of the Action's implementation for the whole duration of the project

For the water component, CARE International in Lebanon developed with good coordination mechanisms and collaboration with the different stakeholders, particularly South Lebanon Water Establishment and the municipalities. This great collaboration was very fruitful to identify the project objectives and the priority interventions on the water supply infrastructure. Both SLWE and the municipalities have positively received the collaboration and have shared available plans and data and have taken an active role in designing and selecting the interventions type and intervention areas. CARE met with the SLWE authorities to identify the most needed interventions in terms of access to water. The priorities shared by SLWE were discussed at WASH Sector level first in order to prevent overlapping among implementing agencies or intervention gaps. The municipal representatives were consulted to ensure alignment of municipal plans with SLWE's plans. CARE WASH specialists examined the proposed options and discussed them with SLWE and with the municipalities in order to guarantee the impartiality of the selection, cost-effectiveness, and relevance to the mandate of the organisation. During the period of the engineering design preparation done with Kredo Engineering, a change of the lines to be rehabilitated was raised compared to what was planned in the initial proposal and new targeted areas have been identified by SLWE in coordination with CARE WASH team to be included in the design package (see more details in R1).

After completion of the detailed engineering design by the consultant Kredo, after completion of an international tendering process, the contractor Al Rawan was awarded the infrastructure construction work on November 2016 for a contract duration till end of June 2017. All the infrastructure work was completed as per the workplan and accomplished as per the consultant design. Hence CARE, with Al Rawan, was able to rehabilitate 8 boreholes by installation of all required hydraulic and mechanical equipment's in addition to electrical components and protection devices as stated in the logframe and contract agreement. CARE also installed 17,997 meters of lines in 6 municipalities in South Lebanon area, which is exceeding the target of 16,000 meters as defined in the logframe of the original proposal. CARE was able to provide safe access to water for 194,242 beneficiaries in the targeted areas.

CARE signed a Memorandum of Understanding (MOU) with the Ministry of Water and Energy approving the donation to the South Lebanon Water Establishment (SLWE) aimed at the rehabilitation of the water line and 8 wells. The MoU guarantees the durability of the action with the SLWE committing to take over the management of the infrastructures at the end of the project.

CARE conducted 7 training sessions on provided WaterCAD software and delivered certification of attendance for 20 participants from SLWE. CARE was able to conduct a start-up workshop and 12 community engagement meetings in the targeted areas: Ghazyeh, Loubieh, Baissarieh, Bqosta , Aabra and Darb es Sim. CARE celebrated the World environment day in 2016 and the world water day in 2017.

Al Rawan's quotation for the works planned in the project was lower than the budget available for execution of meters lines and wells rehabilitation. Consequent budget savings were identified based on the available budget under the related lines (70EU01 and 70EU02). Coordination meetings were held between CARE and South Lebanon Water Establishment (SLWE) to identify potential remaining gaps to be covered followed by site investigations, preparation of Bill of quantities, cost estimate and specifications. The decision was taken to purchase spare equipment to deliver to the SLWE to ensure greater durability to the infrastructure constructed in the project. CARE conducted a coordination meeting with EU delegation representatives on 12 April 2017 and an information letter to present this option to purchase spare equipment with the budget savings. The detailed report and relevant documents were submitted to the EU delegation on 21 April 2017 (Annex I).

Hence, CARE was able to provide additional spare equipments to SLWE such as submersible pump and motor set, electrical cables, riser pipes and automatic transfer switches. The main objective of spare equipment's provision to SLWE is to ensure the sustainability of the project for a longer period. The specific objective is to strengthen the preventive maintenance practices leading to decrease the failure rates of infrastructure and increase the reliability of the water establishment services and financial capacity. The water project activities and the provision of spare equipment were accomplished within the project budget and handed over to SLWE within the project time frame as per attached signed Transfer of ownership of assets.

For the waste management component, CARE has adopted a more grass-root level approach and worked with a well-established network of local environmental organization, Lebanon eco movement. DPNA and TERRE Liban are Lead members of the Eco movement and are CARE main partners in this project for the solid waste component. DPNA, conducted 15 Focus group discussion in the targeted areas, and reached 173 participants from Loubieh, Baissarieh and Ghazyeh. CARE was able to strengthen the capacity of TERRE Liban by providing a paper collector to TERRE Liban sorting facility in Sarafand. TERRE Liban in collaboration with DPNA were able to distribute 1983 cardboard sorting bins and reach 13,199 beneficiaries in the sorting at source awareness campaign. The acceptance of the sorting at source behaviour and the willingness of people to participate in this action lead to the collection and recycling of 6 Tons of paper on average per month.

What has been the outcome on both the final beneficiaries &/or target group (if different) and the situation in the target country or target region which the Action addressed?

The key municipality staff who were interviewed as part of the endline outcome monitoring unanimously stated that the interventions resulted in increased water supply whereby water was supplied daily to the residents in comparison to the period before the intervention. This also meant that the residents stopped resorting to buying trucked water.

In addition to the above, with the success of the intervention and increased water supply, the result was a strengthened relation between the residents and the municipalities as the project has built trust between both parties. Residents now appreciate the effort made by their municipalities especially when they compare the water situation in their villages with that of neighbouring ones.

One municipality had a drastic change in the water situation: the increased water supply caused an abundance in water quantities in Lubiye. The project had a spillover effect on the larger town of Saksakiyeh which was connected to the same main line as Lubiye. In the summer, neither towns received enough water. Currently, when Lubiye reservoir was connected to the separate well as a result of CIL's intervention, the public water feed was fully diverted towards Saksakiyeh. Now 2,532 residents in Lubiye, in addition to 6200 residents in Saksakiyeh enjoy a steady supply of public water –an indirect impact of CIL's project.

In terms of waste management, the 3 municipalities involved in this action endorsed the activity and one of them (Ghazyeh) contributed indirectly through the provision of bins for sorted paper in the main roads of the town. The M&E endline report reveals that people are more aware of waste management practices and its importance. More so, 2 municipalities signed an agreement with a local NGO (Beam of Environment) to collect the paper waste from the municipality beyond the timeframe of the intervention.

Please list the indicators of the Specific Objective, and provide level of achievement if available at this stage:

	Intervention logic	Objectively verifiable indicators of achievement	Level of Achievement
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Overall objectives	O 1: Provide sustainable water supply in adequate quantities to the most vulnerable populations in Lebanon	1. Decrease in level of perceived tension between communities related to water and sanitation. Target: 30%	12%
	O 2: Contribute to improve solid waste collection service for vulnerable population in critical areas of Lebanon	2. Technical and perceived sustainability of water and sanitation systems implemented according to local authorities and communities. Target: mark of 9/10	10/10
Specific objective	SO: Improve reliable access to safe water and sanitation (solid waste) for highly vulnerable host and refugee communities in in areas of Southern Lebanon most affected by the influx of Syrian refugees in a sustainable way	1. Proportion of targeted beneficiaries (M/W/B/G) that have increased access to water in adequate quantities Target:80%	90.5%
		2. % beneficiaries (M/W/B/G) with increased knowledge of alternative waste management solutions. Target:70%	68%

O1.1 : Decrease in level of perceived tension between communities related to water and sanitation.
Target: 30% - Reached 12%

The 12% increase in the indicator relating to social cohesion is a finding that comes as no surprise - according to the interagency social stability sector 1st quarterly report for 2017, “the social stability landscape in Lebanon appears to be changing with competition for jobs emerging as the key driver of tensions between communities. The beginning of 2017 saw an increase in citizens’ protests against Syrian labor competition and the closure of Syrian-owned shops in several municipalities across Lebanon”³.

According to the Social Stability sector, “the overall spike in inter-community tensions, and antagonistic rhetoric and discourses throughout Lebanon in the aftermath of the series of attacks on the Al-Qaa village in late June 2016 revealed that despite the largely peaceful situation, underlying causes of tensions remain prevalent in the country and constitute a situation conducive to conflict”.

The security concerns of the local communities pose another constraint to inter-community relations as “the vast majority of people report feeling less safe than before the crisis – and as many as 91 percent of host communities believe that the presence of displaced Syrians poses a security threat to them”⁴.

This has led some municipalities to opt for curfews and other restrictions as a tool to address local residents’ security concerns. Bissariyeh appears to have very high sources of tensions and have curfews and regulations against the refugee population in place being implemented, while Ghaziyeh has moderate sources of tensions.⁵

O1.2: Technical and perceived sustainability of water and sanitation systems implemented according to local authorities and communities. **Target: mark of 9/10 - Reached 10/10**

Perception of Sustainability by Municipalities

Perceived sustainability was measured through KIIs with heads of municipalities. Systems are found sustainable if municipality reaches a score of at least 70/100. Perceived sustainability criteria were:

- Quality of the newly installed/rehabilitated material
- Durability of the newly installed/rehabilitated material
- Capacity to maintain installed material and rehabilitated system

The MEAL team interviewed heads of municipalities/key municipal staff in 6 out of 7 areas of intervention. Their responses regarding the sustainability of the rehabilitated water systems and installed equipment were similar to a large extent with all of them stating that the intervention is durable and will not require any further maintenance for at least 20 years, while some approximated the durability to more than 30 and 40 years. On another note, and as one aspect of sustainability, all

³ SOCIAL STABILITY 2017 Quarter 1 Dashboard. (2017). [pdf] Beirut: Inter-Agency Coordination Lebanon. Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/Interagency_Quarterly_1st_2017SocialStability.pdf [Accessed 13 Oct. 2017].

⁴ Sector Outcomes. (2017). [pdf] Beirut: SOCIAL STABILITY SECTOR. Available at: <https://data2.unhcr.org/en/documents/download/53667> [Accessed 13 Oct. 2017].

⁵ Sources of Tension - South Lebanon - July 2017. (2017). Beirut: Inter-Agency Coordination - Social Stability Sector.

the interviewed reported that the municipality is in direct contact and liaison with the SLWE and should be able to maintain the newly established/rehabilitated water systems. All 6 respondents stated that none of the material was dysfunctional by the time of delivery.

This certifies that the perceived sustainability by the local governments is set at 100%, thus CIL reaching its target for this indicator.

Technical Sustainability by SLWE

Technical sustainability was measured through a tool that was administered to the heads of distribution and production departments at the SLWE. Each intervention (water source or water lines) needed to score $\geq 70\%$ on questions related to sustainability to get the full mark. All interventions got a full mark from the heads (9 municipalities + water sources/stations).

The MEAL team approached two departments directly supervising and coordinating the project with CIL at SLWE –these are the ‘Distribution’ and ‘Production’ departments in the water establishment. The heads of these departments filled a survey developed by the WASH team which measures technical sustainability of the project in each of the areas of intervention.

The head of the Production Department at the SLWE stated that the rehabilitated infrastructure is expected to be sustainable and the only obstacle facing proper functioning is the power supply by Electricité du Liban. None of the installments was dysfunctional after handing over to the water establishment.

The head of the Distribution Department at the SLWE had similar answers to those of the Production Department. The head of the department indicated that CARE’s response to any issues were immediate. She also expected the installations to be durable and sustainable.

Along with the responses from key personnel in the SLWE, CARE has ensured the sustainability of installations through the provision of spare parts and equipment to the SLWE.

Sustainability is also ensured through the human resources of the SLWE who are available for maintenance as they are acquainted to the materials installed by CARE, and through official revenue-maximizing tariff schemes by the water establishment.

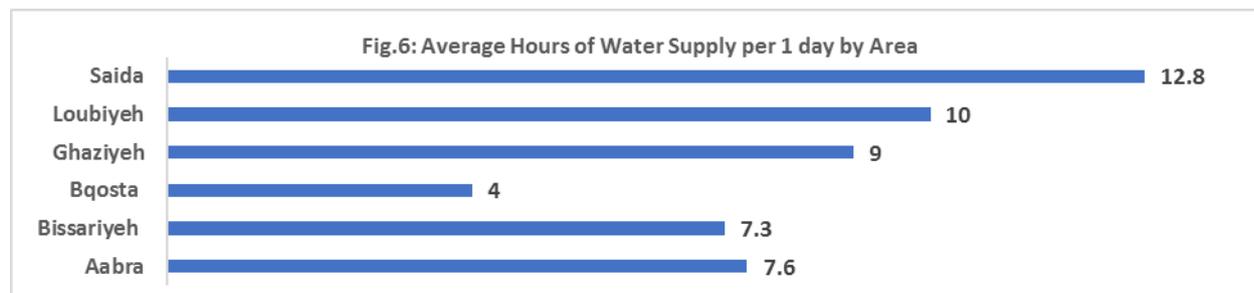
O2.1 : Proportion of targeted beneficiaries (M/W/B/G) that have increased access to water in adequate quantities Target:80%- Reached 90,5%

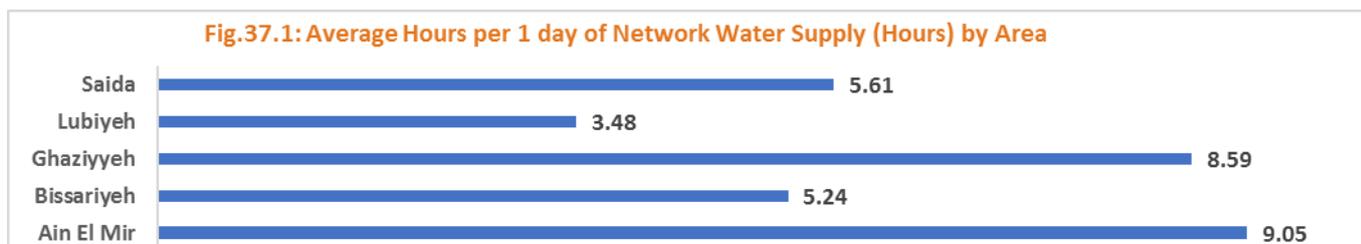
The CARE team decided to measure this indicator as defined in the proposal –‘improved quantity available from the public networks’.

According to the resident’s responses at endline phase in comparison to the baseline phase:

- Water supply increased from 3.5 hrs/day to 10 hrs/day in Loubiyeh
- The average hours of water supply per day did not much from baseline to endline in Ghaziyeh
- Water supply increased from 5 to 7 hrs/day in Bissariyeh
- In Saida, water supply increased from 5.5 hrs/day to almost 13 hours a day

When calculating the average hours for 1 day of supply, Saida records the highest with almost 13 continuous hrs of water supply. The lowest hours of supply were recorded in Bqosta (4 hrs).





When triangulating with the heads of municipalities, all of them stated that water quantities have vastly improved to the extent that people were no longer in need of buying trucked water or relying on other water sources, some of them were even using the water irresponsibly as a result of its abundance.

The MEAL team also opted for technical measurement of the water flow in the targeted sites and water systems to measure change in the water supply.

The water flow increased from 365.5 liters/second to 731 liters/second. This meant that water supply increased from 6,275 m³/day to 27,410.40 m³/day. Taking into consideration that the new network, which had a 40% leakage ratio prior to the intervention, now has 0% leakage, therefore the new and final water supply is 38,374.56 m³/day – This is 511.55% increase in the water quantities for the rehabilitated quantities.

Table: Water Flow Calculations – Prior to and Post Intervention

		Water Flow (L/s)		Water Flow (m3/day)		
Prior to Action		365.5		6,275		
With Action		731		27,410.40		
	Well code	Pump station	Running hours	L/s	m3/hr	m3/day
	H2	Rafic Hariri	22	40	144	3168
	H3	Rafic Hariri	22	55	198	4356
	H4	Rafic Hariri	22	85	306	6732
	F1	Fawar	22	40	144	3168
	F2	Fawar	22	40	144	3168
	F3	Fawar	22	75	270	5940
	Q	Qenarit	8	9.5	34.2	273.6
	E	Ain el Mir	8	9	32.4	259.2
	Lubiyeh	Lubiyeh	8	12	43.2	345.6
Total				365.5	1315.8	27,410.40
Leakage in Existing Network		40%				
Leakage in New Network		0%				
		Final Water Flow rate (m3/day)				
Without Leakage		38,374.56				

Taking into consideration the above calculation of increased water flow, and estimating a correction factor of 5% of the result which is 25.5% (5% of 511.55%),

O2.2: % beneficiaries (M/W/B/G) with increased knowledge of alternative waste management solutions. Target:70% - Reached 68%

Compared to the baseline, when asking the people of Lubiyeh, Ghaziyyeh, and Bissariyeh (the 3 areas where the solid waste campaign and sorting action took place), 68% of the people involved in the campaign responded that they do apply methods for solid waste management compared to 36% from the baseline.

Among the people involved in the paper sorting and collection action, 72% were found to be still involved in it, while the rest stopped the sorting in their HHs.

While the 70% target of improved knowledge in solid waste management was not reached, one can argue that behavioral change does not occur within a few months and requires further awareness raising. However, the result indicates that there has been a significant improvement in the solid waste practices of the residents. Knowing that 72% of these people are still involved in the solid waste action, we can consider that these 72% also have improved knowledge in their solid waste management practices.

It is recommended for future interventions that improvement in knowledge be measured through in-depth KAP surveys so as to accurately measure both knowledge and behaviour.

2.2. Results and Activities

What is your assessment of the results of the Action so far? Include observations on the performance and the achievement of outputs, outcomes and impact in relation to specific and overall objectives, and whether the Action has had any unforeseen positive or negative results.

Following Annex 1, please list all the results with progress of the related indicators and all the related activities implemented during the reporting period.

In case unit costs, lump sums or flat-rates are agreed, please provide the necessary information justifying the costs in the financial report. (ex. number of actual units etc.)

The accomplishment by CARE of the infrastructure work positively resulted in reduction of non-revenue water in the pipeline and increase of water production. The impact of these 2 results affected at the same time the water provider, SLWE, and the water consumer, the community and beneficiary. The impact of the project is cross cutting many levels such as increasing the quantity of water due to the high efficiency and low failure rate of the equipment installed. Upgrading the quality of water due to the installation of new riser pipes inside the wells, instead of the old corroded riser pipes and the installation of new pipeline free of cracks leading to eliminate the risks of microbiological contamination due to leakage and intrusion. The high sustainability of the installed equipment, will reduce the maintenance cost on SLWE and consequently increase their income and give them the chance to efficiently manage their resources while providing a better service to the community.

CARE MEAL team conducted observation visits to all project activities as well as interviews with the SLWE and municipalities enquiring about implementation process and progress, as well as coordination with these 2 parties. According to the observations and findings from the visits, the implementation went smoothly. The action was closely coordinated with the municipalities by CARE. Coordination with the SLWE was continuous. No communication or coordination shortcomings were reported. Both SLWE officials and key municipality staff praised the work done by CARE technically and in terms of coordination, supervision, and response to both parties' queries.

The performance of the contractor was also seen in a positive light both by the MEAL team and the above-mentioned parties.

The only recommendation that was observed by the MEAL team and flagged to the project team was the low involvement of the Syrian refugees in project activities, specifically, community engagement meetings, and solid waste awareness workshops, seminars, and events. This was a result of community tensions that were reflected in the related indicator above with explanation.

R1 –194,242 vulnerable Syrian and Lebanese people improve their access to clean water in four municipalities of South Lebanon

<quantify the achievement of each result from the beginning of the action and explain any changes, especially any underperformance; refer to the indicators and assumptions in the Logframe>:

Table: Summary of indicators achievement for result 1

Indicator #	Indicator	Target Value	Overall Target	Cumulative Achieved	Achieved
1.1	# of meters rehabilitated or extended	meters	16 000	17 997	112%

1.2	# of water sources rehabilitated and/or equipped	water sources	8	8	100%
1.3	% of identified SLWE technical staff improving their waste management capacities	%	70%	80%	

The project targeted the municipalities of Saida, Qenarit and Ein el Mir under the water source rehabilitation. Since the Qenarit and Ein el Mir villages are newly integrated municipalities, their citizens in the below table are merged under Saida municipality. In addition, the project targeted the municipalities of Ghazyeh, Loubieh, baissarieh, Bqosta, Aabra and Darb es sim under the water meters rehabilitation and extension.

Table: Number of beneficiaries per municipality with improved access to safe water supply

	Syrian Refugees	Lebanese	Total Beneficiaries
Ghazyeh	12,585	34,064	46,649
Baissaryieh	7,115	5,865	12,980
Loubieh	321	2,211	2,532
Bqesta	648	3,654	4,302
Aabra	1,544	13,007	14,551
Darb Es Sim	5,652	6,622	12,274
Saida	31,951	69,003	100,954
TOTAL	59,816	134,426	194,242

During the execution of the main water lines, daily coordination was conducted between CARE and SLWE head of distribution department. This collaboration helped SLWE to do new house connections at the same time while CARE's contractor is executing the infrastructure work, leading to time and resource saving while increasing the numbers of water subscribers. The number of subscribers increased on average 4.79 % in the targeted municipalities due this collaboration. This increase is a result of the trust relationship between SLWE and the local population which was enhanced through CARE interventions during the community meeting especially that the baseline reflected the lack of coordination between the municipalities, SLWE and the local community.

Table: New connections and new water subscribers per municipalities

Municipality	New building connections	# of apartments / building	# of family members (per apart)	Building benef	Total targeted benef (Lebanese and Refugees)	% of new benef (from Total targeted beneficiaries/municipality)	% of new benef (from Total targeted beneficiaries)
Aabra	50	4	5	1000	14,551	6.87%	1.10%
Baisarieh	75	3	5	1125	12,980	8.67%	1.24%
Bqosta	72	4	5	1440	4,302	33.47%	1.59%
Darb Es Sim	30	2	5	300	12,274	2.44%	0.33%
Ghazieh	24	4	5	480	46,649	1.03%	0.53%
Total				4345	90756	52.49%	4.79%

Although some of the residents didn't sense a difference in the quantity of water received from SLWE yet, the main stakeholder informed us that the boreholes rehabilitation allowed the establishment to produce a greater amount of water in a shorter period of time which resulted in lowering the cost of water production thus investing these margins in improving the service provided to the final beneficiaries.

On the level of population, all targeted area noticed a better water service in terms of quantity which allowed them to save extra money while not buying trucked water for daily use.

On the other hand, CARE has noticed an increase of water subscription by approx. 5%, while conducting the water lines infrastructure rehabilitation.

1.1 Indicator 1.1: # of meters rehabilitated or extended. Target: up to 16 000 – Achieved: 17 997

CARE installed under this project **17 997 meters** of water lines in the 6 targeted municipalities with the contractor Al Rawan. CARE executed the work as per the consultant design and recommendations of the Ministry of water and energy and contract with the EU delegation.

Table: Numbers of meters installed in each municipality

Municipality	pipeline length
Aabra	1,129.00
Bissarieh	2,977.00
Bqosta	5,208.00
Darb es Sim	2,553.00
Ghazyeh	2,654.00
Loubieh	3,476.00
TOTAL	17,997.00

1.2 Indicator 1.2: # of water source rehabilitated and/or equipped. Target: 8 – Achieved: 8

CARE rehabilitated **8 water sources** in Saida area as follow: 3 water sources in Al Fawwar pump station, 3 water sources in Rafic Hariri pump station, 1 source in Ein el Mir pump station and 1 water source in Qenarit pump station with the contractor Al Rawan.

1.3 Indicator 1.3: % of identified SLWE technical staff improving their water management capacities. Target: 70% - Achieved: 80%

SLWE identified 15 engineers and technical staff to attend the Water CAD training. The 15 trainees were 7 women and 8 men. CARE and SLWE representatives agreed that 7 training sessions will be conducted and a pre and post evaluation will be done to measure the improvement of SLWE staff in water management through the use of the WaterCAD software. The result of the tests were analysed

by CARE MEAL team and a report was generated reflecting that 80% of identified SLWE technical staff has improved their water management capacity.

A1. Activity 1: Identification and design of WASH infrastructure projects

Topics/activities covered <please elaborate>:

Reason for any changes in the planned activity <please explain any problems (e.g. delay, cancellation, postponement of activities) which have arisen and how they have been addressed> (if applicable):

Please list any risks that might have jeopardised the realisation of some activities and explain how they have been tackled.

A1.1.1 Identification of project areas:

CARE selected the project areas among the most vulnerable cadasters in South governorate using UNHCR ranking (2015)¹. The ranking was done on the basis of multi-deprivation index (MDI) encompassing access to health services, income levels, access to education services, as well as access to water and sanitation services and housing conditions. The MDI was overlaid on the quantified presence of Syrian refugees and of deprived Lebanese, thus grouping cadasters into five vulnerability grades and assigning them “high pressure” or “substantial pressure”. CARE combined this vulnerability ranking with a need assessment in term of access to water, systems of waste management and condition of water supply infrastructures in the targeted areas. CARE identified the areas of Ghazyieh, Loubyeh and Bissaryeh at the initial phase of the project.

A1.1.2 Selection of priority projects:

Several coordination meetings were held between CARE International in Lebanon (CIL) and different stakeholders, particularly South Lebanon Water Establishment and the municipalities in order to identify the project objectives and the priority interventions on the water supply infrastructure. Both SLWE and the municipalities have positively received the collaboration and have shared available plans and data and have taken an active role in designing and selecting the interventions type and intervention areas. CARE met with the SLWE authorities to identify the most needed interventions in terms of access to water. The priorities shared by SLWE were discussed at WASH Sector level first in order to prevent overlapping among implementing agencies or intervention gaps. The municipal representatives were consulted to ensure alignment of municipal plans with SLWE’s plans. CARE WASH specialists examined the proposed options and discussed them with SLWE and with the municipalities in order to guarantee the impartiality of the selection, cost-effectiveness, and relevance to the mandate of the organisation

During the inspection visits conducted by CARE Consultant Company, the findings of the topographic surveyor combined with the data collected from SLWE distribution department and the study and projects departments showed that 8,212 meters of water pipes originally scoped under this project had already been rehabilitated by SLWE through fund by South Lebanon Council. Consequently, new water lines were identified to be rehabilitated and to replace the 8,212 meters. As a result, new geographic areas were added to project target areas, including Aabra, Darb es Sim and Bqesta in Saida district. Bqesta is ranked number 3 as per the vulnerability map March 2015. Bqesta lines are a priority for the village, since this area hasn’t had any water infrastructure till date. Aabra and Darb es Sim are ranked among the Most Vulnerable areas and 2nd Most Vulnerable areas respectively with High and Substantial pressure on water resources as per vulnerability map March 2015 (*for more details on changes see Annexes 1*). This change request was presented during a meeting with the EU delegation in Lebanon. Since these modifications did not affect the main purpose of the action, no addendum was required to the contract.

After selection of priority projects, SLWE conducted several meetings with the ministry of water and energy’ representative and shared the objectives and activities of the project. As next step following the coordination, SLWE wrote a formal letter to the ministry describing the main components and output of the project. The ministry of water and energy approved the project with no objection of any activity.

A1.1.3: Detailed engineering design (drawings, BOQ, specifications)

CARE hired an engineering design consultant company (Kredo), who developed a detailed engineering design including specifications, Bill of quantities and shop drawings for the 16,000 meters of network and 8 boreholes to be rehabilitated. Kredo conducted field visits, well tests and topographic survey to ensure the compliance of the design with the Lebanese and EU regulations. Kredo prepared a detailed calculation for the pipe size, nominal pressure and pump set characteristic with a projection of 20 years to include the growing of the population in order to ensure the sustainability of the project and population needs. The detailed engineering design was attached to the annual report.

A1.2 Community engagement

A.2.1 Start – up workshops:

With the 12 community committees set up in the municipalities, CARE organized start up meeting to introduce the EU and CARE to the project community, description of the project action and enhance the community to give feedback of the work during the execution phase to CARE and share the basic needs of the population. The meeting aimed to build the relation between the beneficiaries and the SLWE by defining the role of each one of them and how they can contribute to better water services. In addition, the meeting aimed to introduce the consultant and contractor to the beneficiary in order to facilitate their presence and work accomplishment within the targeted areas.

A specific start-up workshop was conducted in presence of EU delegation representative, the Director General of SLWE, heads of departments, heads of municipalities and CARE partners in the solid waste management DPNA and TERRE Liban upon award of the selected contractor. This workshop introduced the awarded contractor to the mayors of municipalities and to South Lebanon Water Establishment Director General and management team. A presentation was conducted introducing the full scope of work of the project such as rehabilitation of the water network, wells rehabilitation, equipping and building the capacities of the water establishment staff as a hard component and promoting sorting at source as a good practice to manage household solid waste through TOT and focus group discussions and door to door awareness campaign through CARE's partners, alongside, shedding light on the efforts of the European Union and CARE to enhance access to safe water and solid waste management in the most vulnerable affected areas in South Lebanon. On the other hand SLWE CEO, Engineer Ahmad Nizam underlined the importance of these grants to enhance the water service in south Lebanon.



Mr. Jose Louis Vinuesa Santamaria, EU delegation representative in Lebanon, indicated the various efforts exerted by the European Union to support the Lebanese local community alongside the refugees.

A1.2.1 Constitution and follow-up of community committees:

12 community engagement meetings were held during the project duration. Two community engagement meetings were held in each municipality where infrastructure water lines are rehabilitated. The first meeting was held prior to the execution and the second meeting was held after

the installation work is completed. 348 participants from the targeted areas attended the community engagement meetings (64% men, 36% women).

The purpose of the first meeting is explained above. The purpose of the second meeting was to inform the beneficiary regarding the completion of the executed work and conducting awareness as described below:

- Presentation on the executed work
- Awareness session on water conservation
- Awareness session on water quality and water hygiene best practices at household level
- Awareness on sorting solid waste at source
- Feedback from participants on the project execution and additional needs



Pictures taken during the community engagement meetings

In addition to the community engagements meeting, CARE International in Lebanon (CIL) organized different community events:

- World Environment Day on Wednesday June 1st 2016. CIL targeted 49 participants (57% male, 43% female; 53% Lebanese, 35% Palestinian, 4% P.R.S, 6% Syrian, 2% other) from the international organizations working in south Lebanon and residing in Saida region. DPNA, INTERSOS, Mercy Corps, Swiss Agency for Developments and Cooperation (SDC), Norwegian Refugee Council (NRC), Lebanese Diving Center, Cooperative Housing Foundation – Lebanon (CHF), The International Committee for the Development of People (CISP), BEA and Arab Youth Climate Movement (AYCM) joined CIL in this event.

The objectives of this workshop were to:

- Promote the eco-sustainable usage of water practices,
- Promote an eco-friendly waste management practices at the individual and municipal levels,
- Promote the preservation of the Lebanese biodiversity (Animals, Birds, Fish and Plants)



Pictures during visit of solid waste treatment plant in Saida and the participant in awareness sessions

- World Water Day 2017 by introducing the students of Makassed Houssam Eddine Hariri High school (MAK HHHS) located in Bqosta to the water value chain. The students received information

about CARE's global impact, interventions, how CARE's interventions fall under the SDG of the UN, EU contributions to the water sector in humanitarian crisis and in Lebanon particularly. In addition, awareness videos on water conservation tips were also presented.



Pictures from the awareness session at Hariri High school

- On Wednesday March 22, 2017 CARE organized a field trip for the MAK HHHS students to South Lebanon Water Establishment facilities in Fawar and Sainic. 28 students and teachers (64% male, 36% women) participated in the event. Fawar water treatment plant is under rehabilitation by CARE through this project. At Fawar treatment plant SLWE produce water through 7 deep wells and conduct bio chemical and physical water Lab tests in the main Laboratory according to Libnor standards.

The visit to Fawar water facility covered the following:

- Presentation on water production chain and borehole main components such as well casing, pump set, riser pipes, and motor control by SLWE head of pump station
- Presentation on the monitoring and testing equipment's available at the laboratory such as Atomic Absorption, PH, and Conductivity meter by SLWE head of laboratory department.
- The importance of water quality control and the daily monitoring procedures conducted by SLWE laboratory
- Water Conductivity test was witnessed by the students



Pictures during the visit to Fawar facility

The visit to Sainic waste water facility covered the following:

- Waste water treatment scheme by SLWE waste water plant engineer such as waste water such as screening, grit, sedimentation basin and effluent diversion
- Physical waste water test was witnessed by the students at the waste water laboratory
- Presentation on the role of SLWE in producing water and treating the waste water

We are sharing below the email from the MAK HHHS's EEA program coordinator Ms. Huda Kaen to CARE's team regarding this event.

“ Special thanks go to you and CARE team for inviting us to this event. Special thanks as well for trying your best to engage students in such a global issue, especially those who were hesitant. You did really succeed, for since they came back they have been orally reflecting on this event. They have started to realize the importance of the role you have regarding these issues and in their own role as well. Together we can direct our younger generations to move on the right path by assuming responsibility toward such global issues, but I am sure this will not be easy.

Appreciatively,

Huda”

A 1.3: Installation, testing and commission of about 16,000 metres of water pipes inclusive of all fittings, and 8 water sources :

A 1.3.1 Selection of the contractor

CARE’s project manager prepared the Terms of reference, scope of work and Bill of quantities during January and February 2016. The call for advertisement for hiring a consultant was published for 14 days in local newspaper. Technical evaluation and financial evaluation were conducted by CARE team for the bidders resulting in selection of the consultant Kredo and start the preparation of the design package by May 2016. As mentioned above in A1.1.2, during the period of the design preparation a change of the lines to be rehabilitated was raised and new targeted areas have been identified by SLWE in coordination with CARE WASH team to be included in the design package.

The consultant Kredo prepared the design package including specifications, bill of quantities, and summary of work, mechanical shop drawings, electrical shop drawings and topographic survey profiles. The call for advertisement for a period of 21 Calendar days was published in local and international newspaper as per CARE and EU procurement procedures in beginning of August 2016. CARE engaged South Lebanon Water Establishment head of study and design department Eng. Ramzi Ramadan and head of production department Eng. Pierre Najem, in addition to 2 engineers from CARE office in the technical committee for contractor selection to ensure the involvement and sharing experience between CARE and the main beneficiary of the action. All the bidders were evaluated based on technical criteria including but not limited to: company profile, past experience in the water sector, workplan and submittal of material for each equipment and items proposed for installation. A financial evaluation was conducted separately by a committee from CARE procurement and finance department. The selection of the contractor was based on a ratio calculation between the technical and financial scoring to ensure that the selected contractor is capable to accomplish the work while respecting the quality, cost and time. The contractor Al Rawan was awarded the infrastructure construction work on November 2016 for a contract duration till end of June 2017

A 1.3.2 Elaboration of timeframe

The time frame for the execution of the work was accomplished by end of June 2017 as per the contract between the contractor AL Rawan and CARE including the installation and testing of the water lines extension and water wells rehabilitation. The project was handed over to SLWE on 18 July 2017 and a formal letter issued by SLWE and signed by the DG on 26 July 2017 confirmed that they don’t have any objection to receive the work pertained under the project. A translated copy of SLWE confirmation letter is available for reference.

A 1.3.3 Execution of works, supervised by CARE staff

Al Rawan contractor was able to execute the work as per his contact agreement with CARE while respecting the detailed engineering design prepared by Kredo consultant. During the execution phase coordination was conducted between all stakeholders, SLWE managerial and operation personnel, mayors of municipality, the consultant and contractor to overcome any challenges or delays. During the execution CARE’s field engineer was supervising the contractor work on daily basis. All the material to be used during water lines installation was checked in warehouse prior to delivery to the site to make sure all the materials are conformed to the data sheet submitted by the contractor during the bidding phase. Field density test and proctor modified test were conducted after base coarse compaction to ensure the protection of installed pipeline and sustainability of project. All the installed

pipes were pressurized and tested as per specifications and in presence of the consultant engineer to ensure that no leakage will occur when water is pumped in the lines. The asphalt was installed and compacted on 2 layers of 5 cm each to ensure the stability and durability of performance. All the installed lines are supported with As Built drawings, showing the coordinate of each lines, location of manholes and the profile of installation. An Operation and maintenance manual were delivered to SLWE in hard and soft copies including the data sheet of each items installed such as pipes, fittings, air valves, gate valves, wash out valves, butterfly valves, manholes cover and As Built drawings.

Example of field density test in Aabra

		Density and unit weight of soil in place by the Rubber "Balloon Method" ASTM D2167 - 94				<small>1ST FLOOR, SATCON HEADQUARTERS AKBIEH, SAIDA-TYR COASTAL ROAD ZAHIRAN, LEBANON TELEFAX: 00961 7 26 09 78 MOBILE: 00961 3 74 74 72 website: www.satcon-sss.com e-mail: info@satcon-sss.com</small>	
PROJECT:	ABRA						
LOCATION:	ABRA						
SAMPLE DESCRIPTION:	BASE COARSE	DATE TESTED:	24-05-17				
Test no.	T1	T2	T3	T4			
Initial volume (c.c)	180	170	175	190			
Final volume (c.c)	800	600	770	1130			
Volume of the hole (c.c)	620	430	595	940			
Wet Density (gm/c.c)	2.19	2.23	2.17	2.25			
Moisture Content:							
No. of can	16	20	18	18			
Weight of can + wet soil (gm)	1490.0	1100	1425	2250			
Weight of can + dry soil (gm)	1438.4	1067.9	1375.9	2149.8			
Weight of water (gm)	51.6	32.1	49.1	100.2			
Weight of can (gm)	134.3	142.7	131.1	131.1			
weight of dry soil (gm)	1304.1	925.2	1244.8	2018.7			
Weight of wet soil (gm)	1355.7	957.3	1293.9	2118.9			
Moisture Content (%)	3.81	3.35	3.79	4.73			
DRY DENSITY (gm/c.c)	2.11	2.15	2.10	2.15			
Relative density:							
Field density (gm/c.c)	2.11	2.15	2.10	2.15			
Max. density from proctor (gm/c.c)	2.2	2.2	2.2	2.2			
Relative density %	95.75	97.91	95.23	97.83			



CARE and Kredo engineers daily monitoring of the excavation work done by contractor Al Rawan



Protective equipments were worn to ensure safety of the workers



Protective barriers and signs on site to ensure safety of beneficiaries around the construction area

In total the project installed **17 997 meters** of water lines in the 6 targeted municipalities through its contractor AL Rawan. CARE executed the work as per the consultant design and recommendations of the Ministry of water and energy and contract with the EU delegation.

Table: Number of meters installed in each municipality

Municipality	pipeline length
Aabra	1,129.00
Bissarieh	2,977.00
Bqosta	5,208.00
Darb es Sim	2,553.00
Ghazyeh	2,654.00
Loubieh	3,476.00
TOTAL	17,997.00

The project also rehabilitated **8 water sources** in Saida area as follow: 3 water sources in Al Fawwar pump station, 3 water sources in Rafic Hariri pump station, 1 source in Ein el Mir pump station and 1 water source in Qenarit pump station. Al Rawan submitted in his tendering offer pumpset made by Gruppo Aturia, Italy. South Lebanon Water Establishment Director general and CARE’s Wash project manager witnessed the pump and motor performance test conducted in Aturia factory in Italy. During the test, the pump set characteristics were checked versus the required characteristics in the engineering design such as flow, total head, power consumption, efficiency and dimensions to ensure that the running of the pump set and installation is adequate to the well aquifer yield and dimensions. A test report and a performance test curve were generated by Gruppo Aturia for each pump and motor set.



Pictures taken during factory test - checking pump dimensions and electromechanical characteristic

TEST REPORT												Ref. No.								
												SP24M151								
												REV. A								
Pump type	KRM10L5F			Motor			ATURIA			Test instruments		References								
Flow	Q ₁₀	Q ₁₅	Q ₂₀	Type	1110103		Elect. Instruments		Weld. Dig. Yokogawa WT250		Client									
Head	Static	Dynamic	Net	HP	132	Amp	258	Gauge		05-4064		A. RAWAN								
Duty	460	m	15	R.P.M.	2812	Hz	50	Flowmeter		AS&S UNIC		Globeconcor								
Rotating speed	2900	RPM		Item									Arabian							
Frame number	2318006205			Serial number	358366004								10/1980							
H. min.	H. max.	Q ₁₀	Q ₁₅	Q ₂₀	Q ₂₅	Q ₃₀	Q ₃₅	Q ₄₀	Q ₄₅	Q ₅₀	Q ₅₅	Q ₆₀	Q ₆₅	Q ₇₀	Q ₇₅	Q ₈₀	Q ₈₅	Q ₉₀	Q ₉₅	Q ₁₀₀
175.5	1.5	0.09	167.07	6.03	9.00	403.0	178.89	178.89	88.50	88.50	0.72	50.0	97.00	19.2	2349	6.03	6.03			
173.20	1.0	0.08	174.78	7.85	6.19	403.0	180.55	180.55	89.06	89.06	0.72	50.0	97.00	19.2	2349	6.03	6.03			
149.70	1.5	0.1	161.89	44.13	180.78	401.4	201.06	201.09	100.1	100.1	0.78	50.0	97.00	19.2	2349	6.03	6.03			
149.77	1.2	0.10	149.07	48.61	178.24	401.7	208.30	208.39	117.48	117.48	0.69	50.0	97.00	19.2	2349	6.03	6.03			
135.00	1.0	0.00	137.64	34.63	136.67	401.4	110.0	213.08	114.85	114.85	0.89	50.0	97.00	19.2	2349	6.03	6.03			
121.03	1.5	0.75	121.15	8.25	230.01	401.0	214.27	214.27	120.5	120.5	0.80	50.0	97.00	19.2	2349	6.03	6.03			
118.08	1.0	0.00	119.18	66.02	251.35	401.2	217.7	217.71	120.65	120.65	0.80	50.0	97.00	19.2	2349	6.03	6.03			
												Cod		Meth						
												Water		Water						
												Applied Voltage		400V						
												Working substance		Distil						
Client name	S-LWE			Date	24/11/2010			Discharge pipe Ø (mm)	150		Operator	M. Sater		Approval	Gruppo Aturia S.p.A.					

Example for Rafic Hariri well 3 test reports

Table: quantity and rating of the pumpset installed in SLWE pump stations

Item	Description of the asset	Flow (L/s)	Head (m)	Type of the asset	Serial Number

1	Pump Set Type: XN8L10/H8125	40	14	pump and motor	pump SN2016002234 / motor SN3850752	Rafic Hariri pump station - well 2 – Saida
2	Pump Set Type: XN10L5F/H10180	55	140	pump and motor	pump SN2016002235 / motor SN3884280000P	Rafic Hariri pump station - well 3 – Saida
3	Pump Set Type: XN12H5F/H10230	85	140	pump and motor	pump SN2016002235 / motor SN3884280000P	Rafic Hariri pump station - well 4 – Saida
4	Pump Set Type: XN8L8/H8100	40	110	pump and motor	pump SN2016001284/ motor SN385075000P	Fawwar pump station - well 1 – Saida
5	Pump Set Type: XN8L8/H8100	40	110	pump and motor	pump SN2016001285/ motor SN385075000P	Fawwar pump station - well 2 – Saida
6	Pump Set Type: X12G4D/H10180	75	110	pump and motor	pump SN2016002237/ motor SN385A280D	Fawwar pump station - well 3 – Saida
7	Pump Set Type: BG8A23/H8100	9.5	420	pump and motor	pump SN2016001490/ motor SN385075000P	Qinnarit pump station
8	Pump Set Type: BG8A33/H8150	9	62	pump and motor	pump SN2016002238/ motor SN385075400P	Ain el Mir pump station

Regarding the execution of the water source rehabilitation and prior to the installation of pump set in the wells, Closed Captioned Television (CCTV) camera inspection was conducted by the consultant Kredo for the 8 wells in order to have a deep vision of the well casing condition, aquifer and to confirm accessibility for pumpset installation. A copy of the CCTV videos and CCTV report were provided to SLWE for their record.

The motor control centre (MCC) were assembled at Al Rawan workshop in Saida. A site visit was conducted by Kredo's engineer and CARE Wash team to inspect and test the motor control centre without load prior to delivery to each pump station. The rehabilitation of the water sources covered the installation of new pump set, riser pipes, submersible power cables, valves and fittings at the well head, MCC, automatic transfer switches including all related control and protection devices. Al Rawan contractor conducted the tie in of new pump set and MCC in presence of Kredo engineer and CARE WASH engineer to ensure the proper running of the installed equipment.



Installed motor control centre at Rafic Hariri pump station



Installation of pumpset at Al Fawar pump station

A.1.3.4 Monitoring of the work

Monitoring of the work took place during the execution of the field work on daily basis by the WASH engineer, the project manager, the consultant engineer and in collaboration with the MEAL team. The WASH engineer was available on the site on daily basis to make sure that the contractor is executing the work as per the designed specifications, shop drawings and workplan. CARE's engineer was checking the material description and rating and verify that it was approved for potable water usage. CARE's engineer was documenting his visit using a site investigation and a daily report signed by the consultant engineer, contractor's engineer, and SLWE representative.

Example of a site investigation report



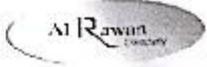
Submittal for Site investigation	
Project Name:	Construction Work for Water Supply Extension & Rehabilitation of Wells Equipment in South Lebanon District - Lebanon
Project number:	2016/DEVCO I/INTLEB08BEI-539
Reference:	I-013005SI-002-D
Location of Inspection:	Darb Sim municipality
Donor:	International Cooperation and Development (DEVCO)
Beneficiary:	South Lebanon Water Establishment (SLWE)
Attendees:	Care International representative: Eng. Jakleen Bou Orom AL Rawan Company representative: Eng. Ayman Assi Kredo representative: <i>Ali Jaber</i> SLWE representative: <i>Rasha Bazzi</i>

Purpose of Site investigation	
A. Civil	
<input type="checkbox"/>	Site survey
<input type="checkbox"/>	Pipes delivery
<input type="checkbox"/>	Excavation
<input type="checkbox"/>	Pipe laying
<input type="checkbox"/>	Sand filling, base coarse and compacting
<input checked="" type="checkbox"/>	Line pressure testing and delivery to SLWE for DI 150mm at 14bar & HDPE 125mm at 11.5 bar
B. Mechanical and Electrical	
<input type="checkbox"/>	Pumps set delivery
<input type="checkbox"/>	Pumps set installation
<input type="checkbox"/>	Valves and fittings delivery
<input type="checkbox"/>	Valves and fittings installation
<input type="checkbox"/>	Sensors and switches installation
<input type="checkbox"/>	MCC installation

For CARE Int Leb	For the Contractor's Representative	For the SLWE Representative
Name: Jakleen Bou Orom	Name: Al-Rawan company s.a.r.l.	Name: <i>Rasha Bazzi</i>
Signature: <i>Jakleen Bou Orom</i>	Signature: <i>Al-Rawan</i>	Signature: <i>Rasha Bazzi</i>
Date: 04 / 05 / 2017	Date: 04 / 05 / 2017	Date: 04 / 05 / 2017

Ali Jaber

Example of daily work report

Project Name:	Construction Work for Water Supply Extension & Rehabilitation of Wells Equipment in South Lebanon District - Lebanon	
Beneficiary:	South Lebanon Water Establishment (SLWE)	
Contractor:	Al-Rawan Company for General Contracting & Trading s.a.r.l.	
NGO:	CARE International in Lebanon (CIL)	
Donor:	International Cooperation and Development (DEVCD)	
Consultant:	Kredo.S.A.L	
Location:	<i>lobieh</i>	
Reference:	I-01720-A	

DAILY WORK REPORT

DATE	<i>10-1-2017</i>		HOURS WORKED	From: <i>8am</i> To <i>2pm</i>		WEATHER	SUNNY	
MANPOWER SUPERVISION / CRAFT	NO.	TOTAL HOURS	MAJOR EQUIPMENT/ MATERIALS	NO.	TOTAL HOURS			
Site Engineer	1	8	Pressure pump for test	1				
General Supervisor			Crane					
Supervisors	1		Excavator	1				
Electricians			Dump Pickup					
Labour	4		grinder	1				
Skilled labour	4		kobcoat					
Safety officer	1		Roller					
Welder			Compactor					
Equipment driver	2		Cutter					
Fitter	1		water tank					
Helpers			Doser					
Mechanical labour			cewatering pump					
			electrical generator					
			welding machine					
Over Time			jackhammer					
			Hino truck					
TOTAL MANPOWER/ HOURS		8	Safety & emergency signs	1		<i>Safety</i>		
			Signboards					

DESCRIPTION OF WORK PERFORMED TODAY BY CONTRACTOR

- 7 pipes
- 15 cavities around 70 meters

COMMENTS BY CONSULTANT (DELAYS, INTERRUPTIONS, DEVIATIONS, EXTRA WORK ACTIVITIES, UNUSUAL OCCURRENCE'S,ETC, RELEVANT TO TODAY'S WORK).

COMMENTS BY CARE'S ENGINEER

Work was ended at 2pm due to the ground was muddy. Difficulty in work progress.

Contractor signature	Consultant signature	CARE signature
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

Scanned by CamScanner

CARE's engineer was checking the excavation depth and width, the thickness of the sand bedding, the thickness and granular material of the back fill and base coarse, the type and size of the pipes. CARE Wash coordinator was checking the testing report of the base coarse prior to approval of the compaction and starting the pressurize pipeline. SLWE engineer was witnessing every pipeline pressure test and approving the result prior to give confirmation to the contractor for compacting of the base coarse and start laying and compaction of 2 layers of asphalt.



Pictures during monitoring of the contractor by the consultant engineer and CARE's engineer

On the other hand, CARE MEAL department conducted spot monitoring visits for all project activities. The MEAL monitoring aimed at monitoring the process of each of the water and solid waste activities, in addition to the content, methodology, and proceedings of all community-based sessions (FGDs, community engagement, bins distribution, etc.). The findings of these visits are annexed to the report.

In total, the MEAL team:

- Submitted 1 baseline report to allow for outcome monitoring
- Attended ToT sessions and produced an OSM report
- Conducted 12 field visits to the infrastructure sites – produced OSM report for each visit and one final report
- Conducted 5 field visits to community engagement meetings and produced 1 final OSM report
- Attended 2 SLWE training sessions and produced 1 final OSM report
- Conducted field visit to Terre's facility in Sarafand and produced one OSM report for the provided equipment
- Attended 6 workshops/FGDs/seminars and produced an FGD findings report, and 1 seminars and workshops OSM report
- Attended bins distribution and produced 1 OSM report
- Conducted mid-term evaluation of activities and produced 1 report
- Submitted an endline report that measures outcomes

Recommendations were given to the programme team on the spot and analysis findings are attached as annexes. Main findings are highlighted below:

- Low access to the Syrian population to community engagement meetings which calls for other outreach methods by the programme team
- Failure to engage diverse segments in the communities, the majority of community meetings were dominantly attended by males
- Information provided to the communities on the selection criteria and targeting of project areas and the coordination with the municipality and the water establishment. This is particularly important as it forms a key accountability benchmark, specifically beneficiary-driven –or forward – accountability
- Need for additional software (Water CAD) and further trainings to SLWE staff other than Water CAD
- Limited outreach efforts by partners and municipalities which proved to be challenging to mobilize the communities to participate in the project activities (i.e.: community FGDs for solid waste; community engagement meetings on water projects).

- Emergence of further support needs to the waste collection facility (Terre) in Sarafand
- Further needs for municipalities, including solar panels, equipment for solid waste collection, in addition to other WaSH uncovered needs.

A 1.4: Capacity building of relevant staff of the SLWE in water management

A.1.4.1 Capacity assessment

The needs of WaterCAD software at Saida department was raised by SLWE and CARE as a priority intervention since it builds the capacity of SLWE staff in planning, designing cost effective projects, operating successfully the water facilities leading to a better management of SLWE water resources. 15 engineers and technical staff (7 women and 8 men) were recommended by SLWE's HR department to attend the WaterCAD training sessions. A formal letter was issued by SLWE to CARE identifying the training participants and encouraging them to attend the training sessions.

A.1.4.2 Training sessions on water modelling and/or data management and/or other components to identified SLWE staff

7 training sessions were conducted through a consultant covering the topics listed below:

- Fundamentals of Water Distribution
- Quantity of Water: relation between quantity and population; population estimation; water use factors; fire demand; and design periods and flows.
- Distribution of Water: intakes, methods of distribution, storage, flow estimation, pressures, design of networks
- Constructing a Network and Performing a Steady-State Analysis
- Extended Period Simulation
- Scenario Management
- Reporting Results
- Water Quality Analysis
- Chlorination system design
- Working with Data from External Sources
- Problems solving
- Fire Fighting
- Real Scenario using SLWE field data
- Recapitulation of all the topics covered

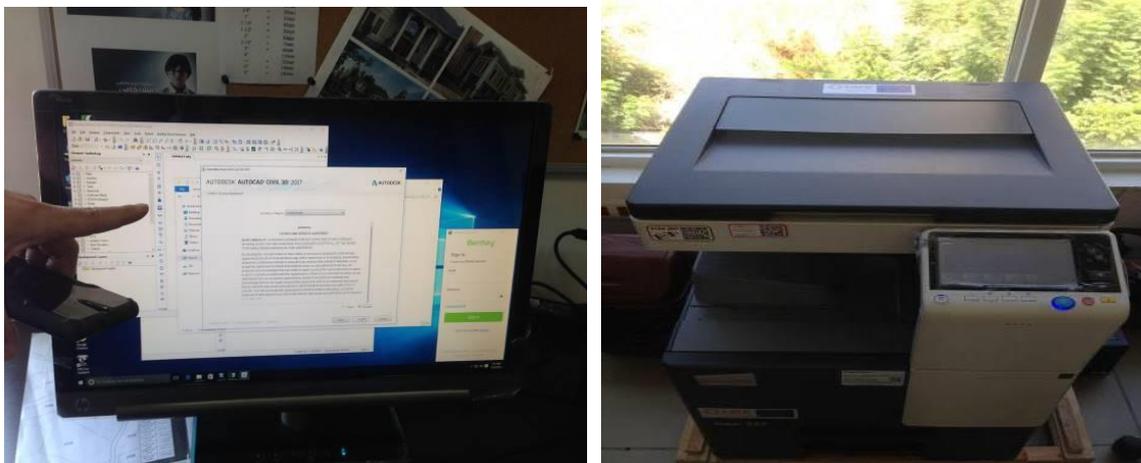


Picture during a WaterCAD training session at SLWE in Saida.

A1.4.3 Installation of hardware and software for water modelling and/or for other components

Following the capacity assessment conducted in collaboration with SLWE, and after identification of the need to purchase 3 WaterCAD license and 1 AutoCAD license, CARE specified the need to purchase 3 computer work station to support better performance of the license purchased. The initial proposed budget to the EU delegation listed the following items: plotter, printer, GPS and camera as asset to be purchased for CARE' office and transferred at the end of the action to SLWE. After internal coordination in CARE, and since the unit cost of each separate item was estimated less than 5,000 Euros, a decision was made to purchase and deliver the mentioned items directly to SLWE especially that the plotter would be an important asset to SLWE so they can scan and archive all the hard drawings they already have and print the large scale maps generated by the WaterCAD and AutoCAD. CARE conducted coordination meetings with SLWE head of design department and identified the characteristics and specifications of the software and hardware prior to starting the procurement procedures.

Technical and financial evaluation was conducted and Advantec was selected as supplier. After installation of hardware equipment, operational and maintenance training was conducted by Advantec for SLWE head of design department and IT team. At the end of the project CARE transferred the license to SLWE ownership.



WaterCAD & autoCAD installation and the printer at SLWE, Saida main office

According to MEAL observations and feedback from training participants as well as the trainer, it is recommended that the training structure be more elaborate and structured. Participants requested more training sessions on Waster CAD. Other trainings suggested by the participants were:

1. Maintenance of water stations
2. Water sources management
3. Water treatment
4. Sanitation and waste water trainings, including the treatment of waste water
5. Network design
6. GIS/Arc GIS
7. Primavera
8. AutoCAD MEP
9. Management and leadership

These were communicated to the WaSH team for use in the current fund (in the case of underspending) and for future projects.

Three main points were raised by participants suggesting how to improve the training:

- Improving the training methodology
- Shortening the duration between training sessions
- Giving more training sessions or elongating the duration of each

R2 – Community-led solid waste collection and recycling are enhanced in critical municipalities*Table: Summary of indicators achievement for result 2*

Indicator #	Indicator	Target Value	Overall Target	Cumulative Achieved	Achieved
2.1	# of host and refugee M/W/B/G that receive environmental awareness sessions	Individuals	10 000	See details below	
	# of host and refugee M/W/B/G that receive environmental awareness sessions (FGD)	Individuals - FGDs	150	173	115%
	# of host and refugee M/W/B/G that receive environmental awareness sessions (Door to door)	Individuals - d2d	9000	4 922	55%
	# of host and refugee M/W/B/G that receive environmental awareness sessions (Schools)	Individuals - students	1000	8 277	828%
	# of host and refugee M/W/B/G that receive environmental awareness sessions	Individuals - attendees	665	218	33%
2.2	# of host and refugee M/W/B/G that participate in the solid waste sorting action. (TERRE)	Individuals	5000	56 684	1134%

Indicator 2.1: # of hosts and refugees M/W/B/G that receive environmental awareness sessions**Target: 2,000 households (10,000 individuals) – Achieved 13 199 individuals**

The awareness sessions led by DPNA, for solid waste sorting at source included door to door awareness campaign and organisation of workshop and seminar. The awareness session focused on the importance of paper sorting. The awareness targeted households, students at schools, shops, local NGO and social organisation in Ghazyeh, Loubieh and Baissarieh. By targeting the schools CARE expanded the activity to include boys and girls for age range 16 to 18 years old.

The volunteers from DPNA who already attended the TOT sessions led by TERRE Liban conducted the awareness campaign which reached 13,199 beneficiaries and consequently exceeded the target.

Table: Number of beneficiaries reached by the awareness campaign.

Number of beneficiary					
	Household	Schools	Shop	Other	TOTAL
Ghazyeh	801	4772	819	10	6402
Loubieh	1289	634	10	0	1933
Baissarieh	1867	2871	116	10	4864
TOTAL	3957	8277	945	20	13199

Indicator 2.2: # of host and refugee M/W/B/G that participate in the solid waste sorting action.**Target: 1,000 households (5,000 individuals) – Achieved 9 503 individuals**

Endline conducted in August by CARE MEAL team shows that 72% of the beneficiary who received solid waste sorting awareness campaign are still participating in the sorting activity leading to an achievable target of 9,503 individuals and exceeding the initial project target. The behavioural change in beneficiary habits was noticed even during a short period of time especially for boys and girls at school.

Activity 2.1: Awareness and information sessions at community level addressed to all relevant population groups

A 2.1.1: Training of trainers by TERRE Liban.

6 TOT sessions have been provided by TERRE Liban to DPNA volunteers. The training sessions aimed to equip 90 trainees with environmental knowledge to enable and empower them to influence their surrounding and to become environmental advocates for solid waste sorting at source with special focus on paper sorting, since this has been recognized as the best practice to manage solid household waste. The selection of the attendees for the training was overseen by DPNA and TERRE Liban, and the participation of active environmentalists, volunteers, conscious citizens in the targeted areas was prioritized, to maximise the impact of the TOT and pass on the knowledge to others. TERRE Liban in collaboration with DPNA was able to exceed the target and recruit additional 12 persons and reached 102 attendees in total. TERRE Liban distributed handout, booklets, environmental songs CDs, and pen as part of the training material package. The booklets covered environmental information and potential activities and were made of recycled paper.



Picture taken during a TOT session held in April 2016

The following show the segregation of attendees by gender, age and nationality

Sex	Participants	%
Female	64	63%
Male	38	37%
TOTAL	102	

Nationality	Participants	%
Lebanese	75	74 %
Palestinian	22	21 %
P.R.S	3	3 %
Syrian	2	2 %
TOTAL	102	100%

Age group	Participants	%
<20	21	20%
20-25	25	24%
26-30	14	14%
31-35	8	8%
>35	34	34%
TOTAL	102	100%

A pre-test and post-test were filled by the attendees of the TOT sessions to measure the increase of their knowledge regarding the solid waste management. The knowledge of the trainees regarding the paper recycling improved and increased by 29% after the training. 100% of the trainers showed improvement in test scores between start and end of ToT sessions.

A 2.1.2 Gender mainstreaming training for partners

Gender is a cross sectorial component among CARE’s project. Moreover CARE’s Lebanon approach follow the approach from “CARE MENA Social and gender justice framework 2015 – 2030”, which build on CARE 2020 program strategy.

Gender mainstreaming training for partners and CARE’s staff was conducted on 31st January 2017 for 20 participants. Two representatives from TERRE and two representatives from DPNA attended the gender training. The training session was facilitated by CARE gender and protection advisor. After the training the participants will be able to:

- Recognize why gender is important for good project and program work
- Know the basic principles of power and socially constructed identities and how these are related to gender
- Have a greater understanding of core concepts of gender, hereunder key terms such as gender equality, gender mainstreaming and gender analysis
- Understand the key elements and steps of a gender analysis and have increased capacity to do an analysis
- Be familiar with the CARE Gender Marker self-assessment tool, incl. the Gender Continuum and the Gender Marker Vetting Form
- Practice the Gender Marker tool

A 2.1.3: Awareness raising sessions by DPNA

In order to integrate the communities in the waste collection and management planning, DPNA conducted door to door and schools awareness campaign in the targeted municipalities.

15 Focus group discussion were held in the targeted areas including 173 participants as shown in the below table:

Municipality	FGD	Participants	Lebanese	Syrian	Other	Female	Male
<u>Ghazveh</u>	7	82	151	13	9	109	64
<u>Loubieh</u>	2	35	173			173	
<u>Baissarveh</u>	6	56					
TOTAL	15	173					

The aim of the community discussions is to get to know people’s level of awareness regarding waste sorting and to tailor the project’s activities to the target population accordingly to get community’s buy-in. Findings from these discussions helped to focus topics of discussion in the subsequent awareness-raising campaign and workshops.

A list of semi-structured guiding questions that follow the above-mentioned topics was used in the FGDs. Questions remained open to encourage productive conversation.

Discussion topics observed:

- Identify the environmental situation in the community
- Identify current solid waste management practices by local government
- Assess participants’ level of knowledge on general solid waste management practices
- Assess the communities’ level of knowledge regarding paper sorting and recycling
- Assess participants’ current practices in solid waste management at household level, with focus on paper sorting
- Consult with the communities on best timings and places for paper collection

The internal analysis of the FGDs came out with the following findings:

- The environmental situation in the targeted areas is particularly challenging when it comes to Solid Waste Management (SWM). Garbage is widespread on the streets; means of disposal are not eco-friendly and include disposal in landfills and/or burning in open air, rather than a proper sorting and treatment process. The communities note that no supervision is made from the side of the local governments, in addition to the lack of regulations and laws (and law enforcement) on the national and local levels.
- Solid waste collection does not face any challenges; the municipalities are able to collect local solid waste through municipal trucks or through a contracted private company but without being sorted

- No serious efforts were made by the municipalities to tackle the garbage crisis or to launch initiatives in that regard.
- As per the FGD participants, communities considered that the main obstacles hindering the improvement of the solid waste situation in their area lays in:
 - Absence of solid waste management facilities, such as recycling factories, in the area
 - Lack of funding opportunities focusing on this sector
 - Lack of organizations active in this sector to support SWM
 - Lack of awareness by the communities as well as local governments on the importance of SWM practices at local and household level
 - Lack of prioritization by the local governments of the environmental situation, particularly the garbage crisis, which has led to the lack of initiative in this regard;
 - Lack of coordination and cooperation between the municipalities and the local communities.
- Only in one municipality (Bissariyeh) did the community attribute the aggravation of the situation to the Syrian refugee population as the latter has contributed to the overpopulation in their area.
- Areas of improvement that help further the SWM situation, according to the communities included:
 - Raising awareness among the communities on waste reduction and recycling;
 - Initiating SWM practices on the local levels, such as waste sorting and recycling;
 - Support from and Advocating for the implementation of a SWM policy/procedures with the Ministry of Environment which focuses on enhanced SWM practices;
 - Have a penal system for individuals/enterprises who do not comply with sorting, recycling, etc.
 - Reflect on success stories by institutions and individuals who have implemented improved SWM practices to learn from these experiences and incite others to do the same.
- Acceptable level of knowledge on the types of waste produced by different institutions (schools, factories, hospitals, households, etc.).
- The concept of waste sorting was very generic among all FGD participants and very few observations were made of individuals who do practice waste sorting at home.
- Participants were found to have an average level of knowledge on solid waste reduction techniques.
- Limited knowledge on waste sorting process and usages of recycled paper.

Brochures have been prepared using recycled papers and distributed during the door to door awareness campaign and workshops and seminars. The brochures promote the importance of reduce, reuse and recycle of solid waste with focus of the paper component. The door to door awareness campaign was conducted by volunteers from DPNA who already attended the TOT sessions and a debriefing on the FGD findings was conducted by DPNA project manager prior to the launching of the awareness campaign.

During the awareness campaign TERRE Liban distributed 1983 cardboard sorting bins.

Table: Distribution of bins versus different parameters.

No. of Bins Distributed by Units and Area					
	HouseHold	School	Shop	Other	Total
Baissarieh	469	200	47	50	766
Ghazieh	260	201	276	1	738
Loubieh	401	75	3	0	479
	1130	476	326	51	1983

Other: Local NGO, social organization.*



Pictures taken during the door to door awareness campaign

Activity 2.2: Capacity building of local actors active in waste collection and recycling

A.2.2.1 Planning and equipment of TERRE Liban to expand their current waste collection and sorting action to the target areas

CARE in coordination with TERRE Liban agreed to expand the midway storage sorting warehouse in Sarafand. Sarafand is located in Sahel Zahrani area and considered as a midway location between Ghazyeh, Loubieh and Baissareh. CARE supported TERRE Liban in purchasing cardboard sorting bins, expanding the midway storage by purchasing and installation of a paper compactor and collection of sorted paper from houses, schools and shops. The bins distributed by TERRE Liban were made from recycled papers to emphasize the process of recycling. A paper compactor was purchased and installed in TERRE Liban midway storage. Hence, papers collected are pressed and volume reduced 95% to allow transportation of papers to recycling factory. These two elements, bins and compactor, allowed to plan an adequate awareness and sorting campaign aimed at reaching out to communities and informing them about the practical aspects of the collection system. Once the door to door awareness campaign started and the bins distribution completed the process was as follow:

- TERRE Liban local collector collected the paper and cardboard on Mondays in Loubieh, Tuesdays in Baissarieh, Wednesdays in Ghazyeh
- TERRE Liban worker conduct a second sorting check on the paper and compacted in Sarafand using the compactor
- TERRE Liban driver transport the compacted pile once a week to a recycling factory in Beirut
- The paper is finally recycled.



Collection of paper sorted in houses and schools



Collection of paper/cardboard sorted in schools and supermarkets



Compactor in Sarafand midway storage facility



Piles of paper / cardboard compressed to be sold in Beirut recycling factory

The solid waste activity contributes positively to alleviate the impact of dumping or burning waste in the targeted areas. The intervention is important because these areas are not part of any integrated Solid waste management SWM system applied in the governorate of South Lebanon.

A 2.2.2: Workshops and info sessions gathering the local NGOs, municipal representatives and representatives of all relevant population groups to promote coordination, by CARE and DPNA
 3 Workshops, 3 seminars with 1 final workshop were conducted by DPNA in Ghazyeh, Loubieh and Baissarieh as part of the awareness campaign and activity described above. The aims of the workshops were to raise awareness on topics reflected in much need through the Focus Group discussions. Topics covered:

- Waste Management & its Critical Importance to the Environment: Sorting at the Source, Reduction of Waste Production
- Paper Recycling: How is it done, its importance, its uses and what the project offers
- Our important role as community members and what can we do

The objective of the 3 seminars was to focus on the miscommunication and lack of trust between citizens and the local authorities. CARE in collaboration with DPNA tried to reduce the gaps between the citizens and municipalities by explaining the roles and responsibilities of each stakeholders in the solid waste action. The seminars goal was to ensure that coordination and experience exchange between the citizens and municipalities board continue during and after the action to reduce any possibility for future crisis in the solid waste sector. 218 beneficiaries were reached by the workshops and seminars, showing the acceptance of the citizens to participate in workshops related to solid waste awareness.



Pictures taken during DPNA workshops and seminars

CARE in collaboration with TERRE Liban conducted a solid waste workshop on 17 March 2017, invitees included INGO and LNGO working in the solid waste sector in Lebanon. The aim of the workshop was to share experience and lessons learned.

- The first session of the workshop aimed to exchange experience in the solid waste between different INGO and LNGO by sharing success stories and challenges
- The next session aimed to identify the strength and weakness points alongside with the threats and opportunities of the environmental interventions. This session was led by CARE's MEAL team. The participants answered the SWOT questions. At the end of this session the participants discussed their answers and clarified their point of views.

The main recommendations can be summarized in enhancing the level of coordination and collaboration between the international agencies and local association and experts working in the field of solid waste management by forming a coalition/consortium/workgroup to exchange information and unify the language and approach.



Pictures taken during the solid waste workshop

CARE conducted a closing event for the project on 13 September 2017. A video showing the project achievement was presented on a LED screen covering the overall project activities, its elements, executing partners for environmental component DPNA and TERRE Liban, the consultant, contractor and the community meetings in the different works in the targeted areas.

Care International in Lebanon country director Mrs. Carol Sherman thanked the SLWE and the municipalities for their collaboration with CARE and between the different stakeholders. On the other hand SLWE CEO, Engineer Ahmad Nizam underlined the importance of these grants to enhance the water service in south Lebanon with a focus on providing spare equipment's to ensure the sustainability of the project. Director General asked the donors and the different stakeholders to act quicker especially that the time gap between the project planning proposal and the implementation reached 2 years. All the partners, mayor of municipalities, partner's representatives in addition to SLWE head of departments attended the event



Picture taken during the final event

2.3. Describe if the Action will continue after the support from the European Union has ended. Are there any follow up activities envisaged? What will ensure the sustainability of the Action?

Under the water component, CARE through the consultant Kredo designed the infrastructure work after Kredo conducted field visits, well tests and topographic survey to ensure the compliance of the design with the Lebanese and EU regulations. Kredo prepared a detailed calculation for the pipe size, nominal pressure and pump set characteristic with a projection of 20 years to include the growing of the population and aquifer capacity to ensure the sustainability of the project.

During the selection of the contractor, CARE team based the technical criteria on the material life period and low rate of failure by scoring based on the material properties, rating pressure and certificate of equipment to be used for potable water from quality similar to Lebanon aquifer type.

During the installation phase the instructions were given by the consultant and CARE's engineer to the contractor to eliminate any possible cause of failure of the equipment due to wrong installation procedures.

Air release valves and dismantling joint were installed as designed by the consultant on the water pipelines to eliminate damages in the pipe material due to formation of air pockets. The pockets of air increase head losses, extends pumping cycles and increases energy consumption. Serious damages to valves, gaskets or even breakage of the line could occur if the air valves are not installed at higher point at pumping lines and lowest point at transmission lines.

The contractor, in presence of CARE's engineer conducted on spot training for the pump station operators. The training covered

- Methods of operations
- Electrical parameters check list
- Prevention maintenance rules to detect possible future problems and how to avoid them

After completion of technical and financial evaluation for bidders and after awarding of selected contractor “AL Rawan” for execution of meters lines and wells rehabilitation, budget savings were identified based on the available budget under lines 70EU01 and 70EU02. Technical assessment was conducted by CARE and coordination meetings were held between CARE and South Lebanon Water Establishment (SLWE) to identify the gaps followed by site investigations, preparation of Bill of quantities, cost estimate and specifications. The decision was taken to purchase spare equipment to be delivered to the SLWE to ensure greater durability to the infrastructure constructed in the project. CARE conducted a coordination meeting with EU delegation representatives on 12 April 2017 and an information letter to present this option to purchase spare equipment with the budget savings. The detailed report and Annexes were submitted to the EU delegation on 21 April 2017.

Hence, CARE was able to provide additional spare equipments to SLWE such as submersible pump and motor set, electrical cables, riser pipes and automatic transfer switches. The main objective of spare equipment’s provision to SLWE is to ensure the sustainability of the project for a longer period. The specific objective is to strengthen the preventive maintenance practices leading to decrease the failure rates of infrastructure and increase the reliability of the water establishment services and financial capacity. All the spare equipment’s delivered are recorded in the transfer of asset list and delivered to SLWE via written hand over letter between CARE and SLWE.

As part of the recommendations from beneficiaries during the community engagement meeting and key informants interviews with the municipalities focal point and as part of supporting the sustainability of the solid waste component of the project, CARE purchased and delivered plastic solid waste container to the targeted municipalities to be used as collection point for paper waste and to encourage the participants in the solid waste sorting to continue the action and at the same time reduce the effort and delays of collecting papers from household levels.

CARE was able through intensive coordination to convince the municipalities to continue the paper sorting collection action by signing a memorandum of understanding between CARE, TERRE Liban and the municipalities. The municipalities will play their role and collect the paper sorted and transported it to a sorting facility in Sarafand or other storage as defined by the municipality prior to selling to a recycling factory.

The revenues collected due to the selling of the paper to the recycling factory will be allocated to operational costs of the municipality workers and consequently ensure the sustainability of the solid waste paper sorting at source. It is to note that one ton of paper is currently sold for 60\$ to the recycling factory.

2.4. Explain how the Action has mainstreamed cross-cutting issues such as promotion of human rights,⁶ gender equality,⁷ democracy, good governance, children’s rights and indigenous peoples, environmental sustainability⁸ and combating HIV/AIDS (if there is a strong prevalence in the target country/region).⁹

Gender

According to a CARE study on gender in WaSH in the Bekaa conducted in 2015, ‘at household level, municipalities noticed changes in family dynamics due to water shortage’.¹⁰ Shortage of water meant that women’s workload increased as they would resort to public standpipes; their mobility increased as a result of having to leave the house to collect water. For men, this also meant an increase in the financial burden in the case where households were resorting to trucked water to compensate the low water supply. These changes in household dynamics have led to increased stress for men and women alike.

⁶ Including those of people with disabilities. For more information, see ‘Guidance note on disability and development’ at http://ec.europa.eu/europeaid/guidance-note-disability-and-development-eu-delegations-and-services_en

⁷ https://ec.europa.eu/europeaid/toolkit-mainstreaming-gender-equality-ec-development-cooperation_en

⁸ Guidelines for environmental integration are available at: https://ec.europa.eu/europeaid/sectors/economic-growth/environment-and-green-economy/climate-change-and-environment_en

⁹ Please refer to EC Guidelines on gender equality, disabilities, etc.

¹⁰ Aoun, H. and Bousquet, C. (2017). *Women & Water: A survey of gender as it relates to water, sanitation and hygiene in Bekaa, Lebanon February 2015*. Bekaa: Co-Academic Programs of the Faculty of Health Sciences, University of Balamand, Beirut.

The continued pressures on Lebanon's natural resources, especially water, with limited access of potable water due to poor services observed in many regions across the country. The presence of large number of refugees still places significant strain on basic water and sanitation services.

These findings were also observed in Saida: a -according to a testimonial from one of the female beneficiaries from this project echoed the findings in the aforementioned Bekaa study and stated that she faced problems providing water for her family due to a shortage in water supply.

The programme team also sought to accommodate the activities to the communities; for instance, as part of gender mainstreaming throughout the project activities, and based on input from the community, CARE resorted to changing the timing of community engagement meetings to better fit the schedule of working men and married women in order to reach a wider range of participants.

CARE also sought to ensure the equal participation of men and women in all project activities, especially community FGDs and engagement meetings. Invitations and outreach for these events targeted men and women equally, and it was noticed that women were highly participating in the activities.

In community engagement meetings, the ratio of women participation ranged from 25% to 40%, while in the ToT training, 60% of participants were women.

The highest attendance of women was observed in the solid waste FGDs where 63% of participants were women.

On the other hand, a gender training was conducted for CARE and partner staff delivering the key concepts of gender equality, gender mainstreaming and CARE's gender marker. The training aimed at strengthening skills and commitment to apply this new knowledge in programs and projects.

As for the DEVCO team, it was made up of 3 persons, 2 of them are women within the capacity of Project Manager and Project Engineer. The 3rd staff member, a male, was the community mobilization officer.

Good Governance

During the water conservation awareness held as part of the community engagement meeting, a section covered the right of every citizens in access to water and the responsibility of the water authorities in providing safe water supply, while encouraging the citizens to subscribe to the public network and pay the required fees. In addition to the implications of this on gender, as it directly addresses inclusion alongside human rights and equity, this also supports the good governance of the SLWE.

2.5. How and by whom have the activities been monitored/evaluated? Please summarise the results of the feedback received from the beneficiaries and others.

The monitoring and evaluations activities were conducted by the MEAL team. MEAL activities included a baseline assessment; outcome monitoring survey; OSM visits for infrastructure sites, community engagement meetings, bin distribution, paper collection site, ToT, SIWE training sessions, and community focus groups; qualitative data collection (FGDs, KIIs). The MEAL team also conducted a mid-term evaluation of activities and produced a report on this.

In each of its tools, the MEAL team had a set of questions that relate to accountability, specifically on sharing project selection criteria, selection of targeted areas, voicing the needs of the communities and engaging them in the activities.

An indicator performance tracking table (IPTT) was filled on a monthly basis to track progress towards activities and indicators.

Dar-Al-Handasah, the audit team assigned by the EU, also conducted spot checks and monitoring visits to community events and project sites.

A gender training for partner and CARE staff was conducted to raise awareness among staff on gender concepts.

Success stories, MEAL findings, and project factsheet are attached as annexes.

2.6. *What has your organisation or any actor involved in the Action learned from the Action and how has this learning been utilised and disseminated?*

Several recommendations were produced and successes highlighted throughout the project cycle:

a. Outreach

- Shortcomings in coordinating the community sessions included the failure to engage diverse segments in the communities. With the exception of Bqosta and Ghaziyeh, and Lubiyeh to a lesser extent, where the gender of the attendance was almost balanced (M65/35F, M60/40F, and M75/25F respectively), all the other community meetings were dominantly attended by males.
- Another shortcoming was the inability and lack of access to Syrian refugee residents in community meetings. The average participation of Syrians (and Palestinians) did not exceed 7% of total attendance, and was noticed only in Aabra and Lubiyeh. This participation was only limited to attending the meetings –no interaction was spotted from the refugees during the meetings. The low access of the Syrians to the community meetings is related to the local authority standpoint from the refugees. The general feedback from the municipalities on contacting the refugee community regarding the project was that the interventions are targeted towards and are more relevant to the host community rather than the refugees. It was noticed in Darb Es-Sim that the local authority initially objected to the entire project as it was funded under the Syria response. This should further be addressed in future interventions, as infrastructure rehabilitations are not only aimed at enhancing the performance and management of the water systems, but also have an underlying objective to foster social cohesion between communities. The logic is that, through the intervention, tensions related to water scarcity and degrading environment will be reduced, while community forums, namely the community meetings, will enable exchanges among inhabitants on their living environment.
- Dissemination and sharing information on selection criteria and rationale for project areas and the coordination with the municipality and the water establishment. This is particularly important as it forms a key accountability benchmark, specifically beneficiary-driven –or forward – accountability.
- A planned objective of community meetings from the design phase was the formation of a community committee that would supervise the works and provide CiL and the SLWE with feedback on their performance from the community perspective. However, according to Law 221 of the year 2000, which is the main regulating law of the water sector, the only supervisory the water sector in Lebanon is primarily managed by the Ministry of Energy and Water on a national level, and on a regional level, through the autonomous Water Establishments (WEs).
- Limited attendance was noted in awareness campaign workshops. As per the ToR, 75 participants were to be reached through these workshops. Only 46 have been reached. This is mainly the shortcoming of the implementing partner who is responsible for the coordination of invitations and outreach with the municipalities and the local communities. It was apparent that the local partner did not make use of its local networks and resources and completely relied on the municipality to reach out for the intended audience. The municipality, however, was very limited in its outreach efforts.
- The absence of partner representatives in their activity (solid waste workshops) to supervise and oversee the implementation of the proceedings was observed. As the organization responsible for the implementation of this entire activity, partner engagement and commitment is to be tackled in future coordination meetings with them. More efforts are to be conducted on the part of partners to ensure attendance in upcoming activities, with particular focus on the closing event which is intended to host 665 participants, a

relatively large number. CARE's programme and MEAL teams are to discuss ways to support partners on this.

- It is important that community engagement includes all targeted areas regardless of type of work – to ensure transparency and more visibility for CARE in the region of intervention.

b. Implementation

- It is necessary for CARE to implement its solid waste activities using a different approach in coordination with the municipalities themselves. CARE is to support the local governments in acquiring the needed equipment (large vehicles and containers) so they are supported to run proper waste sorting. This, in turn, facilitates the sorting and compacting action inside of Terre's storage facility and minimizes time, staff, and transport costs.

c. Visibility

- It is recommended that the programme team coordinates with the municipality on the visibility requirements so as to keep visibility for pipeline sites, to the extent applicable, in order to optimize CARE visibility and accountability regarding information sharing.
- It is recommended, as stated in several OSM reports for different CARE projects, that a budget allocation be for visibility materials for any new fund which should to include not only signs, handouts, and banners, but to also produce project visibility items for relevant staff (i.e.: vests/t-shirts/caps, etc.).
- As part of accountability, and in abidance of the global accountability initiatives to which CARE is a signatory (i.e. Charter4Change, Core Humanitarian Standard-CHS, etc.), sharing all the above information is fundamental for forward accountability¹¹. An accountability plan is to be developed along the visibility plan so as to foresee all project requirements and to allocate the necessary budget to implement the plans and activities.

d. Needs and Sustainability

- software provides 3 work stations for SLWE staff when working on water modelling. This is a concern especially as trained SLWE staff exceed 15 individuals; no more than 3 persons will be able to use the software at the same time, therefore minimizing the number of water models that could be designed by the establishment. The number of water modelling software was primarily dictated by the grant size and future interventions are to note the need for additional software if CARE is to provide comprehensive programming within the targeted areas.

2.7. Please list all materials (and number of copies) produced during the Action on whatever format (please enclose a copy of each item, except if you have already done so in the past). Please state how the items produced are being distributed and to whom.

DPNA printed 3000 brochures on solid waste management and best practices. These were distributed on households, institutions and schools during the bin distribution process. They were also distributed during the community FGDs.

CARE printed 500 brochures on waste management. CARE also printed stickers that were placed on the electrical panels provided by CARER to the water stations, and on the compactor provided to Terre Liban.

Regarding the Water CAD training, CARE produced 20 certificates for the participants.

¹¹ CiL's Accountability Framework as well as other global frameworks stipulate that programmes be based on communication, participation and feedback of crisis-affected people and communities whereby these latter know their rights and entitlements and have access to information and a safe and responsive mechanisms to handle complaints and feedback.

2.8. Please list all contracts (works, supplies, services) above € 60 000 awarded for the implementation of the Action since the last interim report if any or during the reporting period, giving for each contract the amount, the award procedure followed and the name of the contractor.

Contract	Amount	Award procedure	Name of contractor
Detailed engineering design	94,520 USD	National call for tender with advertisement for a period of 14 calendar days in local newspapers followed by tender opening session, administrative, technical and financial evaluation to select the awarded bidder.	Kredo
Construction work for water supply extension and rehabilitation of wells equipment in south Lebanon district	1,269,987.49 USD	International call for tender with advertisement for a period of 21 calendar days in local and international newspapers followed by tender opening session, administrative, technical and financial evaluation to select the awarded bidder.	Al Rawan
Spare parts	174, 620 USD	Sole source contract for purchasing spare pumps. Al Rawan is the sole agent for Aturia pumps in Lebanon.	Al Rawan

3. Beneficiaries/affiliated entities and other Cooperation

3.1. How do you assess the relationship between the Beneficiaries/affiliated entities of this grant contract (i.e. those having signed the mandate for the Coordinator or an affiliated entity statement)? Please provide specific information for each Beneficiary/affiliated entity.

CARE has sub-grant agreements with local NGO DPNA and TERRE Liban in the framework of this project. To maintain and promote effective collaboration CARE conducts weekly and bi-weekly meetings with DPNA and TERRE Liban mainly in DPNA's office where we discuss what the project challenges are and how to address them. The meetings are attended by Community Mobilization Officer and Project Manager from CARE, project manager (DPNA) and project coordinator (TERRE Liban) on the Partner's behalf.

When challenges encountered by any of the partner, CARE supported them by providing solution through suggestions provided by the project manager and MEAL team to successfully reach the project targets and achieve higher impact on beneficiaries.

3.2. Is the above agreement between the signatories to the grant contract to continue? If so, how? If not, why?

The agreement between CARE and the sub grantees ended in 16 September 2017, by the end the agreement between the EU delegation and CARE. There are no available funds within CARE possible upcoming projects to cover solid waste components.

3.3. *How would you assess the relationship between your organisation and State authorities in the Action countries? How has this relationship affected the Action?*

The relationship between CARE and SLWE can be described as cooperative at many levels, including, but not limited to with the Director General, with the Head of Distribution Department, Head of Pumping Station Department, Head of Design & Study Department. To build mutually trustful and participatory relationship CARE provided regular updates to SLWE about the progress of the project and obtains necessary from SLWE feedback/information for planning and implementation purposes. All the communication between CARE and SLWE was in writing and documented. In the meantime, SLWE had the contact information (phone number, email address) of designated CARE staff members to be able to communicate any issues or questions related to the project or for any urgent needs or consultations when necessary. The SLWE has shown high level of cooperation with CARE in regard of the implementation of the project and as a result reach out to CARE for support on other needs in the water sector.

In addition, CARE coordinated its activities with the municipalities in the target areas. CARE conducted community meetings in each of the target municipalities for the water infrastructure component, and due to the regular coordination between CARE and the local municipalities CARE upgraded the purpose of community meetings from informative session to water and solid waste awareness session for a sustainable change in people behaviour even after the project end.

3.4. *Where applicable, describe your relationship with any other organisations involved in implementing the Action:*

- Consultant: Kredo: good relationship, coordination meetings are conducted on monthly basis, and more often when necessary
- Contractor: Al Rawan: good relationship, coordination meetings are conducted on monthly basis, and more often when necessary. Work executed on time, within the budget and as per standards quality.
- Supplier and consultant for the water software's training: Advantec: good relationship, coordination meetings are conducted on monthly basis, and more often when necessary
- Final Beneficiaries and Target groups: South Lebanon Water Establishment: good relationship, coordination meetings are conducted on monthly basis, and more often when necessary CARE has also established positive relationship with heads of municipalities in the implementation areas.
- Other third parties involved (including other donors, other government agencies or local government units, NGOs, etc.) : the NGO involved are partners in the project (co-applicant)

3.5. *Where applicable, outline any links and synergies you have developed with other actions.*

CARE is a regular participant of the Water and Energy Coordination meeting, led by UNICEF conducted in South Lebanon, Beirut, and Mount Lebanon governorates on monthly basis.

CARE's project manager attended a workshop in Erbil in June 2016. This first workshop for CARE WASH staff and partners working in Syria and neighboring countries aims to build on initial collaboration between technical staff around the region and the Emergency WASH Team, to strengthen the working of individual COs within a functional regional network, through coherent programming and consistent application of gender mainstreaming and quality standards, and by promoting learning between COs. CARE 's representatives from Iraqi Kurdistan, Jordan, Turkey offices were attending in addition to Lebanon.

The workshop aimed to provide a background of information on the evolution of CARE wash response in the region and to discuss future regional WASH approach through the following:

- Technical activities – scale and quality
- M&E
- Strengthening our mainstreaming of gender and vulnerability
- Partnership
- Capacity building

➤ Coordination (Clusters, sector working groups)

To strengthen the relation between CARE and other INGO, local NGO and donors active in the water and solid waste sector, CARE invited them to participate in the World Environment day and solid waste workshop. The purpose of involving different actors is to learn from each other experience and how to overcome challenges to be able to serve better the most vulnerable population.

While conducting the capacity building assessment with South Lebanon water establishment, they raised the needs for testing tools such as Closed Captioned Television camera (CCTV) for inspection of deep wells and the need for mobile ultrasonic flowmeter in order to check the flow at different level of the system from production to distribution while calculating the non-revenue water losses. In addition, the need for metal analyzer to check the compatibility of valves and fittings for potable water usage was requested.

Due to the unavailability of budget under this project, CARE coordinated with ACF, conducted meetings with the head of South Base and project manager and discussed the capacity building training that CARE is leading for SLWE operators to avoid any overlap and shared the needs from SLWE, provided ACF with technical data sheet for the suggested testing tools and put ACF in contact with the head of design and study department to coordinate the training and equipment provision and benefit in adequate way from their available budget as per SLWE needs. The feedback from SLWE regarding this coordination was very appreciated and successful since ACF was able to provide some of the suggested equipment and reply to SLWE needs.

Following the program meeting, CARE also organized joint meetings between CARE MEAL team and ACF MEAL team in order to discuss the way of indicators measurement and interpretation of result and exchange experience.

3.6. *If your organisation has received previous EU grants in view of strengthening the same target group, in how far has this Action been able to build upon/complement the previous one(s)? (List all previous relevant EU grants).*

N/A

3.7. *How do you evaluate cooperation with the services of the Contracting Authority?*

The relationship between CARE International in Lebanon and the EU delegation is considered cooperative since coordination meeting were done in a short notice of time when requested from CARE to the EU. The EU Delegation didn't reject any technical request sent through formal report to the EU and consequently CARE was able through this fund to extend the targeted areas from 3 to 6 municipalities under the water infrastructure lines and provide spare equipment to SLWE aiming to better ensure the sustainability of the project.

In addition, EU delegation invited CARE to participate in a WASH consortium, MADAD fund on 19 May 2017, with other 9 NGO working in the water sector in Lebanon. This invitation reflects the intention of the EU delegation for future collaboration with CARE.

4. <i>Visibility</i>

How is the visibility of the EU contribution being ensured in the Action?

The European Commission may wish to publicise the results of Actions. Do you have any objection to this report being published on the EuropeAid website? If so, please state your objections here.

During the community engagement meetings and coordination meeting with different stakeholder and partners involved in the project action, CARE representatives are providing information to the Syrian and hosting community about the project activities and the support of the European Union to the

action and its impact in improving the access to safe water and solid waste management. The information provided through power point presentation, discussion or /and brochures aim to ensure that the program participants are aware of the role of the EU in providing sustainable development project to support vulnerable population in the targeted areas.

The EU visibility is included in the community engagement brochures (attached), at the roll up banners used during the TOT session of the solid waste activity, as well as in the brochures distributed during the solid waste awareness session. The EU visibility principles were also followed at the sites where the water project was implemented.

All the material produced and listed below included the EU visibility.

- Success story was produced by CARE communication manager as part of the project communication plan. The success story copies were distributed to the participants of the project final event. Sample of the success story is attached to this report.
- Fact sheets were also produced describing the activity of the project, the target and the beneficiary reached. Fact sheet is attached to this report
- During the timeline of the project solid waste and water awareness brochures were distributed during the community engagement meetings, the door to door awareness campaign and the solid waste workshops and seminars.
- During the celebration of the world environment day, mugs were distributed to the students as part of the awareness focusing on the importance of drinking water conservation. Mugs were also distributed as a souvenir to the participants of the final event.
- Below is a link to the first article published by CIL in the French weekly "Le Journal du Dimanche (JDD)". The article comes out of our DEVCO project and was prepared by CARE communication manager and translated/edited by CARE France, as they are the direct contact with JDD.

<http://www.lejdd.fr/international/moyen-orient/au-liban-dans-les-camps-de-refugies-chaque-goutte-deau-doit-etre-utilisee-a-bon-escient-3446597#xtor=CS1-4>

5. <i>Location of records, accounting and supporting documents</i>
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Please indicate in a table the location of records, accounting and supporting documents for each Beneficiary and affiliated entity entitled to incur costs.

Name of the contact person for the Action:

Alexandre Morel, Program, Operation and Advocacy Director

Signature:

Location: 71 rue Archereau Paris, France

Date report due: 17/03/2018

Date report sent: 16/03/2018