



LEBANON WATER PROJECT (LWP)

Midterm Performance Evaluation

FINAL REPORT

Performance Management and Support Program for Lebanon (PMSPL II)

December 2018

This publication was produced at the request of the United States Agency for International Development (USAID). It was prepared by Jeffrey W. Fredericks, PhD; Joanna Khater; Najwa Andraos; Wassim Katerji, PhD; Joe Rufka; and Gulnard Ters of Social Impact, Inc.

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Cover Photo: Construction of water distribution network, Sabah Village in Jezzine demonstration area, which is part of an LWP activity for improving and expanding water services for Lebanese citizens (Gulnurd Ters, Quality Management Engineer/Social Impact)

December 2018

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ABSTRACT

USAID's Lebanon Water Project (LWP) is a \$65-million activity that was launched in October 2015 and will conclude in September 2020. LWP's purpose is to improve: i) Service delivery and resource management of Lebanon's five public-water utilities; ii) Civic engagement in water management and citizens' perception of water utilities' role in providing a necessary and valuable service; and iii) Private-sector involvement in water management. This mid-term performance evaluation has found that LWP's objectives meet USAID/Lebanon's Country Development Cooperation Strategy's objectives and beneficiary needs. LWP's assumptions remain valid. Its construction activities, management plans and tools, and training courses are improving Lebanon's public-water utilities. The degree of impact varies. Delays have occurred in construction. LWP has established a diverse and wide-ranging grants program covering communities, agriculture, and industry—issuing more than 32 grants. Media coverage has been substantial, with national campaigns reaching over 1.17 million people. One Public-Private Partnership was signed with one of the Regional Water Establishments (RWEs) for fees collection. Tender documents have been prepared and suggested for selected RWEs for model water supply Public-Private Partnerships with RWEs, but no partnerships have been signed to date. No external contextual factors were found that would affect LWP's performance. LWP is putting in place mechanisms to ensure the initiatives it implements are sustained as much as possible. The gender-integration strategy has been implemented as planned. Some program and budget adjustments are justified where public-water utilities are not actively participating or have other funding and technical-assistance sources. Even if there are no delays in completing the remaining designs and construction, it may be necessary to extend LWP's duration to complete all training and testing of management issues related to demonstration projects.

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ACRONYMS

A&E	Architecture and Engineering
ACWUA	Arab Country Water Utility Association
AFD	French Development Agency
AUB	American University of Beirut
BMLWE	Beirut-Mount Lebanon Water Establishment
BWE	Bekaa Water Establishment
CDCS	Country Development Cooperation Strategy
CSO	Civil Society Organization
DAI	Development Alternatives, Inc.
DG	Director General
DO	Development Objective
EIA	Environmental impact assessment
ERP	Enterprise Resource Planning
ET	Evaluation Team
EU	European Union
FGD	Focus Group Discussion
FY	Fiscal Year
GIS	Geographic Information System
HCPP	High Council for Privatization and Partnership
IP	Implementing Partner
IR	Intermediate Result
KII	Key Informant Interview
LRBMS	Litani River Basin Management Support
LRA	Litani River Authority
LWP	Lebanon Water Project
LWWSS	Lebanon Water and Wastewater Sector Support
LOP	Life Of Project
M&E	Monitoring And Evaluation
MENA	Middle East and North Africa
MoEW	Ministry of Energy and Water
NGO	Nongovernmental Organization
NLWE	North Lebanon Water Establishment
O&M	Operations and Maintenance
PMSPL	Performance Management and Support Program for Lebanon
PODA	Projects Outside Demonstration areas
PPP	Public-Private Partnership
PWS	Performance Work Statement
QA/QC	Quality Assurance/Quality Control
RMP	Risk Management Plan
RWE	Regional Water Establishment
SCADA	Supervisory Control and Data Acquisition
SI	Social Impact
SI A&E	Social Impact architectural and engineering oversight team
SLWE	South Lebanon Water Establishment
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
USG	United States Government
WDM	Water Demand Management

WE	Water Establishment
WISE	Water Infrastructure Support Enhancement
WQAP	Water Quality Assurance Plan
WSA	Water Security Analysis
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

EVALUATION PURPOSE

The Lebanon Water Project (LWP) midterm performance evaluation aims to validate LWP's theory of change and results framework and to provide directions for the remainder of the activity. This evaluation, prepared by Social Impact, Inc. (SI) for the United States Agency for International Development (USAID)/Lebanon; Development Alternatives, Inc. (DAI) Global, LLC (prime implementing partner); and others at the discretion of USAID/Lebanon, uses the knowledge gained from LWP implementation to date - including monitoring data, information about project context, and other sources - to recommend adjustments to interventions and approaches as needed.

PROJECT BACKGROUND

Even though Lebanon enjoys relatively abundant rainfall and natural water resources, it is plagued by serious problems related to lack of water availability, unsustainable water usage, and insufficient wastewater treatment.

Providing clean, reliable water is a priority in Lebanon. Insufficient infrastructure for water storage, rain harvesting, and water reuse is contributing to an overall deficient water supply while demand continues to grow. Inadequate collection and treatment of wastewater, inefficient use of irrigation water by farmers, and high rates of nonrevenue water are compounding the problem. Water and wastewater infrastructure are outdated and vastly inadequate. Currently, only 25 percent of all households and businesses in Lebanon have access to public water service delivery seven days a week. Potable water networks cover around 80 percent nationwide (among the highest in the region), but more than 50 percent of these networks are past their useful life, resulting in frequent breakdowns, leaks, and financial losses. Water supply service is provided on average for approximately nine hours a day but is as low as three hours a day in some locations. Water utilities have paid virtually no attention to wastewater and irrigation and, although Lebanon's wastewater network covers 60 percent of the country, less than 10 percent is properly treated. The remaining 90+ percent is generally discharged without treatment, severely polluting ground and surface water resources. Surface water resources are heavily exploited, have limited storage, and lack sufficient environmental protection. There is intense stress on groundwater, which is unsustainably withdrawn to meet ever-increasing demands.¹

Water utilities usually operate in financial deficit because of the very low percentage of customer-metered connections (approximately 10 percent nationwide), the low percentage of billing and collection (less than 70 percent), and the lack of a proper tariff strategy. Gaps in the legal/regulatory framework, the lack of sector reform, the high percentage of nonrevenue water, and the lack of a sense of stewardship at the citizen level have entrapped the water sector in a vicious cycle.²

Citizens have lost faith in the capacity of the water utilities and local municipalities to provide proper services and are reluctant to pay their water bills. Citizens have resorted to other means and methods of securing potable water and disposing of wastewater that harm the environment and health of citizens.

¹ USAID Lebanon Water and Wastewater Sector Assessment – 2014 (September 2014)

² USAID RFTOP No.SOL-268-15-000002 Lebanon Water Project (LWP), 06/11/2015

The private sector has played a very limited role in water and wastewater services delivery.³ In this context, Lebanon recently ratified Law 48/2017 Regulating Public-Private Partnerships (PPPs). This law is expected to encourage PPPs in the water sector, which could help alleviate the above-mentioned problems.

The Syrian crisis that started in March 2011 has added yet another stress to the already fragile water and wastewater sector. The number of Syrian refugees in Lebanon is more than 1.5 million (40 percent of Lebanon's 4.1 million pre-crisis population). This refugee influx has seriously affected all of Lebanon's service sectors.

OVERVIEW OF PROJECT AND BUDGET

LWP is a \$65 million activity with a period of performance from September 2015 to September 2020, funded by USAID and implemented by DAI Global, LLC.

LWP aims to increase reliable and sustainable access to water for Lebanese citizens; improve water management practices; enhance the efficiency and sustainability of public water utilities; and, whenever practical and feasible, respond to water issues arising from the influx of Syrian refugees. LWP provides technical and capital assistance to relevant stakeholders and counterparts to enhance water sector performance by building the service delivery and resource management capacity of the five public utilities, advancing civic engagement in water management, and improving citizen perception of water utilities as providing a necessary and valuable service. LWP promotes better water governance to help ensure long-term preservation of Lebanon's water resources, including potable water, wastewater, and irrigation.

EVALUATION QUESTIONS

The evaluation questions for the LWP midterm performance evaluation are as follows:

Relevance

1. To what extent are LWP objectives appropriate for meeting the Country Development Cooperation Strategy (CDCS) development objective?
2. To what extent are LWP objectives appropriate for meeting beneficiary (regional water establishments [RWEs] and water users) needs? Are the activity assumptions still valid?

Effectiveness

3. To what extent are LWP interventions progressing toward meeting the activity objectives as stated in the contract?
 - a. Are the construction activities, management plans and tools, and water establishment (WE) staff trainings effectively improving the service delivery and resource management capacity of the public water utilities?
 - b. Are the nongovernmental organization (NGO) and civil society organization (CSO) grants and implemented awareness and media campaigns contributing to the advancement of the civic engagement in water management and improving citizen perception of water utilities' role in providing a necessary and valuable service?
 - c. Are the initiatives implemented with private companies improving the overall involvement of the private sector in water management?

³ *ibid*

4. Are there any external contextual factors (i.e., country/regional trends) that may affect the activity's performance and hypothesis? If factors are identified to hinder the activity's potential to achieve its objective, how those can these factors be mitigated/addressed?
5. What internal factors are contributing to the achievement (or nonachievement) of the activity's objective?

Sustainability

6. Are there any indications that LWP initiatives are likely to be sustained following the end of the activity? Are there mechanisms in place to ensure that the WE will maintain the systems put in place by LWP and that water users will continue to use the water saving techniques introduced by the activity?

Gender Integration

7. To what extent have LWP gender strategy recommendations been incorporated into the LWP workplan and implemented throughout the activities?

Recommendations

The evaluation provides recommendations on the following:

1. What is needed to reach the planned LWP targets?
2. What midcourse corrections are needed (if applicable)?
3. Are any additional assessments required to provide further information for decision making on this activity?

EVALUATION METHODS

USAID/Lebanon provided PMSPLII a list of initial questions that were subsequently synthesized into seven evaluation questions. The evaluation used mixed methods to collect and analyze primary and secondary data. Secondary data were collected by reviewing project documentation, workplans, progress reports, technical reports, and surveys. Primary data were collected through key informant interviews (KIs) with USAID Lebanon Mission staff, LWP project staff, the four regional RVEs, Litani River Authority (LRA), project beneficiaries, private sector partners, and other stakeholders; a focus group discussion (FGD) with a grantee NGO; and site visits. The evaluation team (ET) conducted 37 KIs with 54 individuals, three site visits, and one FGD with 10 participants. The ET met with the directors general (DG) and staff of each of the five utility establishments at their offices. An evaluation matrix was used for data analysis to ensure that all data sources were considered. Triangulation of data was used to answer each question with greater validity and robustness.

Fieldwork, which took place from November 5 to December 7, 2018, included preparation of the inception report, data collection, USAID and LWP midpoint briefings, data analysis, and USAID and LWP out-briefings.

KEY FINDINGS AND CONCLUSIONS

QUESTION 1 (RELEVANCE OF LWP OBJECTIVES)

A review of LWP objectives presented in the contract between USAID and DAI⁴ shows they are linked directly to USAID/Lebanon's CDCS 2014–2018 development objectives. LWP objectives are fully appropriate for meeting CDCS development objectives.

QUESTION 2 (MEETING BENEFICIARY NEEDS)

LWP has conducted numerous assessments to determine beneficiary needs, including—for the RWEs and LRA)—training needs assessments, GIS assessments, irrigation assessments, and financial and performance audits. LWP has also prepared RWE business, risk management, and water quality assurance plans. KIs with RWE DGs and staff confirm that LWP objectives are helping to address problem and priority RWE issues.

To understand water user needs in the demonstration areas, LWP carried out a baseline “Citizen Perception and Satisfaction Survey” and assessments of public potable water networks. For the projects outside the demonstration areas and sanitary projects, needs assessments involving municipalities, RWEs, and MOEW were conducted. To meet water user needs in the high water consumption agriculture and industry sectors, LWP selected through its grants program partner NGOs/CSOs familiar with these sectors.

Construction has not been completed for most areas; therefore, benefits to water users in those areas have yet to be realized. LWP will conduct an “Endline Citizen Perception and Satisfaction Survey” in Year 5 to evaluate how well water user needs have been met. A review of numerous LWP success stories and ET discussions with various stakeholders confirmed how beneficiaries (water users) have been positively impacted through grants to communities, agriculture, and industry; the water conservation/protection program; and the water stewardships with commercial companies.

LWP objectives are fully appropriate for meeting RWE and water user objectives. The extent to which LWP objectives are meeting water user needs can be only partially assessed at midterm. Final assessment will require endline surveys.

QUESTION 2A (VALIDITY OF ACTIVITY ASSUMPTION)

A review of the activity assumptions presented in the LWP monitoring and evaluation (M&E) plan (May 2017) shows they are still valid. Several of the assumptions—e.g., that RWEs are strong partners and that international donors are coordinating and aligning their activities with LWP—should not be taken for granted. LWP is aware of these risks and is working to ensure the assumptions remain valid.

QUESTION 3 (MEETING CONTRACT OBJECTIVES)

LWP is a deliverable-based contract with a mechanism to adjust activities that are not meeting objectives. The budget has been fully obligated. With 60 percent of the life of project (LOP) completed, 39 percent of the budget has been spent. LWP is meeting or exceeding its deliverables in most tasks. There are currently 141 deliverables with 82 (58 percent) completed (December 2018). Eight (6 percent) of the remaining 59 to be completed are considered delayed.

⁴ USAID Contract # AID-268-N-15-00001 IDIQ AID-OAA-I-14-00049 dated 09/30/2015

QUESTION 3A (IMPROVING RWEs)

LWP documents, KIIs with LWP and stakeholders, and site visits show that LWP activities, plans, tools, and trainings are improving RWE service delivery and resource management. The degree of impact varies among RWEs. Delays have occurred in several of the enterprise resource planning (ERP), audit, water quality assurance plan (WQAP), and construction deliverables. Some program adjustments are justified where public water utilities are not actively participating or have other funding and technical assistance (TA) sources. Implementation of LWP activities is customer focused. If a WE is not interested in a project activity, it is not required to participate. The hypothesis is that success by one WE can be demonstrated to other WEs and in turn they will adopt/replicate. Four demonstration areas, one in each RWE, were selected to be model supply service areas where the management plans and tools could be successfully implemented. The selection of demonstration areas in each WE to focus LWP funding and TA was an effective strategy. It allowed, contractually and conceptually, the integration of all the project activities, including physical improvements, metering, improved system operation and maintenance (O&M), improved customer service, and improved billing in one area to show and evaluate the potential for achievement when proper resources and training are provided.

Construction

Forty percent of the LWP budget is for construction. Of 19 projects, 3 have been completed, 3 are under construction, 1 is under tender, and 12 are under design. Six of eight design contracts were delayed. Consequently, start-up of construction for all six construction projects that are completed or under construction was late. LWP is still planning for all construction to be completed before end of project (EOP) (September 2020). The one-year liability period for the construction is not planned for completion during LOP and will be turned over to the RWEs to finalize. LWP has a very effective quality assurance/quality control (QA/QC) program that results in good designs and good construction but comes with a cost in time. Even if there are no delays in completing the remaining designs, tender process, and construction, it may be necessary to extend LOP to complete all training and testing of management issues related to demonstration projects.

Management plans and tools

Business plans were well done but difficult for the RWEs to implement because of limitations in funding and qualified staff. The decision to introduce risk management plans as a supplement to the business plans was well received by the RWEs. Continued support of the ERP software as a financial planning and management tool was a good decision for several reasons. It was installed under previous USAID projects at all RWEs except North Lebanon Water Establishment (NLWE). Although it is used to varying degrees, the RWEs have adopted it as the core for their financial and management systems. However, without follow-up support after EOP, many of the RWEs may not have enough confidence or trained staff to implement the ERP as designed.

RWEs have greatly benefited from the financial and performance audits and GIS-based asset valuation. Because of collaboration with LWP, several activities, such as GIS and customer service support, were taken up by other donors. The demonstration areas were selected to reduce nonrevenue water, which required completing the construction of a closed physical water supply system with installed meters and introducing water demand management (WDM). Because of the delayed status of the construction, completion of the planned WDM activities and adaptation by the RWEs within LOP will require special effort. The RWEs and LRA recognized the value of the WQAP and water security analysis (WSA) and are using them to try to solicit donor funds. LWP has made a good effort to support irrigation activities through the Water Resources Conservation/Protection and grants program in various geographic locations with limited resources. It is unlikely, though, that the Bekaa Water Establishment (BWE) will be able to implement the irrigation master plan under preparation by LWP without donor support. Although it is their mandate, RWEs all insisted that they require proper staffing and funding before they will officially

take over any new wastewater treatment facilities. Several of the conservation/protection activities were small and had low budgets, but together they provided an effective framework for promoting water conservation and efficiency.

Training

The training provided through LWP has been well structured and well received. LWP has trained more than 837 individuals (31 percent female) with 46 training courses and 217 training days. For the RWEs, the female ratio is 43 percent. The certification training provided through Arab Countries Water Utilities Association (ACWUA) received high praise from the RWEs. Because MOEW with French Development Agency donor support is proposing to establish a water training center, LWP has decided not to continue independent efforts to institutionalize the certification program.

QUESTION 3B (CIVIC ENGAGEMENT)

A review of the LWP grants program shows that LWP has made a major effort to establish a diverse and wide-ranging grants program covering communities, agriculture, and industry and including innovation and research grants, issuing more than 32 grants, with a cap of \$1.2 million. The activities are small in budget (less than \$200,000 to non-U.S. organizations), but together they provide an effective foundation for improving water conservation and efficiency.

Media coverage to date has been substantial, exceeding the LOP total target of 114,000 persons by more than 1,000 percent. LWP has conducted six campaigns, reaching more than 1.174 million people, and presented 26 videos, reaching 300,000 people. LWP has three posted press releases and had press coverage for 21 major events. Final customer surveys will not be conducted until Year 5; therefore, it is difficult to measure the actual benefits of the campaigns.

QUESTION 3C (PRIVATE SECTOR)

LWP has prepared water-specific tender documents for PPPs and is working with RWEs and other donors to identify and promote potential projects. Interest and support for PPPs varies among the RWE DGs. There is optimism that the new PPP law (2017) will help encourage PPPs in the water sector. Several of the RWEs have initiated efforts to involve private sector financial entities in the customer billing process. LWP has used its grants program with the private sector to promote water conservation and water efficiency in a wide range of areas that include industry, agriculture, technology, and schools. The water stewardship program with the commercial sector has also helped to promote water conservation and highlight LWP's water program.

QUESTION 4 (EXTERNAL FACTORS AFFECTING PERFORMANCE)

The LWP Table Overcoming Constraints/Risks (LWP Year 4 workplan) indicates no country/regional trends that will have major effects on LWP's performance and hypothesis. LWP has identified factors they believe hinder the project's potential to achieve its objectives and has prepared the workplan to address those that are within the performance work statement. These include i) lack of RWE capacity, which limits service delivery and impedes utility effectiveness; ii) RWE funding constraints leading to limited or short-sighted investments in infrastructure and water quality; iii) lack of citizen awareness of their rights and responsibilities with respect to the water sector, contributing to limited legitimacy of public utilities; and iv) shocks that have overburdened Lebanon's already strained water systems (i.e., influx of Syrian refugees). LWP is working closely and effectively with the new RWE DGs and donors to mitigate any external issues that occur.

QUESTION 5 (INTERNAL FACTORS AFFECTING PERFORMANCE)

Internal factors contributing to the achievement of LWP objectives include i) involvement of a USAID architectural and engineering (A&E) team for design and construction oversight, which ensured proper QA/QC; ii) well-qualified LWP technical teams; iii) experienced and engaged LWP management teams; iv) utility coordinators assigned to each RWE to coordinate and monitor LWP activities onsite; v) subcontracts with a broad range of work requirements (i.e., assessments, training, outreach, and GIS); vi) a close partnership between USAID and LWP; and vii) LWP's internal ERP design team's responsiveness to RWE needs in tailoring ERP to meet individual WE requirements.

Internal factors contributing to the possible nonachievement of LWP EOP objectives include delays in design and corresponding delays in construction.

QUESTION 6 (INDICATIONS OF SUSTAINABILITY)

There are numerous indicators that LWP initiatives are likely to be sustained. LWP's sustainability table, prepared for this evaluation, shows that LWP has tried to build in mechanisms for sustainability in all their activities. The commitment to the RWEs and support of LWP by other donors such as the EU, UNICEF, and the World Bank indicate that the activities implemented under the project are sustainable. LWP is working closely with RWEs, providing training, documentation, and handholding for its activities. Because of staffing issues, funding constraints, and differing RWE priorities, it is difficult to predict the degree and extent of the sustainability. LWP has demonstrated that the private sector is willing to take initiative in marketing water conservation and efficiency technologies on their own. Using what they have learned under LWP, several NGOs/CSOs have been able to attract funding outside LWP. Use of regional water expertise, such as American University of Beirut (AUB) and ACWUA, has expanded the resource pool available to support the water sector.

QUESTION 7 (GENDER INTEGRATION)

LWP's gender strategy shows that gender has been included and implemented as planned. LWP has mainstreamed and implemented gender throughout all its planned activities, evidenced by the high percentage of females participating in the RWE training (43 percent) and the successful involvement of a women's cooperative, Atayeb Al Rif (Rural Delights), in the grants program.

RECOMMENDATIONS⁵

Needed to Reach LWP Targets

Question 3a (Improving RWEs)

1. Consider extending LWP to complete all training and testing of management issues related to demonstration projects **(USAID)**.
2. Prioritize a closed system subzone for demonstration construction in each WE that can be completed as soon as possible so that WDM can begin **(LWP)**.
3. Get a commitment from each WE on which ERP modules they will implement within the next year. Prepare a revised action plan to make sure these modules are installed, working properly, and fully used by RWE staff before the EOP **(LWP/RWEs)**.

⁵ Suggested organization to carry out recommendation follows recommendation in parenthesis—for example, (LWP).

4. Set a reasonable target on finalizing asset valuation survey data that is acceptable to South Lebanon Water Establishment (SLWE), NLWE, and the LWP subcontractor **(LWP)**.
5. Lead GIS-ERP integration in the WEs where ArcGIS Server is already installed and running. The main concern is to have a unique coding system used across the two systems **(LWP/Donor Implementing Partners [IPs])**.
6. Follow up with RWEs, GVC-supported GIS units, and UNICEF to make sure asset and customer data bases are put into the GIS **(LWP/RWEs/GVC)**.
7. Continue to work with donors to ensure their activities complement and support LWP **(USAID/Donors)**.
8. Adjust and align donor and LWP workplans, particularly on GIS, WDM, ERP, and the customer service and communication activities **(USAID/Donors/RWEs/LWP/Donor IPs)**.
9. Assist RWEs/LRA in securing funding to implement WQAP/WSA recommendations **(USAID/LWP/Donors/RWEs/LRA)**.

Question 3b (Civic Engagement)

10. Follow up with grantees to evaluate grant activity results **(LWP/SI)**.
11. Follow up with grantees to help them find additional funding or to promote their products **(LWP/USAID/Donors)**.

Question 3c (Private Sector)

12. Continue working with RWEs, donors, and the private sector to move PPPs to the next step of identifying funds and tendering at least one PPP project **(LWP/USAID/Donors/RWEs)**.
13. Continue to work with the stewardship companies and highlight their support whenever possible, perhaps through a conference or workshop **(LWP)**.

Question 4 (External Factors Affecting Performance)

14. Continue to work closely with USAID, RWEs, and donors to ensure close collaboration to address external factors that may arise. In addition to the informal and/or regular meetings currently conducted, RWEs might hold formal monthly meetings and joint workshops, and donors and their implementers might hold formal quarterly meetings and workshops **(LWP/RWEs/USAID/Donors/Donor IPs)**.

Question 6 (Indications of Sustainability)

15. Initiate work on a comprehensive EOP sustainability plan with USAID, RWEs, and other donors for the key activities before the end of Year 4 **(LWP)**.
16. Finalize sustainability plan six months before EOP **(LWP/RWEs/USAID/Donors/Donor IPs)**.
17. Follow up with the RWEs to ensure that GIS and ERP licensing fees are incorporated into their annual budgets **(LWP/RWEs)**.
18. Ask DGs to designate key RWE staff responsible for each LWP activity. This should be done immediately for ERP **(LWP/RWEs/USAID)**.
19. Continue working closely with RWEs to establish a suitable, sustainable structure to service and maintain ERP after EOP **(LWP/RWEs)**.
20. Ensure trusted local consultants are identified and mechanisms are in place so the consultants can continue to advise RWEs after project completion **(LWP/RWEs)**.
21. Ensure RWEs are informed of LWP Year 4 and participate in Year 5 workplan activities **(LWP)**.

22. Promote and support USAID efforts to include follow-up support to water sector in USAID CDCS 2019–2023 **(LWP/USAID/SI)**.

Question 7 (Gender Integration)

23. Help set up a gender focal point at each RWE **(LWP/RWEs/USAID/Donors)**.
24. Continue to ensure gender is considered in all training **(LWP)**.
25. Help identify qualified RWE female staff to be assigned as key staff responsible for coordinating various LWP activities **(LWP/RWEs)**.
26. Encourage female representation on the RWE/LWP task committees by identifying and recommending qualified candidates to the RWE DGs **(LWP/RWEs)**.

Suggested Midcourse Corrections

Question 3a (Improving RWEs)

27. Complete designs and tender documents for all projects, but do not start those that cannot be completed before EOP, such as the sanitary wetlands projects **(LWP/USAID)**.
28. Consider ways to increase effort on the ERP, such as hiring additional LWP technical assistance staff, persuading DGs to officially appoint a WE staff member full time to coordinate ERP activities, and organizing a formal ERP unit in each RWE **(LWP)**.
29. Consider ways to accelerate implementation of the WDM component in the SLWE, NLWE, and BMLWE demonstration areas, such as identifying and completing construction and installing meters in a subzone in each demonstration area as soon as possible; preparing the WDM and nonrevenue water model for the subzone; identifying and training personnel from all relevant sections—i.e., production, networks and distribution, and billing and customer service—on WDM and the nonrevenue water model **(LWP/RWEs)**.

Suggested Additional Assessments

30. Consider adding a final EOP institutional appraisal of RWEs **(LWP)**.
31. Consider conducting a final EOP evaluation survey of private sector initiatives carried out under the project, including the grants and water stewardship programs **(LWP)**.
32. Consider holding an EOP round table with major stakeholders to present work accomplished under LWP and solicit ideas for a new project **(LWP/USAID)**.

INTRODUCTION

PROJECT DESCRIPTION

The Lebanon Water Project (LWP) is a \$65 million activity with a performance period from September 2015 to September 2020, awarded by the United States Agency for International Development (USAID) and implemented by DAI Global LLC (DAI).

LWP aims to increase reliable and sustainable access to water for Lebanese citizens; improve water management practices; enhance the efficiency and sustainability of public water utilities; and, whenever practical and feasible, respond to water issues arising from the influx of Syrian refugees. LWP provides technical and capital assistance to relevant stakeholders and counterparts to enhance water sector performance in Lebanon. LWP promotes better water governance to help ensure long-term preservation of Lebanon's water resources, including potable water, wastewater, and irrigation.

LWP builds on previous USAID-funded water development projects—Litani River Basin Management Support (LRBMS), Lebanon Water Policy Program, Lebanon Water and Wastewater Sector Support (LWWSS), and Water Infrastructure Support Enhancement (WISE)—to achieve its objective to improve water governance and protection of the public water sector.

LWP works in close coordination with the regional water establishments (RWEs) and Litani River Authority (LRA). Demonstration areas have been identified with the RWEs to focus major infrastructure work and complementary institutional development and capacity building activities at the corresponding RWEs. These include four cazas (districts), Jezzine in South Lebanon Water Establishment (SLWE), Metn in Beirut Mount Lebanon Water Establishment (BMLWE), Zahle in the Bekaa Water Establishment (BWE), and Koura in North Lebanon Water Establishment (NLWE). LWP also coordinates with local authorities and institutions, local nongovernmental organizations (NGOs), farmer cooperatives, and industries to identify water conservation and protection solutions in other targeted areas. A map showing the extent of LWP activities is shown in **Figure 1: LWP Activity Map**.

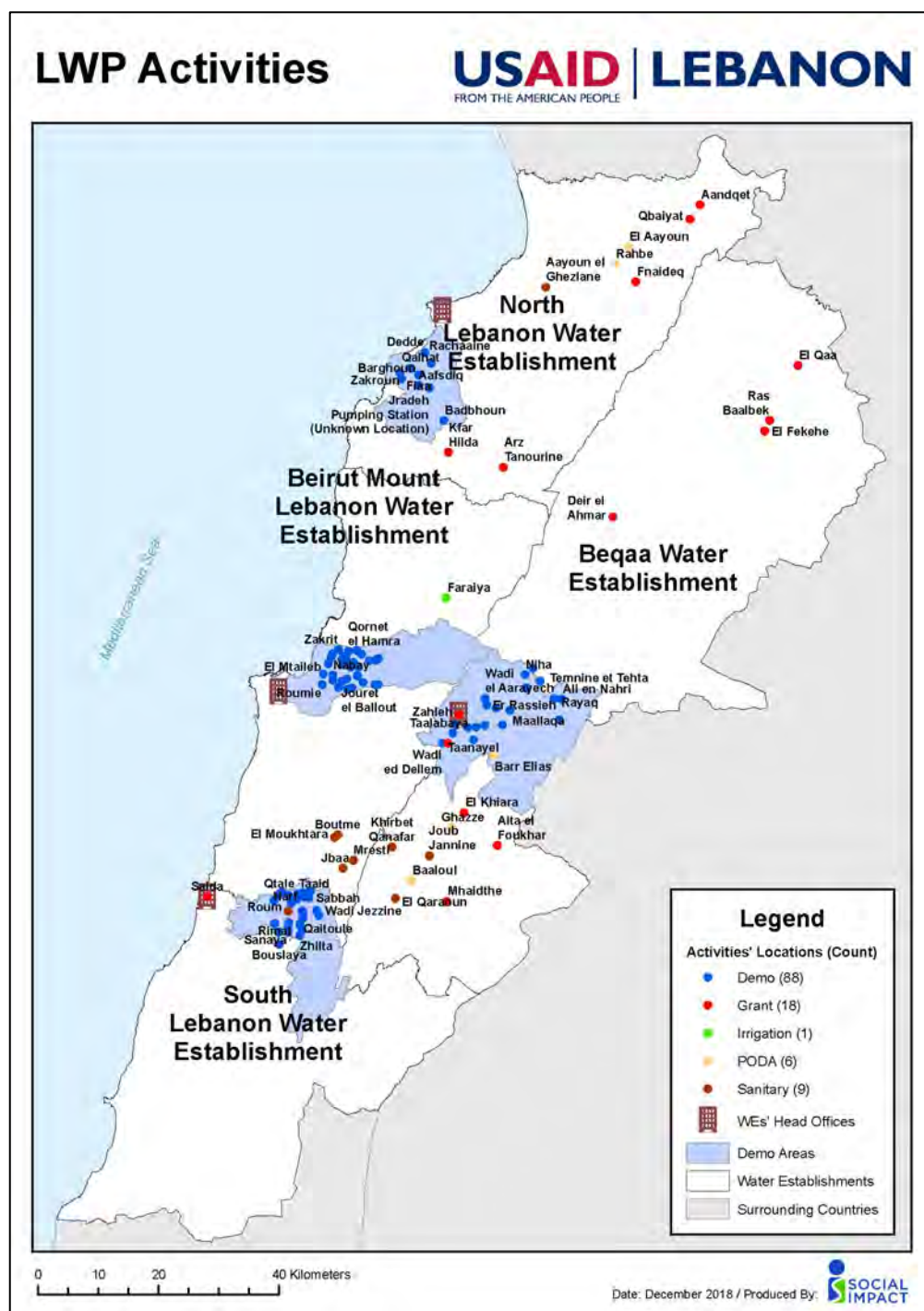
PROBLEM STATEMENT

Even though Lebanon enjoys relatively abundant rainfall and natural water resources, it is plagued by serious problems related to lack of water availability, unsustainable water usage, and insufficient wastewater treatment.

Providing clean, reliable water is a priority in Lebanon. Insufficient infrastructure for water storage, rain harvesting, and water reuse is contributing to an overall deficient water supply while demand continues to grow. Inadequate collection and treatment of wastewater, inefficient use of irrigation water by farmers, and high rates of nonrevenue water are compounding the problem. Water and wastewater infrastructure are outdated and vastly inadequate. Currently, only 25 percent of all Lebanon households and businesses have access to public water service delivery seven days a week. Potable water networks cover around 80 percent nationwide (among the highest in the region), but more than 50 percent of these networks are past their useful life, resulting in frequent breakdowns, leaks, and financial losses. Water supply service is provided on average for approximately nine hours a day but is as low as three hours a day in some locations. Water utilities have paid virtually no attention to wastewater and irrigation and, although Lebanon's wastewater network covers 60 percent of the country, less than 10 percent is properly treated. The remaining 90+ percent is generally discharged directly without treatment, severely polluting ground and surface water resources. Surface water resources are heavily exploited, have limited storage, and lack

sufficient environmental protection. There is intense stress on groundwater, which is unsustainably withdrawn to meet ever-increasing demands.⁶

Figure 1: LWP Activity Map



⁶ USAID Lebanon Water and Wastewater Sector Assessment – 2014 (September 2014)

Water utilities usually operate in financial deficit because of the very low percentage of customer-metered connections (approximately 10 percent nationwide), the low percentage of billing and collection, and the lack of a proper tariff strategy. Gaps in the legal/regulatory framework, the lack of sector reform, the high percentage of nonrevenue water, and the lack of a sense of stewardship at the citizen level have entrapped the water sector in a vicious cycle.⁷

Citizens have lost faith in the capacity of the water utilities and local municipalities to provide proper services and are reluctant to pay their water bills. Citizens have resorted to other means and methods of securing potable water and disposing of wastewater that harm the environment and health of citizens.

The private sector has played a very limited role in water and wastewater services delivery.⁸ Lebanon recently ratified Law 48/2017 Regulating Public-Private Partnerships (PPPs). This law should encourage PPPs in the water sector.

The Syrian crisis that started in March 2011 has added yet another stress to the already fragile water and wastewater sector. The number of Syrian refugees in Lebanon is more than 1.5 million (40 percent of Lebanon's 4.1 million pre-crisis population). This refugee influx has seriously affected all Lebanon service sectors.

PROJECT DESIGN

LWP aims to improve water governance and protection to ensure reliable and sustainable access to water in Lebanon by building the service delivery and resource management capacity of the five public utilities, advancing civic engagement in water management, and improving citizen perception of water utilities as providing a necessary and valuable service.

LWP provides targeted interventions to achieve three results: i) improved service delivery and resource management capacity of the five public water utilities, ii) improved civic engagement in water management and citizen perception of water utilities as providing a necessary and valuable service, and iii) improved private sector involvement in water management.

The Lebanon CDCS development objectives (DOs) and intermediate results (IRs) that LWP contributes to are as follows:

- DOI: Improved capacity of the public sector in providing transparent, quality services across Lebanon
 - o IR 1.1: Enhanced competitiveness that expands micro-, small, and medium-size enterprises
 - o IR 1.2: Increased availability of water-related public services for all in Lebanon
 - Sub-IR 1.2.1: Increased water management efficiency
 - Sub-IR 1.2.2: Improved water service infrastructure
 - o IR 1.3: Improved governance in addressing citizen needs in public service delivery
 - Sub-IR 1.3.1: More capable municipalities working inclusively with citizens to effectively accomplish local development objectives
 - o IR 1.4: Strengthened civil society contributing effectively to participatory and democratic governance

⁷ USAID RFTOP No.SOL-268-15-000002 Lebanon Water Project (LWP), 06/11/2015

⁸ *ibid.*

- Sub-IR 1.4.1: Citizen concerns increasingly addressed through civil society organization initiatives

LWP will achieve this objective by employing a strategy that brings the public sector, the private sector, and civil society together to conserve and improve water resource management. The strategy focuses on improving public water utility capacity, engaging citizens in communicating with public water entities, and promoting citizen behavioral changes to conserve water and protect water quality through media campaigns. Concurrently, LWP will implement activities to increase private sector engagement in finding solutions to water service delivery and water quality problems through partnerships with the public water entities.

Results A: Improved service delivery and resource management capacity of the five public water utilities. To achieve Results A, LWP will strengthen the managerial and operational functions of the water entities while providing related upgrades to their infrastructure. The project will support the Government of Lebanon's newly developed water strategy, which boosts the role of these RWEs and LRA as the legitimate entities to provide efficient services to the population.

Results B: Improved civic engagement in water management and citizen perception of water utilities as providing a necessary and valuable service. To achieve Results B, LWP will bolster the legitimacy of the RWEs and LRA by engaging citizens, local authorities, and the commercial sector to improve their understanding and support for steps to improve water management and delivery of water and wastewater services by the water utilities and municipal governments. LWP will also employ a communications strategy to build awareness of water use behavior and to engage civic society in water conservation and management.

Results C: Improved private sector involvement in water management. To achieve Results C, LWP will support and mediate pilot private sector partnerships to improve water and wastewater management, leverage the funding of innovative water conservation technologies, and improve water use awareness. Activities under Results C will be crosscutting along Results A and Results B, with overlapping outcomes such as more customers who pay bills, less nonrevenue water, and less wasteful uses of water.

DEVELOPMENT HYPOTHESIS

LWP is based on the following theory of change: If LWP can improve public water utility service delivery and resource management capacity, advance civic engagement in water management, improve citizen perception of water utilities as providing a necessary and valuable service, and expand private sector involvement in water management, LWP will be able to improve water governance and protection to ensure reliable and sustainable access to water.

CRITICAL ASSUMPTIONS

Achieving LWP objectives depends on several assumptions concerning the Lebanese political, security, and institutional context. The below factors were defined by LWP as critical assumptions⁹ that could have major effects on the achievement of the project's objectives:

Assumption 1: The security situation in Lebanon does not significantly change.

Assumption 2: RWEs and LRA are willing participants in the project.

⁹ Activity Critical Assumptions (LWP M&E Plan V2, May 2017)

Assumption 3: Civil society and the private sector are willing partners in collaboration for project activities

Assumption 4: International donors are coordinating and aligning their activities with each other and with RWEs and LRA.

EVALUATION PURPOSE, SCOPE, AND METHODOLOGY

EVALUATION PURPOSE AND USE

This LWP midterm performance evaluation, prepared by Social Impact, Inc. (SI), aims to validate LWP's theory of change and results framework and provide directions for the remainder of the activity. This evaluation uses the knowledge gained from LWP implementation to date—including monitoring data, information about project context, and other sources—to recommend adjustments to interventions and approaches as needed. LWP has completed Year 3 of a five-year project. The evaluation covers the period from September 2015 to September 2018 (through Year 3). Evaluation data were collected and reported through September 30, 2018.

This evaluation is intended for USAID/Lebanon; DAI Global, LLC (prime implementing partner); and others at the discretion of USAID/Lebanon. The evaluation will provide USAID/Lebanon with concise, actionable, evidence-based recommendations for future program design or program improvement. The report from this evaluation will become publicly available on the Development Experience Clearinghouse.

EVALUATION QUESTIONS

USAID/Lebanon provided a list of questions as part of their Statement of Objectives for the LWP Year 3 Evaluation Assessment (July 7, 2018). These questions have been incorporated into seven evaluation questions addressing relevance (two questions), effectiveness (three questions), sustainability (one question), and gender integration (one question) in accordance with the recommendations provided by the relevant “USAID How-To Note”¹⁰ and by the SI “Evaluation, Quality, Use, and Impact (EQUI) system.” This was discussed during the evaluation team in-briefing with USAID on November 13, 2018.

The evaluation questions for the LWP midterm performance evaluation are as follows:

Relevance

1. To what extent are LWP objectives appropriate for meeting the Country Development Cooperation Strategy (CDCS) development objective?
2. To what extent are LWP objectives appropriate for meeting beneficiary (RWEs and water users) needs? Are the activity assumptions still valid?

Effectiveness

3. To what extent are LWP interventions progressing toward meeting the activity objectives as stated in the contract?
 - A. Are the construction activities, management plans and tools, and WE staff trainings improving the service delivery and resource management capacity of the public water utilities?
 - B. Are the nongovernmental organization (NGO) and civil society organization (CSO) grants and implemented awareness and media campaigns contributing to the advancing civic engagement in water management and improving citizen perception of water utilities' role in providing a necessary and valuable service?

¹⁰ USAID (2016). How-To Note: Evaluation Statement of Work. Program Cycle Guidance. [Online] Available from: <https://usaidlearninglab.org/library/how-note-evaluation-statement-work>

- C. Are the initiatives implemented with private companies improving private sector involvement in water management?
4. Are there any external contextual factors (i.e., country/regional trends) that may affect the activity's performance and hypothesis? If factors are identified to hinder the activity's potential to achieve its objective, how those can these factors be mitigated/addressed?
5. What internal factors are contributing to the achievement (or nonachievement) of the activity's objective?

Sustainability

6. Are there any indications that LWP initiatives are likely to be sustained following the end of the activity? Are there mechanisms in place to ensure that the VE will maintain the systems put in place by LWP and that the water savings techniques introduced by the Activity will continue to be used by the water users?

Gender Integration

7. To which extent recommendations generated by the LWP Gender Strategy were incorporated in LWP workplan and implemented throughout the activities so far?

Recommendations

The evaluation provides recommendations on the following:

1. What is needed to reach the planned LWP targets?
2. What midcourse corrections are needed (if applicable)?
3. Are any additional assessments required to provide further information for the decision making on this activity?

METHODOLOGY

The evaluation was carried out by an SI evaluation team (ET) consisting of one international expert (the team leader) and one local evaluation specialist. The Performance Management and Support Program for Lebanon (PMSPL) II chief of party was assigned as the technical supervisor. Other members of the SI PMSPL II Lebanon office provided inputs as required on gender, GIS, and construction activities. An SI home office project director was assigned to ensure all deliverables complied with SI standards and practices.

The evaluation used mixed methods to collect and analyze primary and secondary data. Secondary data were collected by reviewing project documentation, workplans, progress reports, technical reports, and satisfaction surveys (**Annex 2: List of Documents and Sources Reviewed**). Primary data were collected at selected project sites through semi-structured key informant interviews (KIs) with USAID Lebanon Mission staff, LWP project staff, the four RWEs, LRA, project beneficiaries, private sector partners, and other stakeholders; a focus group discussion (FGD) with a grantee NGO; direct onsite observation; and additional KIs/FGDs as needed. An evaluation matrix was used for data analysis to ensure that all data sources were considered. Triangulation of data was used to answer each question with more validity. In most cases the USAID performance work statement (PWS), LWP annual reports, LWP workplans, and other LWP reports were used as the basis for evaluating project progress. The activities and related progress were discussed in detail with LWP staff and then confirmed through field and office visits to stakeholders and partners.

Fieldwork took place between November 5 and December 7, 2018.

The ET held 37 KIIs with more than 50 persons (**Table 1: List of Entities Interviewed in KIIs**).

Several meetings were held with the USAID contracting officer's representative, including an in-briefing, midterm briefing, and out-briefing. For the LWP team, the ET met with the LWP chief of party, the two deputy chiefs of party, seven LWP technical teams, the M&E team, the quality assurance and gender specialist, the environmental review officer, and each of the five utility coordinators assigned to the RWEs and LRA. For the RWEs and LRA, the ET visited each of the five main offices and met with each of the directors general (DGs). The ET also met with three of the RWE financial directors (SLWE, NLWE, BMLWE) and three of the head of station/projects (BWE, BMLWE, NLWE). The ET also met with UNICEF, the EU implementing partner Gruppo di Volontariato Civile (GVC), and the World Bank-funded finance officer seconded to BWE.

#	Stakeholders	# KII (individuals)
1	USAID	1 (1)
2	LWP	13 (22)
3	RWE DGs	5 (5)
4	RWE Staff	12 (14)
5	Construction QA/QC	1 (6)
6	Contractors	1 (2)
7	Donors	3 (3)
8	Municipal WWTP Operator	1 (1)
	Total	37 (54)

The ET made three site visits: i) Chabrouh Irrigation System (BMLWE), Chabrouh Dam, Faraya; ii) Haouch El Oumara Demo Zone (BWE), Zahle; and iii) Jezzine Demo Project (SLWE), Jezzine. During the site visit to Zahle, the ET visited the smart meter and household meter installation sites and the head of pump station office. During the Jezzine visit, the ET visited a construction site, the Jezzine SLWE branch office, and the Jezzine Complex pump station.

An FGD was conducted with the grantee Atayeb Al Rif (Rural Delights) Cooperative at their Beirut center.

See **Annex 3: List of People Consulted** and **Annex 4: Data Collection Schedule** for additional details on the places visited and people consulted for this evaluation.

LIMITATIONS AND BIASES

The ET was aware of several noteworthy limitations and biases related to its data collection and analysis:

- **Recall Bias:** Recall bias is a common evaluation issue. All the RWE and LRA DGs are new. Several were not fully aware of all LWP past efforts. A few LWP beneficiaries responded to questions posed by the ET with answers that blended their experiences into a composite memory. Respondents often referred to support from previous USAID projects (LWWSS, LRBMS, WISE) and other donors, such as EU-established GIS units, UNICEF-provided communications support, and World Bank financial strengthening support at BWE, and did not distinguish them as separate activities. The ET mitigated this bias by asking about specific activities to ensure that those activities were part of the LWP program. Cross-checking was done with the LWP team.
- **Response Bias:** Response bias is the risk that key informants may be motivated to provide responses that would be considered socially desirable or influential in obtaining donor support. Some informants phrase their responses to gain continued USAID support or to highlight their independence from donor support. This bias was mitigated by asking about specific activities. For example, some respondents provided broadly positive remarks about USAID training and stated they would like more support from USAID. The ET asked follow-up questions on the training, how it benefited the organization, and how it was being used. LWP utility coordinators accompanied the ET and were present at all DG KIIs.

- **Selection Bias:** Selection bias is an inherent risk when implementers facilitate contact with project stakeholders. The ET was fortunate and had no problem meeting with requested stakeholders. Because the RWEs are the priority LWP stakeholder, much of the ET's time was spent with the RWEs. The ET did not focus on water users because the planned improvements to the demonstration areas, project areas outside the demonstration areas, and the sanitary projects have not been completed and no actual benefits have been achieved. The ET did talk to several donors, a grantee, and a municipal employee. Respondents who valued the program or saw the evaluation as an opportunity for informing USAID of certain positions were willing to spend more time in an interview. However, all DGs and their staff were generous with their time and willing to answer all questions. All the DGs involved their staff directly in the meetings or set up follow-up meetings to ensure all the ET questions were answered.
- **Timing:** Because this is a midterm performance evaluation, many activities are ongoing, have not started, or build on each other (construction, management tools, training, awareness). Project benefits to users have not occurred in the areas where construction is ongoing or has not started. The evaluation of actual benefits to users in these areas will require the EOP "Endline Citizen Perception and Satisfaction Survey" planned for Year 5.

FINDINGS AND CONCLUSIONS

QUESTION I

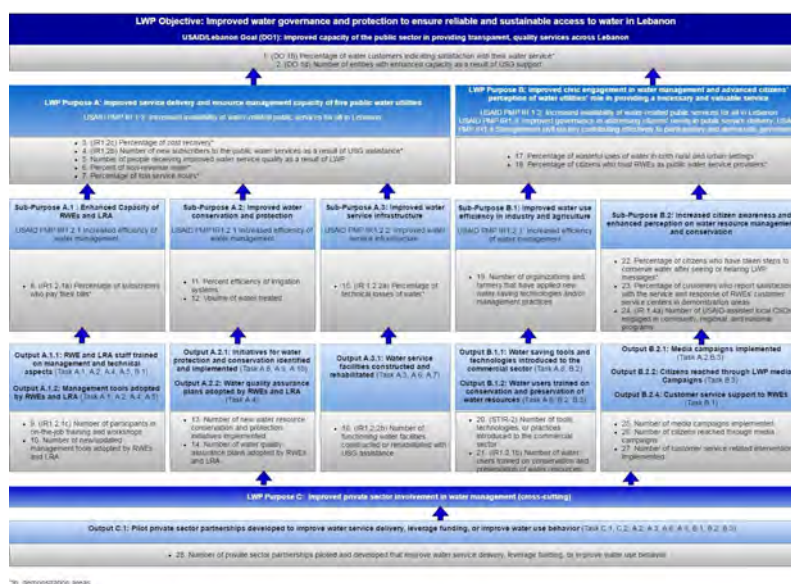
To what extent are LWP objectives appropriate for meeting the CDCS development objective?

FINDINGS

LWP objectives presented in the contract between USAID and DAI¹¹ are linked directly to USAID/Lebanon's CDCS 2014–2018 development objectives shown in **Figure 2: Lebanon Water Project Results Framework Linked to USAID CDCS Indicators**.¹²

The project objective “Improved water governance and protection to ensure reliable and sustainable access to water in Lebanon” is linked to USAID/Lebanon's DO 1: Improved capacity of the public sector in providing transparent, quality services across Lebanon. LWP's “Purpose A: Improved service delivery and resource management capacity of five public water utilities” contributes specifically to USAID's IR 1.2: Improved availability of water-related public services for all in Lebanon. Subpurposes A.1 and A.2 contribute to USAID's IR 1.2.1: Increased efficiency of water management, and Subpurpose A.3 contributes to IR 1.2.2: Improved water infrastructure.

Figure 2: Lebanon Water Project Results Framework Linked to USAID CDCS Indicators



LWP's “Purpose B: Improved civic engagement in water management and citizen perception of water utilities’ role in providing a necessary and valuable service,” supported by two subpurposes, “Subpurpose B.1: Improved water use efficiency in agriculture and industry” and “Subpurpose B.2, “Increased citizen awareness and enhanced perception of water resource management and conservation,” contributes to IR 1.2: Improved availability of water-related public services for all in Lebanon; IR 1.3: Improved governance in addressing citizen needs in public service delivery; and IR 1.4: Strengthened civil society contributing effectively to participatory and democratic governance.

LWP's Purpose C: Improved private sector involvement in water management, is crosscutting and supports both Purposes A and B.

CONCLUSIONS

LWP objectives are fully appropriate for meeting CDCS development objectives.

¹¹ USAID Contract # AID-268-N-15-00001 IDIQ AID-OAA-I-14-00049 dated 09/30/2015

¹² Source LWP M&E Plan V2, May 2017

QUESTION 2

To what extent are LWP objectives appropriate for meeting beneficiary (RWEs and water-users) needs?

FINDINGS

RWEs: To determine RWE and LRA needs, LWP has conducted numerous assessments, including training needs assessments, GIS assessments, irrigation assessments, infrastructure assessments, and financial and performance audits. LWP has also prepared business, risk management, and water quality assurance plans. KIs by the ET with RWE DGs and staff confirm that LWP objectives are helping to address problem and priority RWE issues. The DGs were all recently appointed in March 2018. During the KIs, several DGs stated that USAID was their most important donor. Several confirmed they were reviewing their programs and developing new strategies and expressed the hope that LWP would support these new strategies. LRA expressed commitment to focus on Litani River pollution control and the desire to be included in any water/wastewater activities that influence water quantity/quality in the Litani River.

Water Users: To understand water user needs in the demonstration areas, LWP carried out a baseline “Citizen Perception and Satisfaction Survey” and assessments of the public potable water networks. For the projects outside the demonstration areas (PODAs), LWP conducted needs assessments involving municipalities, RWEs, and MOEW to determine requirements for communal water services in vulnerable Lebanese communities and those hosting Syrian refugees. To identify sanitary projects, LWP prepared studies on appropriate sanitation solutions and conducted stakeholder consultations with municipalities and RWEs. To meet water user needs in the high-water consumption agriculture and industry sectors, LWP selected through its grants program partner NGOs/CSOs familiar with these sectors. The diversity of activities and interest in programs, such as the Incentive Rebate Program by farmers and the International Organization for Standardization trainings on environmental water management for agriculture producers and industrial manufacturers, further demonstrates LWP efforts to address water user needs of all types and at all levels.

Construction has not been completed for most areas; therefore, actual benefits to the water users in those areas have yet to be realized. LWP will conduct an “Endline Citizen Perception and Satisfaction Survey” in Year 5 to evaluate how well water user needs have been met. However, a review of numerous success stories published by LWP in their progress reports and ET discussions with various stakeholders confirmed how water users have been positively impacted to date by LWP through grants to communities, agriculture, and industry; the water conservation/protection program; and water stewardships with commercial companies.

CONCLUSIONS

LWP objectives are fully appropriate for meeting RWE and water user objectives. The extent to which LWP objectives are meeting water user needs can be only partially assessed at the midterm. Final assessment will require endline surveys.

QUESTION 2A

Are the activity assumptions still valid?¹³

¹³ Activity Critical Assumptions pg. 8, LWP M&E Plan, May 2017

FINDINGS

Assumption 1: The security situation in Lebanon has not changed. BWE estimates that Bekaa has a population of 750,000 Lebanese and between 850,000 and 1.1 million Syrians. The first elections since 2009 were held in May 2018; however, efforts to form the new cabinet led by Prime Minister-designate Saad al-Hariri are still ongoing.¹⁴

Assumption 2: RWEs are strong partners in the project. LRA had backed away from LWP support under the previous DG, but the new DG indicated during the ET KII that he would like to renew the partnership with LWP. LRA's DG stated that he was not included as a full partner in the Litani basin activities. SLWE's new DG mentioned a 'lack of flexibility' on USAID's part in adapting to meet a new strategy. The BMLWE DG indicated during the ET KII that he appreciated the support provided by USAID but was not actively seeking additional donor support.

Assumption 3: Civil society and the private sector have collaborated successfully on numerous project activities, as documented in the LWP progress reports.

Assumption 4: International donors are coordinating and aligning their activities with LWP. International donors and their implementing partners involved in the water sector meet regularly (verified through KIIs with USAID, LWP, a World Bank consultant, UNICEF, and EU implementing partner GVC). Several donors do not have a permanent presence in the country and regularly visit LWP for updates on what is happening in the sector. During the ET visit, LRA commented that better donor coordination is necessary and that donors come to solve problems but become part of the problem—specifically, in relation to coordination on activities in the Litani River basin.

CONCLUSIONS

1. Activity assumptions 1 and 3 are still valid;
2. Activity Assumptions 2 and 4 are still valid as well but require close monitoring. Assuming that RWEs are strong partners and that international donors are coordinating and aligning their activities with LWP, should not be taken for granted.
3. LWP is aware of these risks and is working to ensure the assumptions remain valid.

¹⁴ <https://www.reuters.com/article/us-lebanon-newspaper/lebanese-newspaper-protests-politicians-failure-to-form-government-with-blank-edition-id>

QUESTION 3

To what extent are LWP interventions progressing toward meeting the activity objectives as stated in the contract?

FINDINGS

Findings were compiled primarily from LWP annual reports, LWP annual workplans, and LWP M&E plans. Findings were verified from supplemental information and tables provided by LWP, LWP documentation, KIs with LWP and stakeholders, an FGD with a grantee, and site visits.

Performance Work Statement (PWS): LWP is a deliverable-based contract with deliverables specified under contract Section 2. LWP has a mechanism to adjust PWS activities that are not meeting objectives through a contract modification. The PWS was adjusted with MOD 3 (June 2017). LWP has submitted a modified PWS (Mod 6, November 2018) to adjust deliverables and schedules. The request (November 2018) is proposing a six-month cost extension to LOP to capture the improvements in Demonstration Areas, and to perform data collection activities to determine whether the contract Performance Standards were met.

Budget: The LWP budget (\$65,205,229) has been fully obligated (CLIN001:77 percent; CLIN002:14 percent; CLIN003: 9 percent). At the close of Year 3 with 60 percent of the LOP completed, 39 percent of the budget has been spent (CLIN001: 38 percent; CLIN002: 49 percent; CLIN003: 34 percent). Approximate breakdown by RWEs (KI with LWP, 11/12/18): BWE (8.5 percent); SLWE (30 percent); NLWE (30 percent); BMLWE (30 percent); and LRA (1.5 percent). USAID cut the budgets for LRA and BWE (KI USAID, 11/13/18).

Deliverables: Annual workplans for Years 1–3 included an Appendix A: Deliverables. Annual reports for Years 1 and 2 included an Annex I: Deliverables and Progress Tracker. These annexes were not included in the annual workplan for Year 4 and the annual report for Year 3. LWP did provide a Task Order Deliverable Fee Schedule Year 3 spreadsheet (see **Table 2: Deliverable Status** and **Annex 6: LWP Deliverable Table**) that listed the status of each deliverable. Details on the status of the deliverables were also reviewed using the separate results tables and writeups in the Year 3 annual report and Year 4 annual workplan. As of December 20, 2018, 82 of 141 deliverables are completed, with 59 remaining. Eight of the 59 remaining deliverables are delayed.

Performance Indicators: Year 3 Annual Report Annex A: Monitoring and Evaluation Reporting for End of Year 3 shows the total number of performance indicators as 28. Of 16 indicators that had accumulated targets for Year 3, 15 had been met or exceeded, and 1, #14, is ongoing with three of five water quality assessment plans (WQAPs) completed (see **Annex 7: M&E findings table**).

Table 2: Deliverable Status ¹⁵		
Category	Total	# Deliverable
Original Total	156	
Cancelled/ Combined	15	36, 38, 29, 52, 67, 68, 74, 75, 80, 81, 101, 114, 2, 7.b, 7.c
Completed	82	
Remaining	59	
Submitted (pending approval)	0	
Delayed (accounted for in the remaining)	8	08.b, 34, 35, 37, 62, 60, 91, 105
Added	6	125, 126, 127, 128, 129, 130

CONCLUSIONS

I. LWP has met 58 percent of its deliverables (December 2018).

¹⁵ Source LWP email, dated December 28, 2018, Subject: LWP evaluation - Clarification of some issues

2. LWP is delayed on 6 percent of its deliverables (December 2018)
3. LWP has met 54 percent of its planned LOP performance indicators.
4. LWP has met or exceeded 94 percent of its total accumulated Year 3 performance indicator targets.

QUESTION 3A

Are the construction activities, management plans and tools, and WE staff trainings effectively improving the service delivery and resource management capacity of the public water utilities?

FINDINGS

Question 3a directly relates to LWP Results A. The presentation in this report follows the three themes of Question 3a: construction, management plans and tools, and trainings. The related LWP task order activities are indicated for each of the themes. The LWP Results A tasks are listed below:

- A.1. Strengthen RWE and LRA Planning and Internal Operations Management
- A.2. Improve Billings and Collection
- A.3. Reduce Nonrevenue Water Losses
- A.4. Water Quality Assurance Plans (WQAPs)
- A.5. Training and Capacity Building to Improve Hours of Service
- A.6. Improve Communal Water Service Delivery (PODA)
- A.7. Improve and Expand Water Services for Lebanese Citizens (Demo)
- A.8. Improve the Efficiency of Irrigation Systems in Selected Areas
- A.9. Support the Development of Context-Appropriate Models for Sanitation Service and Sewage Management (Sanitary)
- A.10. Improve Water Resources Conservation/Protection in Litani Basin

USAID/LWP Philosophy: Implementation of LWP activities is customer focused. Each WE is unique and has individual needs. If a WE is not interested in a project activity, it is not required to participate. The hypothesis is that where there is a strong interest, there will be a high chance of success. This success can then be demonstrated to other WEs and they in turn will adopt/replicate.

Utility Coordinators: LWP has utility coordinators assigned and sitting at each RWE to help implement LWP activities. LRA has a utility coordinator assigned and visiting LRA two to three times a week. All RWEs/LRA DGs and staff are working well with the coordinators.

Demonstration Areas: LWP is focusing its efforts on the demonstration area projects. The demonstration areas were selected to be model supply service areas where the LWP management plans and tools could be successfully implemented. The plan is to have closed systems fully metered, 24/7 household water availability, minimum nonrevenue water losses (less than 25 percent), and a high fee collection rate (greater than 85 percent). The demonstration area construction/rehabilitation measures include installation of meters at households and smart meters at sources and networks. The four demonstration areas, one in each WE—Jezzine (SLWE), Metn (BMLWE), Koura (NLWE), and Haouch El Oumara in Zahleh (BWE)—were selected because they covered a large area, required minimal construction/reconstruction to provide 24/7 water delivery, had high water fee payments, had customers willing to use meters, were acceptable as a U.S. government project, and were priority areas for the WEs.

Construction (A3, A6, A7, A9):

Approximately forty percent of the LWP budget is for construction. There are several categories: one project for meters and chlorinators for Zahleh (A3); PODA: six projects outside demonstration areas (A6); three demonstration area projects: Jezzine, Koura, and Metn (A7); and nine sanitary projects: three

wastewater treatment plants, three sewage networks, and three wetlands (two new and one rehabilitation) (A9).

Status (November 26, 2018): Of 19 projects, 3 have been completed, 3 are under construction, 1 is under tender, and 12 are under design. Details are presented in **Table 3: Construction Summary and Annex 8: SI A&E Planned versus Actual Comparison Design.**

Table 3: Construction Summary	
Total contracts	8
Total projects	19
Completed projects	3
Under construction	3
Under tender	1
Under design	12

Design Schedule Planned versus Actual: LWP issued an Indefinite Quantity Contract for design/oversight and selected six engineering firms. Two have first class status. According to LWP team, engineering designs have taken longer than anticipated, and some actual bids were higher than design estimates. Six of eight design contracts were delayed; in some cases, took twice the planned period. Reasons for the delays vary by project and include the need for more detailed assessments, overlap with other MOEW and donor projects, in addition to nature of the multi-layered design review process among the different entities: DAI, USAID's A&E, and USAID.¹⁶ There are three design contracts for the nine sanitary projects and three ongoing NLWE PODA projects. The two wetlands projects will require environmental impact assessment (EIA) approval by the Ministry of Environment and USAID. The EIAs still have not been submitted. According to LWP, this will be the first time the Ministry of Environment will review EIAs for wetlands and this may cause delays.

Construction Schedule Planned versus Actual: Start-up of construction activities is up to 10–11 months late (BWE PODA, Jezzine Demo, Metn Demo) and for Koura demonstration project up to 16 months late and still under tender (as of November 26, 2018). LWP is still planning for all construction activities to be completed before EOP (September 2020); however, as of November 26, 2018, construction had not started in two of the demonstration projects (Metn, Koura), in the three NLWE PODA projects, and in the nine sanitary projects. The construction schedule durations for all projects have been kept the same except for Koura demonstration project, which has been reduced from 19 months to 15 months. The construction tender process originally planned for two to three months appears to be taking up to four months in some cases (Jezzine and Metn demonstration projects). Delays in design completion will affect the completion of six of eight planned contracts (10/19 projects). The remaining two contracts (nine projects) are sanitary projects and are under design. Two of the sanitary projects will require EIAs, which could delay start of construction. The one-year liabilities period for the construction activities is not planned for completion during LOP and will be turned over to the RWEs to finalize. This is similar to what was done under the USAID/WISE project. LWP is requesting a six-month extension to capture the improvements in Demonstration Areas, and to perform data collection activities to determine whether the contract Performance Standards were met. LRA irrigation-related activities on Canal 900 were canceled because of water quality problems in the canal.

Quality Assurance/Quality Control (QA/QC): SI A&E serves as USAID's engineer, providing oversight over the project engineering and construction-related activities on behalf of the USAID contracting officer's representative. SI A&E has a subconsultant that supports them for design and construction QA. All LWP designs are reviewed and verified by the SI A&E team. For construction, LWP has subcontracted the works designer for construction supervision. The LWP utility coordinator and infrastructure team monitor the works. For Jezzine, SLWE has assigned an engineer to work with the LWP utility coordinator to monitor the construction activities. The Jezzine SLWE branch engineer also

¹⁶ Source: Review of Annual Reports; KII with SI A&E team, 11/5/18; KII with LWP team, 11/12/18; KII with USAID, 11/13/18.

monitors the works. Local authorities get involved when permitting and main road construction are needed.

Health and Safety and Environmental Compliance: LWP has set up a good health and safety program with the construction contractors that is strictly enforced. LWP has also established a good environmental compliance program that is properly implemented by the contractors.

Management plans and tools (A1, A2, A3, A4, A8, A10)

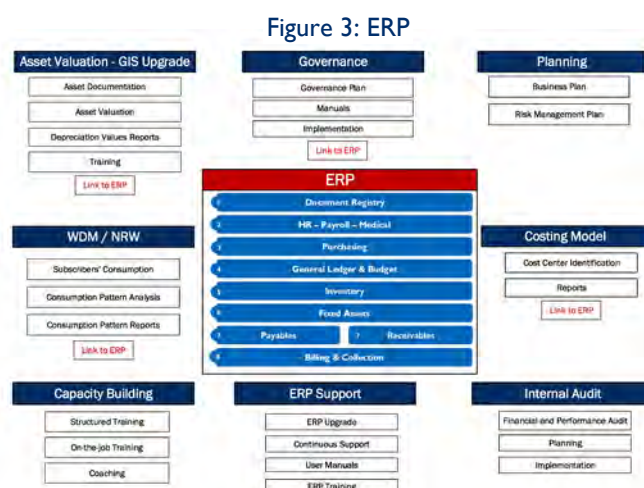
LWP has conducted several assessments and prepared numerous plans and tools to support and guide the RWEs in their work.

Business/Risk Management/Master Planning A1.1: The RWEs (BWE, NLWE, SLWE) prepared business plans (2016–2020). Original plans (2013–2017) were prepared for the RWEs under previous GIZ- and USAID-funded projects. The BMLWE DG opted out of working with LWP and updated his own plan. The RWEs agreed the LWP-prepared business plans were well done. All DGs and LWP agreed that the business plans in their current form were not being used by the RWEs because their limited staff and resources made implementation difficult. It was determined that a risk management plan (RMP) proposed by a consultant, which defines RWE risks and mitigation measures, might be more useful in supporting the LWP governance framework. LWP proposed to replace the business plan deliverable with a new deliverable focused on the RMPs. SLWE was the first to complete the five-year RMP (2017–2022), which identified 50 risks. As a follow-up, the World Bank has selected several items to fund. The RMPs for BWE and NLWE are planned for completion in Year 4. After initial resistance, LRA and BMLWE have shown interest and may also participate.

LWP dropped the preparation of master plans for water and for wastewater. Several RWEs indicated they already had these master plans, so an LRA water quantity monitoring plan for all rivers in Lebanon, a BWE irrigation master plan, and water demand management plans (WDPs) for all demonstration areas were substituted. The LRA water quantity monitoring plan was completed. The BWE irrigation plan is under preparation. The BWE DG commented that the appropriate staff to support the irrigation study was limited. The WDPs are discussed in section A3 on nonrevenue water.

Enterprise Resource Planning (ERP) A1.2: ERP, a flagship activity, is Microsoft's NAV software suite designed for midsize organizations to give managers access to information that enables them to monitor unit operations and track financial and operating performance. The ERP system, currently being implemented by LWP, has nine modules with a module for maintenance management under development, as shown in **Figure 3: ERP**. ERP is installed at all RWEs (see **Annex 9: ERP Implementation Tracker**). The software had been installed under previous USAID projects at SLWE, BWE, BMLWE, and LRA. LRA did not renew its license. The other three WEs did. It was installed by LWP at NLWE in March 2018.

Several new features have been added at the request of the various DGs even though they were outside the project scope (see **Annex 10: LWP Additional Activities Outside Project Scope**). ERP is being used to different degrees at each WE. ERP is being fully used in SLWE with 65 users. NLWE, with 75 users, and BWE, with 55 users, are in different stages of implementation. During the ET visit to BWE, it



was pointed out that the financial reporting module was not working. LWP has agreed to upgrade BWE to ERP Microsoft software version 2018. BWE supports the effort and hopes to have the ERP finalized in 6–10 months. During the ET visit to BMLWE, it was stated that ERP still needs some effort to be complete. BMLWE has its own Excel spreadsheet financial model that it uses in parallel with ERP. BMLWE has also opted to not implement the billing and collection module. NLWE also has its own financial systems. Prior to the installation of ERP, NLWE used software provided under a French assistance program, PIMS-2 for accounting and stock warehouse, and X7 for customer service. NLWE says they will run ERP in parallel with the AFD software for one year. NLWE also indicated they wanted the customer service module connected to GIS and that they considered this a priority for successful implementation of ERP. With French collaboration, it took NLWE two years to fully implement the software.

LWP has a dedicated team of two persons to install, customize, deploy, upgrade, train, and maintain the ERP software. The RWEs cannot support ERP on their own except for BMLWE, which has its own software maintenance support contract. LWP is proposing an ERP support unit jointly funded by all the RWEs after EOP. During an ET visit to BWE, the following suggestions were made concerning ERP: i) hire one more developer, ii) add more WE staff, iii) provide more training, iv) provide good user manuals, and v) make sure the ERP data are clean. It was also suggested that LWP consider hiring a software developer, preferably a company to support ERP not only for regular maintenance but also daily through a call desk or help center.

To better address the issue of improved water governance as a replacement for the governance ERP module, in Year 2 LWP proposed a new governance framework for SLWE and NLWE. Outputs included a governance manual, an organizational plan, and an RMP (see A1.1 above). Governance task committees were formed. The governance manual is currently under review at SLWE and under preparation at NLWE. An organizational plan was prepared for SLWE; however, the new DG requested an update. Hearing of SLWE's experience, BWE mentioned during the ET visit that this was something they were also interested in preparing.

Assets Valuation A1.3: This activity is on track. A standardized asset management manual was prepared for all RWEs. Field mapping of all fixed assets and asset valuation reports were prepared for NLWE and SLWE and converted into GIS databases. At BWE the asset documentation prepared in 2013 was updated. It was integrated into the ERP. On-job-training on GIS and asset valuation was provided. SLWE and NLWE both said that even though the contract was completed, they still had some outstanding comments on the asset data collected by ACE (LWP subcontractor). One WE head of finance stated that the asset management inventory valuation was brought to a recent meeting with MOEW to discuss the budget and because of the asset valuation it looks like the 2019 budget would be approved without modification, which is not usual.

Audits A1.4: It was decided in Year 1 that financial and performance audits would be completed for the utilities that have the staff in place. Therefore, the focus has been on NLWE and SLWE. LWP prepared preliminary audit reports, three-year strategic audit plans, and the annual audit plan for 2018. A financial audit and a performance review were conducted for SLWE for 2015, 2016, and 2017. This was presented in an audit report for 2017. The SLWE head of finance mentioned that before ERP the audit was delayed one to two years, with details always incomplete. Now it is fully implemented. LWP hopes to do the same with NLWE so they can have an accurate opening balance starting in 2019.

GIS A1.5: LWP has met its GIS deliverables. It conducted a GIS assessment for three RWEs (BWE, NLWE, SLWE) and invested in the purchase, licensing, and configuration of GIS software and servers for the same three RWEs. The LWP server equipment and GIS licensing will serve as the basis for forming the EU-funded GIS units for the three RWEs. Asset data were integrated into the GIS systems and on-

job-training was provided to SLWE and NLWE. For LRA, LWP gave first-level GIS training, helped install a gauging station GIS, prepared a water quality monitoring station map, and conducted an IT assessment.

The SLWE GIS server has been shut down for six months waiting for the new DG's plan to establish the new GIS unit and eventually deliver the server to that unit. Currently there is no link between the existing SLWE ERP and GIS. NLWE ArcGIS Online application has not been used beyond the given training. LWP did integrate the GIS nonrevenue water model data developed for Haouch El Oumara into the BWE ERP to help monitor subscriber behavior. It is operational.

Improving Billing and Collection A.2: LWP focus is on the demonstration areas. LWP has conducted many activities, such as introducing handheld bill collection devices and establishing potential partnership agreements with agencies that offer bill payment services to support this task. UNICEF has a mandate to prepare a customer service center and a registration database that covers all the subscribers in BWE (87,000); SLWE (150,000); and NLWE (160,000). UNICEF will not get involved with the actual billing.

Nonrevenue Water A.3: Reducing nonrevenue water is at the heart of LWP activities. The focus is on the four demonstration areas. Water demand management (WDM), a key component of this activity, is the basis for developing cost centers, nonrevenue water savings, establishing consumption-based tariffs, and ERP data integration. WDM implementation requires a closed system with installed meters at sources, key network locations, and households. WDM involves measuring and managing water quantity/quality as well as financial inflows/outflows through the calculation of water and financial balances. Ideally it also requires a rehabilitated network with minimum leakage. The WDM concept was effectively modeled

Figure 4: WDM for Haouch El Oumara



in the BWE demonstration area of Haouch El Oumara during Year 3, shown in **Figure 4: WDM for Haouch El Oumara**. New source and district meters were installed in Haouch El Oumara area in Year 3 Qtr.I. Training was given to staff in November 2017. The nonrevenue water model was completed in June 2018. BWE assigned an employee to be responsible for the model. WDM activities are scheduled through February 2019. In BWE WDM is being implemented with the head of station (Production and Reservoir Section), not the O&M/Network Distribution Section. According to the BWE staff working with LWP on WDM, it could take BWE two years to get WDM fully up and running. The current WDM plans for the three other demonstration areas are scheduled for completion in August 2020. Initially (LWP Year I workplan) LWP had mentioned procurement of leak detection equipment and training on its use. This was not done. Instead it is being done through the EU implementing partner GVC.

Water Quality Assurance Plans (WQAP) A.4: The WQAP has been combined with a water security analysis (WSA). The WQAP deals with water quality and the WSA, based on the international Global Water Partnership indicators modified for Lebanon, provides a tool for addressing water threats with future mitigation measures. The effort is being carried out through AUB. A joint WQAP/WSA was completed for LRA and BWE. A separate report was completed for SLWE. The reports are under preparation for NLWE and BMLWE. The RWEs fully support the WQAPs/WSAs. BMLWE and LRA are using the report findings to request donor funding support.

Irrigation A.8: LWP irrigation activities have included cost sharing on construction of a small drip irrigation system with BMLWE and the farmers of Chabrouh Dam area in Faraya; using grants to promote drip irrigation in Bekaa and in Qbaiyat (North Lebanon); and forming partnerships with three leading Lebanese irrigation companies. The three companies have supplied drip, hydroponics, and micro sprinklers; installed the systems; and conducted farm plot demonstrations and organized and participated

in farmer field days. Through a cooperative agreement, one of them is providing farmer recipients with technical support and access to the LWP incentive rebate program, which covers 50 percent of installation costs (up to US\$15,000) to convert to modern irrigation.

LWP conducted an irrigation assessment of the LRA Canal 900 system. Unfortunately, activities on Canal 900 were put on hold because of water quality problems in the canal.

Sanitary Services A.9: In addition to the planned construction activities, LWP completed several reports to help select sanitary interventions, including “Context-Appropriate Sanitation Solutions,” “Phase I: Stakeholder Consultations and Identification of Potential Sanitation Projects,” “Phase II: Recommended Low-Cost Wastewater Interventions,” and “Assessment of Small Wastewater Treatment Plants in Lebanon: Case Study (Elard/Cabinet Merlin).” LWP also identified and obtained BWE’s buy-in on a list of 127 wastewater projects identified by the four municipal unions that signed the Charter for the Protection of the Litani River Basin.

RWEs have the authority and responsibility to provide sewage collection and treatment services, which have traditionally been provided by municipalities. Larger plants, constructed and funded by the Council for Development and Reconstruction, remain under their management. All RWEs have wastewater master plans. All DGs confirmed that RWEs do not want to take over wastewater treatment facilities unless funding sources are assured.

Conservation/Protection A.10: The preparation of a task action plan report, the construction of the BMLWE drip irrigation system at Chabrouh Dam area in Faraya, the LRA water quality monitoring methodology study for LRA, and the signing of the Charter for the Protection of the Litani River Basin and the follow-up work with municipalities to identify projects were all successfully carried out as activities under this task.

LRA sees itself as the Litani River Basin agency. The DG believes his key mandate is to solve the Litani River pollution problem. He would like LRA to be involved in all decisions concerning water source exploitation and waste disposal affecting the Litani River.

Training (A5):

LWP has trained more than 837 persons (31 percent female) with 46 training courses and 217 training days.¹⁷ The total number of RWE trainees (without double counting) to date is 510 (43 percent female). **Table 4: RWE/LRA Training** shows the breakdown by WE. **Annex II: LWP Training** provides details on the LWP training. LWP has included formal and on-job-training for all its activities. RWEs find all the training well done. All the RWEs are asking for follow-up on most of the trainings. LWP has included a training component in all its subcontracts.

Table 4: RWE/LRA Training			
WE	Trainees (no double counting)	Female	
		Total	%
BMLWE	54	34	63%
BWE	89	23	26%
NLWE	176	78	44%
SLWE	184	82	45%
LRA	7	1	14%
Total	510	218	43%

Certification training provided through ACWUA on water treatment, water distribution (Levels 1 and 2), and wastewater treatment (WWT) was very well received by the RWEs. The original target was 100 persons. To date 151 persons have been trained (18 percent female). Wastewater collection training will

¹⁷ Email from LWP, dated November 30, 2018, Subject: RE: Training Data

be given in Year 4. The certifications are valid for five years. LWP staff emphasized that participants were well selected, which showed in the training results. All trainees who took the certification training passed and were certified. The average grade was 92 with an average of 97 for female trainees. One DG mentioned that although his staff were not currently involved in WWT, it was good preparation for the future. LWP intent was to institutionalize the certificate training program in Lebanon. Because MOEW with AFD donor support is proposing to establish a water training center, LWP has decided not to continue independent efforts to license the certification program.

CONCLUSIONS

1. LWP activities, management plans and tools, and trainings are improving service delivery and resource management.
2. The degree of impact varies among RWEs.
3. In most tasks LWP is meeting or exceeding its deliverable schedule. Delays have occurred in several ERP, audit, WQAP, and construction activities.
4. LWP has tried to include all RWEs and LRA in the project.
5. Some program adjustments are justified where RWEs/LRA are not actively participating or have other funding and TA sources. Examples include LRA and BMLWE, who have self-sustaining budgets and are reluctant to participate in some of the governance aspects of the project; BWE, which is limited in staff capacity and is receiving considerable donor funding and TA under the World Bank Pollution Prevention Project of the Litani River; and activities such as GIS, customer service, and leak detection being funded by other donors.

Construction:

6. Even if there are no delays in completing the remaining designs, tender process, and construction, an extension may be necessary to capture the improvements in Demonstration Areas, and to perform data collection activities to determine whether the contract Performance Standards were met.
7. It may be difficult to complete all the remaining sanitary construction projects still under design by EOP, particularly where EIAs are required.
8. Although it has many layers, LWP has a very effective QA/QC program. The end results are good designs and good construction. This does come with a cost in time.

Management plans and tools:

9. LWP, previous USAID projects, and other donors have prepared many plans and management tools. Implementation of these plans is a challenge, however, and they many stay on the shelf because of a lack of qualified RWE staff and funding. Another reason for the failure to implement the plans is that some of the initiatives may be donor driven. LWP is doing its best to avoid this syndrome by working closely with the RWEs.
10. The water utility DGs talk to each other regularly. Chances are high that a success at one utility will be replicated by another. An example is the sharing of IT resources between SLWE and BWE.
11. Utility coordinators are making a major contribution. Because they sit at the WE they support, they have close relations with their DG and a good understanding of the limitations of the WE where they are assigned. This allows them to effectively schedule and support LWP TA activities, monitor construction activities, transfer knowledge to WE staff, and provide onsite donor coordination. This was witnessed by the ET during visits to the RWEs/LRA.
12. The selection of demonstration areas in each WE to focus LWP funding and TA was an effective strategy. It allowed, contractually and conceptually, the integration of all the project activities, including physical improvements, metering, improved system O&M, improved customer service, and improved billing in one area to show and evaluate the potential for achievement when proper resources and training are provided.

13. Business plans were well done but difficult to implement because of limited RWE funding and qualified staff.
14. The decision to introduce RMP as a supplement to the business plans was a good one. It allows the new DGs to directly get involved in the planning process. It will also help to solicit needed funding for the RWEs.
15. ERP as a planning and management tool has been well received by the RWEs. RWEs are adopting it as the core for their financial and management systems; however, without follow-up support many of the RWEs may not have enough confidence or trained staff to implement it as designed.
16. RWEs do not seem to have a single person assigned responsibility for coordinating LWP ERP development activities and maintaining the ERP software.
17. RWEs (SLWE, NLWE) have greatly benefited from the financial and performance audits.
18. A GIS-based asset valuation for NLWE and SLWE was a significant contribution. However, if the two WEs still consider the asset data incomplete or under review, they may be hesitant to fully adopt.
19. GIS use as planned by LWP is still under development. Even with the EU implementing partner GVC's commitment to form GIS units at three RWEs, without LWP's continued efforts to integrate GIS into RWE activities GIS may not become a working tool.
20. There is a high interest in linking GIS and ERP. Although there have been discussions with donors and RWEs on how best to move forward, a lot of work needs to be done.
21. Even if UNICEF's commitment to upgrade the RWE customer subscriber GIS database is successful, it will require continued LWP efforts to make sure it is integrated into ERP and used for billing.
22. The demonstration areas have been selected to reduce nonrevenue water. This requires completing construction of a closed physical water supply system with installed meters and introducing WDM. To put this in place will take time. Estimates by WE staff confirm that a minimum of 12 to 18 months may be needed to get the WDM program up and running. Because of the status of the construction, completion of the planned WDM activities and adaptation by the RWEs within the LOP will require special attention.
23. WQAP and WSA were successful. They are being used by the RWEs and LRA to solicit donor funds.
24. LWP has made a good effort to support irrigation activities in various geographic locations with limited resources. It is unlikely, though, that BWE will be able to implement the irrigation master plan under preparation by LWP without donor support.
25. Wastewater disposal and treatment remain a major national problem. The RWE mandate for taking over the O&M of wastewater treatment facilities is not enough. The RWEs insist that they require proper staffing and funding before they will officially take over these facilities.
26. Several of the conservation/protection activities are small and low in budget, but together they provide a nice framework for promoting water conservation and efficiency.

Training:

27. LWP-provided training has been well structured and well received.
28. In many instances DGs and staff are asking for additional and follow-up training.
29. The certification training provided to the RWEs received high praise from the RWEs. Involving ACWUA was a good decision by LWP. It linked the RWEs to a regional water utility association.
30. There was a request for additional GIS training although other donors are helping with this.
31. Workshops and presentations to RWEs and donors to share and inform about activities have been extremely successful.
32. Given weak and untrained staff, it might have been better to offer more basic skills training, as suggested in the LWP RWE training needs assessment, similar to the MS office training given to NLWE.

QUESTION 3B

Are the NGO/CSO grants and awareness and media campaigns advancing civic engagement in water management and improving citizen perception of water utilities' role in providing a necessary and valuable service?

FINDINGS

Question 3b directly relates to LWP Results B.

- B.1. Improve Customer Satisfaction with Services Provided by Public Water Utilities
- B.2. Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in Selected Areas of Intervention
- B.3. Increase Civil Society Engagement in Improving Water Use Behavior for Environment and Water Resources Protection

Grants

The LWP grants program (see **Table 5: Grants**) was allocated \$1.2 million. LWP has made a major effort to establish a diverse and wide-ranging grants program, including innovation and research grants, covering communities, agriculture, and industry. LWP is using grantees to help implement an incentive rebate program. Grants have been issued to support awareness and communication programs in each of the demonstration areas. Grants were used to effectively promote drip irrigation in Bekaa and in Qbaiyat (North Lebanon)

Table 5: Grants	
Grant Type	#
CSO Engagement	8
Incentive Rebate for Farmers	9
Innovation	3
Research	12
Total	32

Awareness and media

LWP has conducted six special campaigns, reaching more than 1.174 million people, and presented 26 videos reaching 300,000 people.¹⁸ LWP has posted three press releases and had press coverage for 21 major events. The original water conservation awareness campaign was planned only for demonstration areas. After signing a stewardship program with Fransabank, the campaign received leverage and was aired on national TV.

LWP, in coordination with UNICEF, set up websites for SLWE and NLWE and a Facebook site for BWE¹⁹ with 3,887 followers, 19 postings, and 211,102 views (September 30, 2018). During the ET visit to SLWE, there were some complaints about the website set up by LWP and UNICEF. There was a comment that a Facebook site would be more useful.

UNICEF is mandated to improve communications capacity at RWEs (NLWE, SLWE, BWE); BMLWE is not interested. UNICEF will be providing communication strategies and new branding, sending one staff to each RWE, establishing a communication library, and setting up contact centers for customer service at the participating RWEs.

CONCLUSIONS

Grants:

- I. Grant activities have a limited budget but resulted in a significantly higher leveraging of funds by other entities. The Grants have a total LWP cap of \$1.2 million with a limit of less than \$200,000 to

¹⁸ LWP email dated December 5, 2018 Subject: Media data

¹⁹ <https://www.facebook.com/BWE.gov/>

non-U.S. organizations. When viewed all together the Grants provide an effective foundation for improving water conservation and efficiency.

2. Final customer surveys will not be done until Year 5; therefore, it is difficult to evaluate the benefits of the media campaigns.
3. The focus on demonstration areas and irrigation through the grants is positive.
4. Selection of different grantees for different areas offers a chance to evaluate and compile lessons learned on what works and what doesn't.
5. Some of the grantee interventions were good teaching tools but may not be sustainable—e.g., water testing equipment imported from the United States by Atayeb Al Rif.

Awareness and media campaigns:

6. Media coverage to date has been substantial, exceeding the LOP total target of 114,000 persons by over 1,000 percent.
7. The BWE Facebook page was well received, is being used, and is preferred over a website.

QUESTION 3C

Are initiatives implemented with private companies improving private sector involvement in water management?

FINDINGS

Question 3c directly relates to LWP Results C.

- C.1. Develop a Pilot Private Sector Partnership to Improve Water Supply, Wastewater, or Irrigation Service Delivery
- C.2. Develop At Least One Pilot Private Sector Partnership to Leverage the Funding of Innovative Water Conservation Technologies
- C.3. Develop At Least One Pilot Private Sector Partnership to Improve Water Usage Awareness

LWP has prepared water-specific tender documents for PPPs. The LWP PPP team is working with RWEs and other donors to identify and promote potential PPP projects. Interest and support for PPPs vary among the RWE DGs. NLWE had a PPP for running the Tripoli water supply with a French company for four years ending in 2007. There are numerous limited PPPs for running wastewater treatment facilities, but they are limited usually to service contracts for staff that must be renewed annually. SLWE, BWE, and BMLWE have initiated efforts to involve private sector financial entities in the customer billing process.

The High Council for Privatization and Partnership (HCPP) plays a major role in promoting PPPs. They drafted the new PPP law that was approved in 2017. The law details the procedures for preparing PPPs and promotes more transparency in the tender process when selecting private partners. LWP has worked with the HCPP for PPPs on the interpretation of the law and implementation.

The grants program has worked with industrial (stone cutters), agricultural (dairy, irrigation equipment manufacturers and suppliers), and technology (pump station predictive maintenance) private sector entities.

LWP has formed water partnerships with four major companies through a water stewardship concept for internal corporation water conservation awareness. These include AUDI Bank and Fransabank from the banking sector, Clos St. Thomas from the wine industry, and MTV from the media sector.

CONCLUSIONS

- I. The preparation of tender documents for PPPs is a major next step in moving toward a water PPP.

2. LWP's excellent relationships with donors, RWEs, and the private sector allow a positive forum for engaging these parties to develop a finance-blending mechanism to realize a water PPP.
3. The new PPP Law (2017) provides an improved environment to encourage PPPs.
4. LWP has used its grants program with the private sector to promote water conservation and water efficiency in a wide range of areas that include industry, agriculture, technology, and schools. Success stories include LWP reports of up to 40–60 percent irrigation water savings through installation of modern irrigation systems and up to 25 percent faucet water savings in households and schools through installation of water-efficient faucets.
5. The long-term commitment and effects of the companies involved in the water stewardship program are difficult to evaluate without a survey; however, their direct support to LWP has made the partnering relationship quite valuable in promoting water conservation and highlighting LWP's water program.

QUESTION 4

Are there any external contextual factors (i.e., country/regional trends) that may affect the activity's performance and hypothesis?

FINDINGS

LWP has compiled a table of project-related constraints/risks (LWP Year 4 workplan) with mitigation measures. According to LWP, the table was compiled from lessons learned from previous water sector projects during Years 1–3 and through discussions with RWEs and LRA directors general and the MOEW. Key risks are listed as i) lack of RWE capacity, which limits service delivery and impedes utility effectiveness; ii) RWE funding constraints leading to limited or short-sighted investments in infrastructure and water quality; iii) lack of citizen awareness of their rights and responsibilities with respect to the water sector, which contributes to limited legitimacy of public utilities; and iv) shocks that have overburdened Lebanon's already strained water systems (i.e., influx of Syrian refugees).

Other external factors observed by the ET include i) approval of PPP Law (2017); ii) potential threat of Lebanese pound devaluation; iii) replacement of DGs in all RWEs and LRA in March 2018; iv) overlapping and sometimes overambitious and unclear scope of work resulting from multiple donors (EU, UNICEF, World Bank) funding and embedding staff to support RWE financial, GIS, and communication support activities; v) perception by the RWEs that there are no available funds or trained staff to take over wastewater treatment facility O&M; and vi) MOEW's uncertain role in influencing RWE participation in LWP activities.

CONCLUSIONS

1. There do not seem to be any country/regional trends that will have major effects on LWP's performance and hypothesis at this time.
2. LWP has compiled a complete table of project-related constraints/risks (LWP Year 4 workplan) with proposed reasonable mitigation measures for external factors that could affect the project. The LWP workplan activities support the mitigation measures.
3. The LWP contract is in U.S. dollars. In case of Lebanese pound devaluation, LWP can adjust local contracts accordingly.
4. LWP is working closely with new RWE/LRA DGs to mitigate any issues that come up.
5. Uncertainty of funding sources for wastewater treatment facility O&M and insufficient staff limit RWEs' willingness to involve themselves in new wastewater projects without guarantees.
6. MOEW has the authority to require or enforce RWEs to standardize procedures and methodologies.
7. All staff, especially utility coordinators, are doing their best to work with new RWE/LRA DGs, and most activities are therefore continuing without interruption—a credit to LWP leadership.

8. There is overlap in the RWE activities being supported by other donors (finance, GIS, communications, demand management, installation of Scada-controlled meters). All donors are working to coordinate their efforts.
9. LWP has identified factors that hinder the project's potential to achieve its objective and prepared the workplan to address those that are within the PWS and can be influenced by the project. LWP has successfully addressed some of these factors by, for example, preparing RWE RMPs with the water utilities to design and fund high-priority infrastructure improvement activities, improving coordination among donors to ensure that funds and support complement RWE long-term objectives, and developing partnerships with leading private sector entities in agriculture to showcase economic benefits of applying water conservation tools in irrigation.

QUESTION 5

What internal factors are contributing to the achievement (or nonachievement) of the activity's objective?

FINDINGS

Internal factors that have been contributing to the achievement of LWP objectives include i) involvement of a USAID A&E team for design and construction oversight, which has ensured proper QA; ii) well-qualified LWP technical teams; iii) experienced and engaged LWP management teams; iv) utility coordinators assigned to each RWE to coordinate and monitor activities; v) subcontracts with a broad range of work requirements (i.e., assessments, training, outreach, and GIS; vi) a close partnership between USAID and LWP; and vii) LWP's internal ERP design team's responsiveness to RWE needs in tailoring ERP to meet individual WE requirements.

Factors that have been contributing to possible nonachievement of LWP EOP objectives include delays in design and corresponding delays in construction. As stated in **Question 3a Findings: Design Schedule Planned versus Actual** above. Six of eight design contracts were delayed (10/19 projects); in some cases, the designs took twice the planned period. Reasons for the delays vary by project and include the need for more detailed assessments, overlap with other MOEW and donor projects, and the multi-layered reiterative design review process among different entities including DAI, USAID's A&E, and USAID. Delays in construction will affect time available to complete all O&M training, system calibration, and testing of management issues related to demonstration projects.

"ERP and LWP saved my job when the new DG took over. I was able to respond to his queries immediately." – WE Head of Finance

CONCLUSIONS

1. LWP has a well-managed, highly professional team that is doing a good job implementing the project.
2. LWP has gone through a careful subcontractor selection process and expects diverse and high-quality performance that sometimes may be beyond the subcontractors' capabilities. COR
3. The delays in the start of construction will affect the original planned end date for completion of works. This delay will result in a cascading effect on other activities, such as WDM.

QUESTION 6

Are there any indications that LWP initiatives are likely to be sustained following the end of the activity?

FINDINGS

Close coordination with donors has resulted in promised support for many LWP activities. The EU implementing partner GVC is establishing GIS units and water leakage teams at three RWEs. UNICEF has committed to strengthening RWE customer service support capabilities. Recently the World Bank assessed SLWE's financial management procedures to determine the scope of its next planned technical assistance and concluded that SLWE's financial management systems and staff do not require additional assistance beyond what USAID is providing. Creation of LWP/WE task committees has promoted buy-in of RWE DGs and staff. USAID's strong interest and commitment in the water sector has encouraged the RWEs and donors to support LWP initiatives. LWP has involved NGOs and municipalities in several activities, allowing them to contribute and take ownership. Integration of training and awareness into the implementation of all LWP activities strongly supports sustainability.

"All the things I would recommend to move WEs toward commercial financing are being done by USAID." –World Bank Consultant

CONCLUSIONS

1. There are numerous indicators that LWP initiatives are likely to be sustained.
2. The commitment to the RWEs and support of LWP by other donors such as the EU, UNICEF, and the World Bank indicate that the activities implemented under the project are sustainable.
3. LWP is working closely with RWEs, providing training, documentation, and handholding for its activities. However, staffing issues, funding constraints, and differing priorities make it difficult to predict the degree and extent of the sustainability.

A. Are there mechanisms in place to ensure that the WE will maintain the systems put in place by LWP and that water users will continue to use the water saving techniques introduced by the activity?

FINDINGS

LWP has tried to build in mechanisms for sustainability in all their activities. They have prepared a chart to answer questions for each of the activities, such as recipient demand, recipient beneficiary or customer demand, capacity to maintain, sources of follow-on funding or equipment, the exit strategy, and procurement or grant recipients' demonstrated capability to sustain. See **Annex 12: Sustainability Table** prepared by LWP for the ET.

For the RWEs: The four demonstration areas will provide a working model on how to operate and manage a water supply network that can be replicated in other areas. LWP has been careful to ensure that its activities are user driven, with initiatives such as establishing RWE task committees and involving MOEW and municipalities in the selection of PODA areas. All activities, including those with subcontractors, have a training component. Numerous assessments/studies/plans have been prepared and can be implemented when funds are available. All equipment was procured through local firms, had warranties, and included staff training on use. User manuals have been provided for all software and equipment. To ensure WEs maintain improved customer service satisfaction, LWP has developed WE websites and Facebook pages and provided customer service training and is helping to renovate customer service centers in certain locations.

For water users: LWP has implemented a large awareness media program focusing on water conservation. In demonstration areas water users will be provided with water meters, allowing for consumption-based billing that is designed to provide informed water users with a mechanism and incentive to save money by conserving water. Partnerships with local irrigation suppliers/manufacturers ensure follow-up support to farmers switching to modern irrigation systems. The NGOs/CSOs participating in the grants program are registered and viable organizations. Because of their work with LWP, several NGOs/CSOs have been able

to attract additional funding from outside LWP to support the introduction of modern irrigation at the farm level. Others have broadened their portfolio to promote water quality and conservation as part of their new activities. On a national level, LWP has involved the commercial sector in its communication and awareness media program to promote water conservation.

CONCLUSIONS

1. LWP understands the importance of sustainability.
2. LWP is still in full implementation mode. Therefore, LWP has the challenge of deciding when and how to best finalize and consolidate activities so they can be completed within LOP.
3. Donors are very active in helping to strengthen and support the RWEs and are coordinating with LWP. This will help to ensure follow-up on LWP activities.
4. Commercial sector involvement in the water stewardship program has demonstrated private sector willingness to use corporate social responsibility to contribute to a culture of national water conservation.
5. The private sector is willing to take initiative in marketing water conservation and efficiency technologies on their own, as shown by the irrigation companies setting up their own field farm demonstrations.
6. The grants program showed the value of NGOs/CSOs as sustainable implementing partners in promoting the concepts of water conservation and water efficiency to households, schools, farmers, agro-food producers, and other high water use industry water users.
7. Use of regional water expertise has expanded the resource pool available to support the water sector.

QUESTION 7

To what extent have LWP gender strategy recommendations been incorporated into the LWP workplan and implemented throughout the activities?

FINDINGS

The LWP gender strategy (December 2015) proposed gender-related activities for each of the deliverables. Review of the activities shows that gender has been included and implemented as planned (see **Annex 13: Gender**).

CONCLUSIONS

1. The LWP gender component is crosscutting.
2. LWP has been able to adopt and implement most of the recommendations of its gender strategy.
3. LWP has focused on mainstreaming and implementing gender throughout all planned activities, as evidenced by the high percentage of females participating in the RWE training (43 percent) and the successful involvement of a women's cooperative in the grants program.

RECOMMENDATIONS²⁰

What is needed to reach the planned LWP targets?

Question 3a (Improving RWEs)

1. Consider extending LWP to capture the improvements in Demonstration Areas, and to perform data collection activities to determine whether the contract Performance Standards were met **(USAID)**.
2. Prioritize a closed system subzone for demonstration construction in each WE that can be completed as soon as possible so that WDM can begin **(LWP)**.
3. Get a commitment from each WE on which ERP modules they will implement within the next year. Prepare a revised action plan to make sure these modules are installed, working properly, and fully used by RWE staff before EOP **(LWP/RWEs)**.
4. Set a reasonable target on finalizing asset valuation survey data that is acceptable to SLWE, NLWE, and the LWP subcontractor **(LWP)**.
5. Lead GIS-ERP integration in the WEs where ArcGIS Server is already installed and running. The main concern is to have a unique coding system used across the two systems **(LWP/Donor Implementing Partners [IPs])**.
6. Follow up with RWEs, GVC-supported GIS units, and UNICEF to make sure asset and customer databases are put into the GIS **(LWP/RWEs/GVC)**.
7. Continue to work with donors to ensure their activities complement and support LWP **(USAID/Donors)**.
8. Adjust and align donor and LWP workplans, particularly on GIS, WDM, ERP, and the customer service and communication activities **(USAID/Donors/RWEs/LWP/Donor IPs)**.
9. Assist RWEs/LRA in securing funding to implement WQAP/WSA recommendations **(USAID/LWP/Donors/RWEs/LRA)**.

Question 3b (Civic Engagement)

10. Follow up with grantees to evaluate grant activity results **(LWP/SI)**.
11. Follow up with grantees to help them find additional funding or to promote their products **(LWP/USAID/Donors)**.

Question 3c (Private Sector)

12. Continue working with RWEs, donors, and the private sector to move the PPPs to the next step of identifying funds and tendering at least one PPP projects **(LWP/USAID/Donors/RWEs)**.
13. Continue to work with the stewardship companies and highlight their support whenever possible, perhaps through a conference or workshop **(LWP)**.

Question 4 (External Factors Affecting Performance)

14. Continue to work closely with USAID, RWEs, and donors to ensure close collaboration to address external factors that may arise. In addition to informal and/or regular meetings currently conducted,

²⁰ Suggested organization to carry out recommendation follows recommendation in parenthesis—for example, (LWP).

RWEs might hold formal monthly meetings and joint workshops, and donors and their implementers might hold formal quarterly meetings and workshops (**LWP/RWEs/USAID/Donors/Donor IPs**).

Question 6 (Indications of Sustainability)

15. Initiate work on a comprehensive EOP sustainability plan with USAID, RWEs, and other donors for the key activities before the end of Year 4 (**LWP**).
16. Finalize sustainability plan six months before EOP (**LWP/RWEs/USAID/Donors/Donor IPs**).
17. Follow up with RWEs to ensure that GIS and ERP licensing fees are incorporated into their annual budgets (**LWP/RWEs**).
18. Ask DGs to designate key RWE staff responsible for each LWP activity. This should be done immediately for ERP (**LWP/RWEs/USAID**).
19. Continue working closely with RWEs to establish a suitable and sustainable structure to service and maintain ERP after EOP (**LWP/RWEs**).
20. Ensure trusted local consultants are identified and mechanisms are in place so the consultants can continue to advise RWEs after project completion (**LWP/RWEs**).
21. Ensure RWEs are informed of LWP Year 4 and participate in Year 5 workplan activities (**LWP**).
22. Promote and support USAID efforts to include follow-up support to water sector in USAID CDCS 2019–2023 (**LWP/USAID/SI**).

Question 7 (Gender Integration)

23. Help set up a gender focal point at each RWE (**LWP/RWEs/USAID/Donors**).
24. Continue to ensure gender is considered in all training (**LWP**).
25. Help identify qualified RWE female staff to be assigned as key staff responsible for coordinating various LWP activities (**LWP/RWEs**).
26. Encourage female representation on the RWE/LWP task committees by identifying and recommending qualified candidates to the RWE DGs (**LWP/RWEs**).

What midcourse corrections are needed (if applicable)?

27. Complete designs and tender documents for all projects, but do not start those that cannot be completed before EOP, such as the sanitary wetlands projects (**LWP/USAID**).
28. Consider ways to increase effort on the ERP, such as hiring additional LWP TA staff, persuading DGs to officially appoint a WE staff member full time to coordinate ERP activities, and organizing a formal ERP unit in each RWE (**LWP**).
29. Consider ways to accelerate implementation of the WDM component in the SLWE, NLWE, and BMLWE demonstration areas, such as identifying and completing construction and installing meters in a subzone in each demonstration area as soon as possible; preparing the WDM and nonrevenue water model for the subzone; and identifying and training personnel from all relevant sections—i.e., production, networks and distribution, and billing and customer service—on WDM and the nonrevenue water model (**LWP/RWEs**).

Are any additional assessments required to provide further information for the decision making on this activity?

30. Consider adding a final EOP institutional appraisal of RWEs (**LWP**).
31. Consider conducting a final EOP evaluation survey of private sector initiatives carried out under the project, including the grants and water stewardship programs (**LWP**).

32. Consider holding an EOP round table with major stakeholders to present work accomplished under LWP and solicit ideas for a new project **(LWP/USAID)**.

ANNEXES

Annex 1: Evaluation Statement of Work
Annex 2: List of Documents and Sources Reviewed
Annex 3: List of People Consulted
Annex 4: Data Collection Schedule
Annex 5: Interview Protocols
Annex 6: LWP Deliverable table
Annex 7: M&E Findings Table
Annex 8: SI A&E Planned vs Actual Comparison Design and Construction Table
Annex 9: ERP Implementation Tracker
Annex 10: LWP Additional Activities Outside Project Scope
Annex 11: LWP Training
Annex 12: Sustainability Table
Annex 13: Gender
Annex 14: Interview Minutes

ANNEX 1: EVALUATION STATEMENT OF WORK



Annex 1_LWP
midterm evaluation

ANNEX 2: LIST OF DOCUMENTS AND SOURCES REVIEWED



Annex 2_List of
Documents and Sou

ANNEX 3: LIST OF PEOPLE CONSULTED

(Redacted)

ANNEX 4: DATA COLLECTION SCHEDULE

(Redacted)

ANNEX 5: INTERVIEW PROTOCOLS



Annex 5_Interview
Protocols.docx

ANNEX 6: LWP DELIVERABLE TABLE



Annex 6_Deliverable
Table_Year 3.xlsx

ANNEX 7: M&E FINDINGS TABLE



Annex 7_M&E
findings table.xlsx

ANNEX 8: SI A&E PLANNED VERSUS ACTUAL COMPARISON DESIGN AND CONSTRUCTION TABLE



Annex 8_A&E Design
and Construction Sche

ANNEX 9: ERP IMPLEMENTATION TRACKER

(Redacted)

ANNEX 10: LWP ADDITIONAL ACTIVITIES OUTSIDE PROJECT SCOPE



Annex 10_LWP
Activities Outside Project Scope.xlsx

ANNEX 11: LWP TRAINING

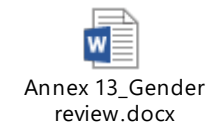


ANNEX 12: SUSTAINABILITY TABLE



Annex 12_LWP
Sustainability Status.xlsx

ANNEX 13: GENDER



Annex 13_Gender
review.docx

ANNEX 14: INTERVIEW MINUTES

(Redacted)

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SOCIAL IMPACT FOR USAID

LEBANON WATER PROJECT (LWP)



MID-TERM PERFORMANCE EVALUATION

Scope of Work

LEBANON WATER PROJECT

MID-TERM PERFORMANCE EVALUATION

Scope of Work

August 2018

This document is available in printed or online versions. Documents are also made available through the Development Experience Clearing House (dec.usaid.gov). Additional information can be obtained from:

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ACRONYMS

ADS	Automated Directives System
CAS	Central Agency of Statistics
CDCS	Country Development Cooperation Strategy
CFR	Code of Federal Regulations
CLA	Collaborating, Learning and Adapting
COP	Chief of Party
COR	Contracting Officer's Representative
CPSS	Customer Perception and Satisfaction Survey
CSO	Civil Society Organization
DAI	Development Alternatives, Inc.
DEC	Development Experience Clearing House
DG	Director General
DO	Development Objective
DQA	Data Quality Assessment
EMMP	Environmental Mitigation and Monitoring Plan
ERP	Enterprise Resource Planning
FGD	Focus Group Discussion
FY	Fiscal Year
GE/FE	Gender Equality and Female Empowerment
GIS	Geographic Information System
GOL	Government of Lebanon
HO	Home Office
HOE	Haouch El Omara
IP	Implementing Partner
IM	Implementing Mechanism
IR	Intermediate Result
KII	Key Informant Interview
LRBMS	Litani River Basin Management Support
LRA	Litani River Authority
LWP	Lebanon Water Project
LWPP	Lebanon Water Policy Program
LWWSS	Lebanon Water and Wastewater Sector Support
LOE	Level of Effort
M&E	Monitoring and Evaluation
MENA	Middle East and North Africa
MOU	Memorandum of Understanding
NGO	Nongovernmental Organization
NRW	Non-Revenue Water
PIRS	Performance Indicator Reference Sheet
PMP	Performance Management Plan
PMSPL	Performance Management and Support Program for Lebanon
PPP	Public-Private Partnership

PSP	Private Sector Partnership
RWE	Regional Water Establishment
RF	Results Framework
SI	Social Impact
SOW	Scope of Work
TAMIS	Technical and Administrative Management Information System
USAID	United States Agency for International Development
USG	United States Government
WISE	Water Infrastructure Support Enhancement
WQAP	Water Quality Assurance Plan
WSPAI	Water Service Provider Assessment Index
WWTP	Waste Water Treatment Plant

INTRODUCTION

The Lebanon Water Project (LWP) is a \$65 million activity that extends from September 2015 until September 2020, awarded by the U.S. Agency for International Development (USAID), and is being implemented by DAI Global LLC.

The objective of LWP is to increase access to clean, reliable, and sustainable sources of drinking water for Lebanese citizens. LWP focuses on improving Lebanon's capacity in the management of water resources, enhancing the efficiency and sustainability of the public water utilities, and addressing water challenges arising from the impact of the Syrian refugee influx to Lebanon. The activity provides technical and capital assistance to relevant stakeholders and counterparts to enhance the performance of the water sector in Lebanon. LWP also promotes better water governance to help ensure long-term preservation of Lebanon's water resources

The objective of this LWP mid-term performance evaluation is to validate LWP's theory of change and its Results Framework (Annex I) and to provide directions for the remainder of the activity. This evaluation seeks to use the knowledge and learning gained from LWP implementation to date, monitoring data, knowledge about the project context, and other sources to recommend adjustments to interventions and approaches as needed.

The estimated duration for completion of the evaluation is 9 weeks proposed to start early October 2018. A six-day work week is assumed. The proposed evaluation team will include an expat Evaluation Team Leader, who will have expertise in evaluating water projects as well as in institutional capacity building and/or a related field, an Evaluation Specialist from PMSPL II and an Evaluation Specialist from Social Impact's home office who will underwrite the quality of the evaluation according to EQUI standards. It is estimated PMSPL II team will contribute around 40 days LOE; the Team Leader will have 45 days LOE; and the SI Performance Evaluation Specialist up to 10 days LOE. As shown in the attached evaluation action plan, the interim finding presentation will be held during the last week of October. The evaluation report **first draft** will be submitted to the mission Mid-November 2018. The final report addressing the Mission's comments is expected to be submitted by Mid-December 2018.

AUDIENCE AND INTENDED USES

This mid-term performance evaluation is intended for USAID/Lebanon, specifically the Program Office, Local Development Office, Development Alternatives Inc (DAI) and others at the discretion of the Mission. In the spirit of the USAID Evaluation Policy, the evaluation will provide USAID/Lebanon with concise, actionable recommendations based on evidence to be used by USAID for future program design or program improvement. The results from the evaluation will be used by USAID/Lebanon during its annual Portfolio Review. The report from this evaluation will become publicly available on the Development Experience Clearinghouse (DEC).

PROJECT IDENTIFICATION

The United States Agency for International Development (USAID) signed the Lebanon Water Project (LWP activity) contract with DAI on 30 September 2015 (No. AID-268-N-15-00001) for an initial value of \$65,205,229 until September 29, 2020.

PROJECT DESIGN

The objective of LWP is to improve water governance and protection to ensure reliable and sustainable access to water in Lebanon through improving the service delivery and resource management capacity of five public utilities; and improving civic engagement in water management and citizen's perception of water utilities in providing a necessary and valuable service.

LWP aims to achieve its objective through targeted interventions in three **Purposes**: Improved service delivery and resource management capacity of the five public water utilities; Improved civic engagement in water management and advanced citizens' perception of water utilities' role in providing a necessary and valuable service; and improved private sector involvement in water management.

The Lebanon CDCS development objectives (DO) and intermediate results (IR) that LWP contribute to are as follows:

- DOI: Improved capacity of the public sector in providing transparent, quality services across Lebanon
 - o IR 1.2: Enhanced competitiveness that expands micro-, small- and medium-sized enterprises Increased availability of water-related public services for all in Lebanon
 - Sub-IR 1.2.1: Increased efficiency of water management
 - o IR 1.2.2: improved water service infrastructure
 - o IR 1.3: Improved governance in addressing citizens' needs in public service delivery USAID
 - o IR 1.4: Strengthen civil society contributing effectively to participatory and democratic governance

A link to the LWP Logical Framework can be found in Annex I.

INSTITUTIONAL CONTEXT

LWP builds upon previous USAID-funded water development projects: Litani River Basin Management Support (LRBMS), Lebanon Water Policy Program (LWPP), Lebanon Water and Wastewater Sector Support (LWWSS) and Water Infrastructure Support Enhancement (WISE), to achieve its objective to improve water governance and protection of the public water sector in Lebanon.

In close coordination with the Regional Water Establishments (RWEs) and Litani River Authority (LRA), LWP identified several demonstration areas to focus major infrastructure work and complementary institutional development and capacity building activities at the corresponding RWEs. Demonstration areas include four cazas, namely Jezzine in South Lebanon, Metn in Mount Lebanon, Zahle in the Bekaa, and Koura in North Lebanon. LWP also coordinates with local authorities and institutions, local non-governmental organizations (NGOs), farmer cooperatives, and industries to identify water conservation and protection solutions in other targeted areas.

THEORY OF CHANGE

LWP is based on the following theory of change: If LWP can improve service delivery and resource management capacity of the public water utilities; improve civic engagement in water management, advance citizens' perception of water utilities' role in providing a necessary and valuable service; and improve private sector involvement in water management, then LWP will be able to improve water governance and protection to ensure reliable and sustainable access to water in Lebanon.

PROJECT INTENDED RESULTS / SCOPE OF THE PROJECT

The objective of LWP is to improve water governance and protection to ensure reliable and sustainable access to water in Lebanon through improving the service delivery and resource management capacity of five public utilities; and improving civic engagement in water management and citizen's perception of water utilities in providing a necessary and valuable service.

LWP will achieve this objective by employing a strategy that brings the public sector, private sector, and civil society together to conserve and improve the management of Lebanon's water resources. The strategy focuses on improving the capacity of public water utilities, engaging citizens in communicating with public water entities, and promoting citizen behavioral changes to conserve water and protect water quality through media campaigns. Concurrently, LWP will implement activities to increase private sector engagement in finding solutions to water service delivery and water quality problems through partnerships with the public water entities.

Purpose A: Improved service delivery and resource management capacity of the five public water utilities

To achieve Purpose A, LWP will strengthen the managerial and operational functions of the water entities, while providing related upgrades to their infrastructure. The project will support the Government of Lebanon's (GoL's) newly developed water strategy that boosts the role of these RWEs and LRA as the legitimate entities that should provide efficient services to the population.

Purpose B: Improved civic engagement in water management and advanced citizens' perception of water utilities' role in providing a necessary and valuable service

To achieve Purpose B, LWP will bolster the legitimacy of the RWEs and LRA by engaging citizens, local authorities, and the commercial sector by improving their understanding and support for steps to improve water management and delivery of water and wastewater services by the water utilities and municipal governments. LWP will also employ a communications strategy to build awareness on water use behavior and to engage civic society in water conservation and management.

Purpose C: Improved Private Sector Involvement in Water Management

LWP will support and mediate pilot private sector partnerships to improve water and wastewater management, leverage the funding of innovative water conservation technologies, and improve water use awareness. Activities under Purpose C will be crosscutting along Purpose A and Purpose B, with overlapping outcomes such as increased customers who pay bills, decreased non-revenue water, and decreased wasteful uses of water.

The Performance Data Table can be found in Annex 2.

CRITICAL ASSUMPTIONS

The successful achievement of LWP objective and purposes is based on several critical assumptions which take into consideration the Lebanese political, security, and institutional context.

1. Security situation in Lebanon does not significantly deteriorate
2. RWEs and LRA are willing participants in project activities
3. Civil Society and private sector are willing partners in collaboration for project activities
4. International donors are coordinating and aligning their activities with each other, and with RWEs and LRA

EXISTING INFORMATION

- Country Development Cooperation Strategy (CDCS) USAID/Lebanon
- Water Project PAD
- LWP Contract and contract modifications
- LWP Work Plans
- LWP M&E Plan
- LWP Periodic reports (Quarterly Reports, Annual Reports, IPPT, etc.)
- Data Quality Assessment (DQA), Project Site Visit Reports (PSV), and Data Verification (DV) reports conducted by Social Impact.
- PMSPL II construction management reports of LWP projects

EVALUATION OBJECTIVES AND QUESTIONS

OBJECTIVES

The objective of this LWP mid-term performance evaluation is to validate the above theory of change and to provide answers to the following questions. Meetings with the Mission and the stakeholders will be held prior to the Evaluation kick-off to determine priorities, and to add clarity to the evaluation questions based on the Mission stakeholders intended use of the evaluation findings, conclusions and recommendations.

EVALUATION QUESTIONS

Relevance

1. To what extent are the LWP objectives appropriate for meeting the CDCS Development Objective?
2. To what extent are the LWP objectives appropriate for meeting the beneficiaries (regional WE and water-users) needs? Are the activity assumptions still valid?

Effectiveness

3. To what extent is LWP's interventions progressing towards meeting the objectives of the Activity as stated in the contract; more specifically:

- o Are the construction activities, management plans and tools, as well as trainings provided to the WE staff effectively improving the service delivery and resource management capacity of the public water utilities?
 - o Are the grants provided to NGOs/CSOs, as well as implemented awareness and media campaigns contributing to the advancement of the civic engagement in water management improving and the citizens' perception of water utilities' role in providing a necessary and valuable service?
 - o Are the initiatives implemented with the private companies improving the overall involvement of the private sector in Water Management?
4. Are there any external contextual factors (i.e. country/regional trends) that may affect the activity's performance and activity's hypothesis? If factors are identified to hinder the activity's potential to achieve its objective, how those factors can be mitigated/addressed?
 5. What internal factors are contributing to the achievement (or non-achievement) of the activity's objective?

Sustainability

6. Are there any indications that the initiatives implemented by LWP are likely to be sustained following the end of the Activity? Are there mechanisms put in place to ensure that the WE will maintain the systems put in place by LWP and that the water savings techniques introduced by the Activity will continue to be used by the water users?

Gender Integration

7. To which extent recommendations generated by the LWP Gender Strategy were incorporated in LWP workplan and implemented throughout the activities so far?

RECOMMENDATIONS

The evaluation is to provide recommendations on the following:

- What is needed to reach the overall planned LWP targets?
- What mid-course corrections are needed (if applicable)?
- any additional assessments required to provide further information for the decision making on this activity?

EVALUATION DESIGN AND METHOD

This evaluation will rely on review of project documentation (e.g. RFA, CA, work plan, quarterly reports, annual report, and technical reports) and data collected from interviews with the Mission, project staff, project beneficiaries and other stakeholders. Site visits, direct observations, and other mixed methods outlined in the evaluation matrix below will be employed to inform the evaluation.

These approaches should allow the evaluation team adequate information to assess the project's implementation and results against its objectives, scope of work, deliverables, work plan, etc. and to determine whether project activities are progressing as planned, how well activities are being implemented and to what extent they meet with targets set in project documentation. Data collected during this evaluation should also provide information on whether the target audience was reached, and how external and internal factors affected project implementation and results.

In accordance with ADS 205.3.8.2, this evaluation is to adequately capture the situations and experiences of both males and females.

ILLUSTRATIVE DATA COLLECTION METHODS AND TOOLS

The evaluation is expected to use a mixed methods approach. The methodology for this evaluation will draw upon qualitative methods, including a desk review, key informant interviews (KII) and focus group discussions (FGD). Methods that will be used for gender sensitive data collection are the following:

- **Desk review:** The evaluation team will do a systematic literature search to identify evaluations, tools and other documents on agricultural value chain projects; the evaluation team will also review existing documents including CDCS, RFA, contract agreement, contract modification, , RIG Audit report, , initial assessments, periodic reports (annual, quarterly, other) and all other reports produced by USAID, Social Impact, and LWP as well as previous evaluation reports of similar projects if available to determine service delivery mechanisms, quality of project results, alignment with CDCS, validity of development hypothesis, quality of program management and the progress against project targets.

- **Interviews of LWP and USAID Key Staff:** KII to obtain more detailed, in-depth understanding about specific issues will be conducted with a mix of male/ female key personnel, such as USAID Local Development Office, LWP COR, DAI/LWP COP and DCOPs, DAI/LWP M&E team, DAI/LWP technical team and engineers, private sector engagement specialist, in addition to gender focal points in the different entities. Discussions will focus on how the interventions were selected, designed and implemented, how the gender gaps were identified and addressed, as well as suggestions for improving the LWP activity outcome during the remaining LOP. Interviews with other key stakeholders will also be conducted using a structured questionnaire as a guide during interviews.

- **KII and FGD with LWP beneficiaries and stakeholders:** The Evaluation Team will conduct KIIs and FGDs (as appropriate) with selected water sector actors and the project beneficiaries (water utilities employees, training recipients, NGOs representatives, private sector entities, farmers trained on irrigation techniques, etc.) Discussions will be derived from the initial findings of KIIs.

- **Direct site's observations:** The evaluation team will undertake field visits to project sites (i.e. water establishment offices and water stations) utilizing a direct observation guide to obtain a first-hand experience of project outcomes.

DATA ANALYSIS METHOD

The data gathered from the KII and the FGD will be used as the basis for data analysis. Techniques in data analysis will be gender sensitive and include review of existing documentation obtained, conceptualizing coding and categorizing of information obtained in the KII and FGD, examining relationships between the different activity components, activities and achievements as revealed by stakeholders, and authenticating conclusions by triangulation of data obtained from different sources.

The evaluation team will prepare a data source matrix (also called an evaluation matrix) that clarifies how the data is collected. It will include the evaluation questions, the evaluation tool(s), data source(s) and analysis plan for each question. An illustrative version of the matrix is provided below. The technical expert will consider the illustrative evaluation matrix and propose a final matrix for consensual agreement by the evaluation team. To the extent possible given time and budget, the methods used may be revised in response to preliminary findings or obstacles that prevent timely implementation of the proposed method.

This matrix will ensure that a multitude of data sources are considered, and the team will be able to use triangulation of data to answer each question with enriched validity. All the data collected from different sources will be reviewed for reliability and validity, and findings will be compared using multiple methods, data forms and sources of data. Data will be organized and disaggregated by gender, to answer specific evaluation questions in the final report. Differentiation between the findings, interpretations, judgments, recommendations, and the specific sources of evidence supporting these, should be made clear in the final evaluation report.

Table 1. Evaluation Matrix (illustrative Template)

Evaluation criteria	Evaluation questions related to the criteria	Sub question/ Illustrative queries	Data sources	Data collection methods, sample and tools	Data analysis plan
Relevance	To what extent are the LWP objectives appropriate for meeting the CDCS Development Objective?		-RFA -LWP Contract -LWP Project Documents (Workplans, Annual Reported, Quarterly Reports, M&E plans, M&E reports) - KII with USAID staff, stakeholders and technical experts	Secondary Sources - Desk review of project documents Primary Sources - Key Informant Interviews (KIIs) with USAID and LWP key staff, technical experts and USAID stakeholders	- Qualitative analysis
	To what extent are the LWP objectives appropriate for meeting the beneficiaries (regional WE and water-users) needs?	Are the activity assumptions still valid?	-RFA -LWP Contract -LWP Project Documents (Workplans, Annual Reported, Quarterly Reports, M&E plans, M&E reports) - KII with USAID staff, stakeholders and technical experts	Secondary Sources - Desk review of project documents Primary Sources - Key Informant Interviews (KIIs) with USAID and LWP key staff, technical experts and USAID stakeholders	- Qualitative analysis
Effectiveness	To what extent is LWP's interventions progressing towards meeting the objectives of the Activity as stated in the contract	Are the construction activities, management plans and tools, as well as trainings provided to the WE staff effectively improving the service delivery and resource management capacity of the public water utilities?	LWP Project Documents (Workplans, Annual Reported, Quarterly Reports, M&E plans, M&E reports) KII with the WE key personnel (Director generals and employees); FGD with LWP training recipients KII with the private sector entities engages with LWP activities	Secondary Sources - Desk review of project documents Primary Sources - Key Informant Interviews (KIIs) with LWP beneficiaries - FGD with LWP trainees and water users.	- Qualitative analysis
		Are the grants provided to NGOs/CSOs, as well as implemented awareness and media campaigns contributing to the advancement of the	FGD with farmers using new irrigation techniques KII with NGOs representatives - grantees to conduct water management campaigns		

		civic engagement in water management improving and the citizens' perception of water utilities' role in providing a necessary and valuable service?			
		Are the initiatives implemented with the private companies improving the overall Involvement of the private sector in Water Management ?			Qualitative analysis
Crosscutting Gender Integration	To which extent recommendations generated by the LWP Gender Strategy were incorporated in LWP workplan and implemented throughout the activities so far?		KIIs with project managers and administrators at senior levels	Secondary Sources - Desk review of project documents - LWP Gender Strategy Primary Sources - Key Informant Interviews (KIIs) with USAID and LWP key staff, technical experts and USAID stakeholders	Qualitative analysis

MID-TERM PERFORMANCE EVALUATION DELIVERABLES

- **Briefing:** The evaluation team will provide a briefing to USAID prior to the start of the evaluation and at the end of the evaluation. The initial briefing will focus on presenting the evaluation team plan for conducting the evaluation. Discussions with the Mission on the proposed methodologies for the evaluation will result in an Inception Report (a deliverable) that states the agreed methodologies.
- **Inception Report:** PMSPL II team will prepare an Inception Report that is the result of kickoff meetings with the Mission and stakeholders. The Inception Report makes final the methodologies, tools, and evaluation work plan and time schedule. The Inception Report will be submitted to the AOR at USAID/Lebanon for approval. Approval of the Inception Report signals agreement by the Mission and the evaluation team to use the proposed methodologies and tools with adherence to the work plan and time schedule. The Inception Report is Annex A of the evaluation report.
- **Interim Findings Presentation:** Toward the end of the field work, prior to the development of the Draft Report, the team will carry out a preliminary findings presentation at USAID to discuss findings, conclusions and recommendations.
- **Draft report:** A draft report of the findings and recommendations will be submitted to USAID AOR clearly describing findings, conclusions, and recommendations, within two weeks of completing the data collection. USAID will provide comments on the draft report within two weeks of submission. ADS 201 directives state that draft reports “must undergo a peer review organized by the office managing the evaluation”, and that “reports must be shared with implementing partners of the projects or activities addressed in the evaluation.” The evaluation team will consider USAID comments and the comments of other stakeholders and revise the draft report accordingly and as appropriate for an independent evaluation. Where differences of opinion exist, these will be presented in a Statement of Differences Annex.
- **Final Report:** The final evaluation report will be provided to USAID in MS Word and Adobe PDF within 15 calendar days following receipt of final comments from USAID. The report will include all of the components outlined in the “Structure of the Evaluation Report”, but not necessarily in the order specified below. The report will not exceed 25 pages (excluding appendices). Appendices should at a minimum include the Inception Report for the evaluation; a list of individuals interviewed; a complete description of the methodology used for the evaluation; and any data collection used. The report will be submitted in English, electronically in MS Word format and compliant with USAID Graphic Standards.

Utilization and Dissemination Plan: The final approved evaluation report will be shared with USAID/Lebanon staff members. The report will follow USAID branding requirements. Evaluations at USAID should be transparent: Findings from evaluations will be shared as widely as possible with a commitment to full and active disclosure. ADS 201.3.5.15 operationalizes this principle by requiring Operating Units to plan for evaluation dissemination: “Missions and Washington OUs must plan for dissemination and use of the planned evaluation. Missions or Washington OUs should consider how key partners and other development actors would best receive evaluation information and plan their communications products accordingly.” A dissemination plan will be prepared and filled prior the kick off the evaluation and upon the approval of the SOW.

As a part of the post Evaluation action plan, the evaluation team will follow up to facilitate and enhance use through one or more of the following steps:

- o Distribute the final approved evaluation report to DAI, LWP and other stakeholders at the discretion of USAID/Lebanon.
- o Uploaded the final approved evaluation report to the DEC for public access
- o Develop a utilization plan with primary intended users
- o Adapt and reformat findings for different audience.
- o Watch for emergent opportunities to reinforce findings
- o Continue to build evaluation capacity during the follow up process.
- o Conduct a client satisfaction survey,
- o Conduct a tracer survey.

REPORTING GUIDELINES

USAID's Evaluation Policy requires that all evaluation SOWs include USAID's Criteria to Ensure the Quality of the Evaluation Report. The LWP mid-term performance evaluation team is advised to incorporate these guidelines in their report where relevant and applicable to the evaluated contract agreement.

Guidelines on the Structure of the Evaluation Report

The findings from the evaluation will be presented in a draft report at a full briefing with USAID/Lebanon and key stakeholders. The format for the evaluation report is as follows:

1. Abstract of not more than 250 words briefly describing what was evaluated, evaluation questions, methods, and key findings or conclusions.
2. Glossary & Acronyms
3. Table of Contents (1 pp.);
4. Executive Summary: that summarizes key points (purpose and background, evaluation questions, methods, findings, and conclusions). (2 to 5 pp.);
5. Introduction: purpose, audience, and synopsis of task (1 pp.);
6. Background: Brief overview of LWP activity context, USAID/Lebanon program strategy and activities implemented in response to the development problem, a brief description of LWP, and purpose of the evaluation (3 pp.);
7. Methodology: Describes evaluation methods, including constraints and gaps (1 pp.);
8. Key Findings and Conclusions for each evaluation question; including a reference to the data quality of the evidence provided (10 pp.);
9. Issues: provide a list of key technical and/or administrative issues, if any (1 pp.);
10. Recommendations: Identify list of recommendations based on the evaluation findings.
11. Annexes: (A) Scope of Work/Inception Report, (B) Persons Interviewed, (C) Bibliography, (D) Data Collection Tools, (E) Data Analysis, (F) Focus Group results (if applicable), (G) AOB, (H) Statement of Differences

TEAM COMPOSITION

USAID's ADS requires that at least one member of every evaluation team be an evaluation specialist. The PMSPL II team will provide evaluation specialization support to the evaluation team backstopped by Social Impact's home office.

The team will include a technical expert who will act as the Team Leader. The **Team Leader (Expatriate)/ Water Sector Expert** should have a professional background in water utility and resources management or civil engineering in the water sector. He/She should preferably have work experience in water sector development strategies and development programs in developing countries. This person shall be responsible for coordinating and directing the overall evaluation, including preparation and submission of the draft and final evaluation report. He/she should have a minimum of 10 years' experience in the design, implementation, and/or evaluation of foreign assistance water sector projects with organizations like USAID, the United Nations, or the World Bank. He/she should have an advanced degree in civil engineering, Mechanical Engineering, Environmental Engineering, Public Administration, or in another relevant area and with sufficient knowledge of gender sensitive evaluations. The team leader should have excellent written and oral communication skills in English (45 days LOE).

The evaluation team will consist of a Team Leader/Water Sector Expert with technical support from PMSPL II evaluation team. PMSPL II staff works alongside the technical expert/evaluator and forms a part of the evaluation team. SI HO has budgetary provision for additional technical evaluation support that might be needed and providing quality assurance for the evaluation through SI's EQUI (Evaluation, Quality, Use and Impact) initiative. PMSPL II resident staff and HO staff participate in drafting, reviewing and editing the draft final report before circulating to the stakeholders for comment and review. Preparation of the evaluation report is the responsibility of the team leader/technical expert. Final editorial responsibility and quality control for the report is with Social Impact. Comments received are to be address by the team leader and the technical expert supported by the PMSPL II staff.

The draft evaluation report is to be reviewed by USAID/Lebanon and, at the request of USAID/Lebanon, a broad range of stakeholders. Comments received after the budgeted end date for this evaluation, may be addressed in a Statement of Differences Annex at the discretion of USAID/Lebanon.

PMSPL II proposes to recruit a technical expert to collaborate in this evaluation as described above. PMSPL II will certify that there is no conflict of interest or potential conflict of interest with respect to the performance of this evaluation on the part of the contractor and the contractor's team members. Social Impact will guarantee that substitutions will not be made for individuals proposed as team members without the approval of USAID.

PROVISIONAL EVALUATION MANAGEMENT

Pre Field-Work (Week 1): PMSPL II staff Identify and recruit the technical experts and assign a team leader. Obtain key documents, establish key contact, liaison with LWP to set up interviews with project staff and prepare interview schedule with LWP stakeholders and beneficiaries.

Evaluation Kick-off (Week 2): The Team Leader arrives in country. PMSPL II COP meets with the Team Leader, Local Expert and PMSPL II evaluation team to assign roles and responsibilities, agree on the evaluation work plan, list of people to be interviewed, number and type of focus group discussions to be carried out, outline of the final evaluation report. During this week the evaluation team will develop the interview guide, the focus group discussion guide and all the necessary forms for collection

of informant narratives, design of field work, and strategy for qualitative analysis takes place. Technical advice and counsel might be sought from SI HQ at this time. The pre-field work should be accomplished prior to the data collection process.

The team will meet with USAID Program Office and COR for an in-country briefing to agree on the evaluation details, methodology and reporting guidelines. Additional documentation may be requested at that time. Logistics for the field visits will also be made final.

Field Work (weeks 3 to 5): Interviews with key stakeholders including, USAID key staff, LWP staff, partners and sub-contractors will be carried out. The team will also interview project stakeholders and beneficiaries whose work have been impacted by project activities. The evaluation team will also carry out focus group discussion with project beneficiaries and stakeholders.

Post Field-Work (weeks 6 to 10): Submission and presentation of the completed draft final report is the responsibility of the Team Leader; an out-brief will be carried out by the team leader and the evaluation team to the Mission. The expat technical expert travels from Lebanon, but remains available to respond to USAID and stakeholder comments as needed.

Review Draft Report (week 11): USAID and stakeholders are requested to review the draft report and prepare comments within two weeks of the submission of the final evaluation report.

Respond to Draft Report Comment (week 12): PMSPL II responds to comments from USAID and stakeholders revising the report as necessary.

Final Report Preparation and Quality Assurance: SI HO applies EQUI quality assurance steps to the draft report. The final report will be submitted no later than two weeks following receipt of final comments from USAID/Lebanon. This includes time needed by SI HQ to edit and review the report prior to submission as a final evaluation report to USAID/Lebanon. The deadline for final report submission is Mid-December 2018.

Table 2. LWP Evaluation Illustrative Work Plan



Table 3. Illustrative Evaluation LOE/STTA

Start date Early October 2018 Final DEC-ready report due Early December 2019.

Proposed Staff	Labor Category	Pre-Field –PMSPLII	Pre-Field Evaluation Team	Evaluation Kick-Off		Fieldwork and Data Collection	Post Field Work				Final Report Submission	Total
		Recruitment, SOW, Workplan, etc.	Preparation - Reading, Work plan	Travel to Lebanon	In-Brief and final planning Inception Report	Interviews, Focus Group Discussions	Preliminary analysis	Present Main Findings & Debriefing	Travel from Lebanon	Data Analysis, Report Writing, Submit Draft to USAID Mission	Respond to USAID comments -Submit Final Report to USAID mission	
Team Leader (Expat)	Consultant	0	5	2	4	15	4	1	1	8	5	45
Social Impact Home Office Support	PE Specialist	3	0	0	2	0	1	0	0	2	2	10
PMSPL 2 Evaluation Support	M&E Specialist / Full time equivalent	5	5	0	3	15	3	1	0	3	5	40
TOTAL LOE		8	10	2	9	30	8	2	1	13	12	95

ANNEX I: LWP LOGICAL FRAMEWORK

Table I. LWP Activity Logical Framework

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Assumptions
LWP Project Objective: Improved water governance and protection to ensure reliable and sustainable access to water in Lebanon	1. (DO 1b) Percentage of water customers indicating satisfaction with their water service in demonstration areas. 2. (DO 1d) Number of entities with enhanced capacity as a result of USG support	LWP records, CPSS	Security situation in Lebanon does not significantly deteriorate. International donors working on the water sector development are coordinating their activities and aligning them with each other and with RWEs and LRA. RWEs and LRA are willing participants in project activities.
LWP Purpose A: Improved service delivery and resource management capacity of five public water utilities	3. (IR 1.2c) Percentage of cost recovery in demonstration areas. 4. (IR 1.2b) Number of new subscribers to the public water services as a result of USG assistance in demonstration areas. 5. Number of people receiving improved water service quality as a result of LWP 6. Percentage of non-revenue water in demonstration areas. 7. Percentage of lost service hours in demonstration areas.	ERP data, CAS records	RWEs and LRA are willing participants in project activities. Citizens are willing to subscribe in return for better public water services. RWEs are willing to adopt a billing system partially based on consumption. RWEs have qualified staff to read meters and keep logs of these readings
Sub-Purpose A.1: Enhanced Capacity of RWEs and LRA	8. (IR 1.2.1a) Percentage of subscribers who pay their bills in demonstration areas.	ERP data	Citizens are willing to pay their bills in return for better public water services.
Output A.1.1: RWE and LRA staff trained on management and technical aspects (Task A.1, A.2, A.4,	9. (IR 1.2.1c) Number of participants in on-the-job training and workshops	LWP training records/Trainet	Staff and senior management in RWEs and LRA are willing to cooperate with LWP utility coordinators and technical

A.5, B.1)			teams to participate in training activities.
Output A.1.2: Management tools adopted by RWEs and LRA (Task A.1, A.2, A.4, A.5)	10. Number of new/updated management tools adopted by RWEs and LRA	LWP Records, ERP data	RWEs and LRA are willing to use and adopt new and updated management tools. RWE and LRA are willing to share their data to be used in the management tools.
Sub-purpose A.2: Improved water conservation and protection	11. Percent efficiency of irrigation systems 12. Volume of water treated	Meter reading logs (at RWEs), ERP system, LWP records	Qualified subcontractors for infrastructure activities are available Meter readings at water establishments are accurate Infrastructure is done for a closed system or a qualified technical need RWEs are willing to protect and maintain meters. RWEs have qualified staff to read meters and keep logs of these readings.
Output A.2.1: Initiatives for water protection and conservation identified and implemented (Task A.8, A.9, A.10)	13. Number of new water resource conservation and protection initiatives implemented	LWP records	Solutions for water conservation and protection are sustainable and adopted by RWEs.
Output A.2.2: Water quality assurance plans adopted by RWEs and LRA (Task A.4)	14. Number of water quality assurance plans adopted by RWEs and LRA	LWP records	Qualified university water labs available for collaboration and coordination.

Sub-Purpose A.3: Improved water service infrastructure	15. (IR 1.2.2a) Percentage of technical losses of water in demonstration areas.	Meter reading logs	Infrastructure is done for a closed system or a qualified technical need. RWEs are willing to protect and maintain meters. RWEs have qualified staff to read meters and keep logs of these readings.
Output A.3.1: Water service facilities constructed and rehabilitated (Task A.3, A.6, A.7)	16. (IR 1.2.2b) Number of functioning water facilities constructed or rehabilitated with USG assistance	LWP records (pictures)	Qualified subcontractors for infrastructure activities are available.
LWP Purpose B: Improved civic engagement in water management and advanced citizens' perception of water utilities' role in providing a necessary and valuable service	17. Percentage of wasteful uses of water in both rural and urban settings 18. Percentage of citizens who trust RWEs as public water service providers in demonstration areas.	Meter reading logs (at farms and industries), CPSS	Civil Society and private sector are willing partners in collaboration for project activities. Economic situation in the country allows for such investments to be made by the private sector, industry or farmers. Citizens are willing to adopt changes at the household level to decrease water consumption. RWEs' management are willing to cooperate with LWP team in public outreach events.
Sub-Purpose B.1: Improved water use efficiency in industry and agriculture	19. Number of organizations and farmers that have applied new water saving technologies and/or management practices	LWP records, Meter reading logs (at farms and industries)	Farmers and industries are aware of the need to conserve water and are willing to change.
Output B.1.1: Water saving tools and technologies introduced to the commercial sector (Task A.8, B.2)	20. (STIR-2) Number of tools, technologies, or practices introduced to the commercial sector	LWP records	Water saving tools and technologies are readily available in Lebanon.
Output B.1.2: Water users trained on conservation and preservation of water resources (Task A.8, B.2, B.3)	21. (IR 1.2.1b): Number of water users trained on conservation and preservation of water resources	LWP training records/Trainet, Attendance logs	Citizens are willing to adopt changes to decrease water consumption.

Sub-purpose B.2: Increased citizen awareness and enhanced perception on water resource management and conservation	22. Percentage of citizens who have taken steps to conserve water after seeing or hearing LWP messages in demonstration areas. 23. Percentage of customers who report satisfaction with the service and response of RWEs' customer service centers in demonstration areas. 24. Number of USAID-assisted local CSOs engaged in community, regional, and national programs	CPSS results LWP records	Citizens are willing to adopt changes at the household level to decrease water consumption. Customers notice and appreciate the changes at the customer service centers in their corresponding RWE service area. Civil society organizations and local authorities are willing partners in collaboration for project activities.
Output B.2.1: Media campaigns implemented in targeted areas (Task A.2, B.3)	25. Number of media campaigns implemented	LWP records	Media campaigns are able to reach out to most regions.
Output B.2.2: Citizens reached through LWP media Campaigns (Task B.3)	26. Number of citizens reached through media campaigns	LWP records, media tolls, CAS records	Media campaigns are able to reach out to most regions.
Output B.2.4: Customer service support activities implemented at RWEs (Task B.1)	27. Number of customer service related interventions implemented	LWP records	RWEs are cooperative with LWP strategic communications team.
LWP Purpose C: Improved Private Sector Involvement in Water Management (Cross-Cutting) Output C.1: Pilot PSPs developed to improve water service delivery, leverage funding, or improve water use behavior (Task C.1, C.2, A.2, A.3, A.6, A.9, B.1, B.2, B.3)	28. Number of private sector partnerships piloted and developed to improve water service delivery, leverage funding, or improve water use behavior	LWP records, documentation of partnerships	Private sector organizations are cooperative and willing to invest. RWEs management are willing to cooperate on PSP initiatives.

ANNEX 2: LWP PERFORMANCE INDICATORS TARGETS

RF reference	Indicator(with disaggregation)	Reported result Y2 – 2017 in progress report	Reported result SAI 2018	LOP Target
1. (DO 1b)	Percentage of water customers indicating satisfaction with their water service in demonstration areas	Not reported	Not reported	87%
2. (DO 1d)	Number of entities with enhanced capacity as a result of USG support	Not reported	Not reported	5
3. (IRI.2c)	Percentage of cost recovery in demonstration areas	Not reported	Not reported	15%
4. (IRI.2b)	Number of new subscribers to the public water services as a result of USG assistance in demonstration areas	1,718	Not reported	2700
5.	Number of people receiving improved water service quality as a result of LWP	0	421,805	720,000
6.	Percentage of non-revenue water in demonstration areas	54% (=baseline)	Not reported	-15% (from baseline)
7.	Percentage of lost service hours in demonstration areas	Not reported	Not reported	-15% (from baseline)
8. (I.2.1a)	Percentage of subscribers who pay their bills in demonstration areas	NLWE 79% BWE 42% BMLWE 84% SLWE 76%	Not reported	NLWE 89% BWE 51% BMLWE 88% SLWE 87%
9. (I.2.1c)	Number of participants in on-the-job training and workshops	104	159	863
10.	Number of new/updated management tools adopted by RWEs and LRA	4	7	47
11.	Percent efficiency of irrigation systems	0	Not reported	+15%
12.	Volume of water treated	0	34,770	51,000 cubic meter/day
13.	Number of new water resource conservation and protection initiatives implemented	1	3	6
14.	Number of water quality assurance plans adopted by RWEs and LRA	0	0	5
15. (IR I.2.2a)	Percentage of technical losses of water in demonstration areas	Not reported	Not reported	-10%

RF reference	Indicator(with disaggregation)	Reported result Y2 – 2017 in progress report	Reported result SAI 2018	LOP Target
16. (1.2.2b)	Number of functioning water facilities constructed or rehabilitated with USG assistance	1	3	53
17.	Percentage of wasteful uses of water in both rural and urban settings	0	Not reported	-15%
18.	Percentage of citizens who trust RWEs as public water service providers in demonstration areas	Not reported	Not reported	53%
19.	Number of organizations and farmers who have applied new water saving technologies and/or management practices	47	22	47
20.	Number of tools, technologies, or practices introduced to the commercial sector	5	Not reported	5
21. (1.2.1b)	Number of water users trained on conservation and preservation of water resources	182	874	5800
22.	Percentage of citizens who have taken steps to conserve water after seeing or hearing LWP messages in demonstration areas	Not reported	Not reported	25%
23.	Percentage of customers who report satisfaction with the service and response of RWEs' customer service centers in demonstration areas.	Not reported	Not reported	87%
24. (IR 1.4a)	Number of USAID-assisted CSOs engaged in community, regional, and national programs.	6	1	5
25.	Number of media campaigns implemented.	1	Not reported	7
26.	Number of citizens reached through media campaigns.	35000	Not reported	114000 (Lebanese) 22600 (Syrians)
27.	Number of customer service related interventions implemented.	7	1	22
28.	Number of private sector partnerships piloted and developed to improve water service delivery, leverage funding, or improve water use behavior.	4	7	12

Annex 2: List of Documents and Sources Reviewed

LWP Documents

LWP Reports List

1. 181128-LWP Reports List.docx

Approvals

2. 170804-Del 31 Approval Request.pdf
3. 170828-Del 8.a Task Order Approval Request.pdf
4. COR Approval Deliverable 8a.pdf
5. Del 31 COR Approval.pdf

Environment

6. 161123- Environmental Manual - Final.pdf
7. Initial Environmental Examination IEE - LWP.pdf
8. Jezzine ERAC approved 06202018.pdf

ERP

9. 181116-Institutional Development Activities.pdf
10. Effectiveness Team Extra Activities.xlsx
11. Accounting SLWE Doc- Final.pdf
12. Budget SLWE Doc- Final.pdf
13. Cases SLWE Doc- Final.pdf
14. Cash Management SLWE Doc- Final.pdf
15. Collection SLWE Doc- Final.pdf
16. Document Register SLWE Doc- Final.pdf
17. Hr and Payroll SLWE Doc- Final.pdf
18. Purchasing SLWE Doc- Final.pdf
19. Stock SLWE Doc- Final.pdf
20. Subscribers SLWE Doc- Final.pdf

Fee schedule

21. 181116-Fee Schedule-Tasks Only (updated PWS).xlsx

Gender

22. Gender Integration Actions.xlsx
23. LWP gender analysis and gender strategy__
24. A Gender Checklist for Managers of Water Programs.docx

M&E

25. 170620-LWP Monitoring and Evaluation Plan-CLEAN-V2.pdf
26. 180719-LWP_IM_DATA.XLSX
27. 180919-Y3SA2 M&E report_DRAFT.pdf
28. 181129-LWP Sustainability Status Table_v3

Communications

29. 160919-LWP Citizen Perception and Satisfaction Survey Analysis.pdf

- 30. I70928-Communications Strategy for RWEs-Final.pdf
- 31. I71024-BMLWE Key Communication Message.pdf
- 32. LWP Communication May 2017.pptx
- 33. I81015-LWP Stakeholder-beneficiary contact list.xlsx

Performance Work Schedule

- 34. I70330-LWP PWS Year 2-Mark Up.doc
- 35. I80910-LWP PWS Year 3-responses to RW.doc
- 36. I81029-LWP PWS Year 3-Clean.doc

Quarterly-Annual Reports

Year 1

- 37. I61109-AnnexI-Y1-Annual (Version 2).xlsx
- 38. AnnexI-Y1-Annual-Report.pdf
- 39. AnnexI-Y1-Q3-report.pdf
- 40. LWP-AnnexI-Y1Q1&Q2-report.pdf
- 41. LWP-Y1-Annual Report.pdf
- 42. LWP-Y1-Q1&Q2 Report.pdf

Year 2

- 43. LWP-Y1-Q3-Report.pdf
- 44. I71106-Annex H-AnnualY2.xlsx
- 45. I71106-Annex I-AnnualY2.xlsx
- 46. Annex H-Y2-Q3-Report.pdf
- 47. Annex I-Y2-Annual-report.pdf
- 48. Annex I-Y2-Q2-Report.pdf
- 49. AnnexH-Y2-Q1-Annual-report.pdf
- 50. LWP-Y2-Q1-Report.pdf
- 51. LWP-Y2-Q2-Report.pdf
- 52. LWP-Y2-Q3-Report.pdf
- 53. LWP-Y2 AnnualReport.pdf

Year 3

- 54. I80919-Y3SA2 M&E report_DRAFT.pdf
- 55. I81114-Y3-Annual Report-Clean.pdf
- 56. Annex G- Communication Y3-Q1-report.pdf
- 57. Annex H- Communication Y3-Q2.pdf
- 58. Annex H- Communication Y3-Q3.pdf
- 59. Annex H-Y3-Q1-report.pdf
- 60. LWP-Y3-Q1 Report.pdf
- 61. LWP-Y3-Q2-Report.pdf
- 62. LWP-Y3-Q3-Report.pdf

Training

- 63. I70308-TNA Final.pdf
- 64. I81128 - Annual Training annex.docx

Work Plans

- 65. Year 1 Work Plan

66. Y1-WP-Annex A-Deliverables.pdf
67. Year 2 Work Plan
68. Y2-WP-Annex B Demonstration Activities.pdf
69. Y2-WP-Annex C Outside Demo Area Activities.pdf
70. Y2-WP-Appendix A-Deliverables.pdf
71. Year 3 Work Plan
72. Appendix A-Y3 Deliverables.pdf
73. Appendix A-Y3 Deliverables.xlsx
74. Appendix B-Demonstration Area Activities.pdf
75. Appendix C-Projects Outside Demo Areas.pdf
76. Year 4 Work Plan
77. LWP Year 4 Work Plan.pdf
78. Y4-WP-Appendix B-PODA Activities.pdf
79. Y4-WP-Appendix C-Sanitation-activities.pdf
80. Y4-WP-AppendixA-demonstration-area-activities.pdf

WRM

81. I80926-Summary Chabrouh Project Lot I .xlsx
82. I81112-WRM Summary of activities.xlsx
83. I81203-NRW Template-HEO.pdf
84. I81008- HEO NRW.pptx
85. 3a-WDM workplan Haouch El Oumara.pdf
86. 3b-WDM workplan Koura.pdf
87. 3c-WDM workplan Jezzine.pdf
88. 3d-WDM workplan Metn.pdf

RWEs

89. I60707- GIS Assessment Report- Final.pdf
90. I60818-Final Financial Audit Manual.pdf
91. I60818-Final Performance Audit Manual.pdf
92. I60906-RWEs Fixed Assets Manual- Final.pdf

BWE

93. I71108-BWE Business Plan 2016-2020 - Revised.pdf
94. I80903-BWE Assets and Cost Centers.pdf
95. BWE - Fixed Assets.pdf

LRA

96. I70928-LRA Gauging Stations Summary-Final.pdf
97. I80625-Litani WQM-Final-clean.pdf

NLWE

98. I61205-NLWE Business Plan.pdf
99. NLWE fixed Assets Summary List.pdf

SLWE

100. I70201-SLWE Business Plan 2016-2020.pdf
101. I71003-SLWE Risk Mgt and Executive Plans.xlsx

I02. SLWE Assets Summary List.pdf

Grantee

Atayeb Al Rif (Grantee):

I03. Final Report_AAR.pdf

MOEW

I04. Government of Lebanon, Ministry of Energy and Water National Water Sector Strategy, December 2010

SI A&E

I05. A&E SOW.docx

I06. Social Impact -SVR#88a - Jezzine DA-06-11-2018.docx

I07. Social Impact -SVR#88b - Jezzine DA-13-11-2018.docx

I08. Social Impact -SVR#88c - Jezzine DA-23-11-2018 (1).docx

I09. Social Impact -SVR#88c - Jezzine DA-23-11-2018.docx

USAID

CDCS

I10. I50224 CDCS Lebanon - Public - FINAL.docx

Contract and Mods

I11. 2016-03-02 LWP Mod 1 with DAI.pdf

I12. 2017-03-20 LWP Mod 2.pdf

I13. 2017-06-22 LWP Mod 3 FE.pdf

I14. 2018-03-27 LWP Mod 4.pdf

I15. 2018-09-27 LWP Mod 5 (Inc. Fund. \$12,213,000).pdf

I16. LWP Contract-AID-268-N-1-15-0001.pdf

RFTOP

I17. RFTOP LWP amend 1 June 11.docx

KEY INFORMANT INTERVIEWS PROTOCOL

Good morning/afternoon and thank you for meeting with us today. As mentioned during our interview request, we are working with USAID to conduct the final evaluation of the LWP Project. We work for a company called Social Impact.

The evaluation is intended to provide an informed assessment of LWP progress to date learn lessons for new projects if needed. It is very important for you to know that this study will not determine if you will receive any services/support/funding now or in the future. The way you answer our questions will not determine if you will receive any kind of government or NGO assistance now or in the future. There is no direct benefit to you or your community for your participation in this study, besides toward the goal of improving this project or new project.

Our team has had the opportunity to review some background documents to get a better sense of the design and implementation of the project. However, these documents can only tell us so much. We would like to speak with you today to hear about your experience, in your own words, in order to help us better understand how these projects look and function “on the ground.”

It is important to understand that while we would like your help in this study, you do not have to take part if you do not want to, and you do not have to answer any questions if you do not feel comfortable doing so. If you decide to take part, your responses will be kept strictly confidential. This means that your name will not be mentioned anywhere in the report, and will not be provided to anyone, including USAID/DAI/LWP or anyone in your community. Specifically:

- We will collect individuals’ names and the farmer group they belong to. A list of focus group participants will be made available as an annex to the final evaluation report, but those names and positions will not be associated to any particular findings or statements in the report.
- We may include quotes from respondents in the evaluation report, but will not link individual names, organizations, or personally identifiable information to those quotes, unless express written consent is granted by the respondent. Should the team desire to use a particular quote, photograph, or identifiable information in the report, the evaluators will contact the respondent(s) for permission to do so.
- All data gathered will be used for the sole purposes of this evaluation, and will not be shared with other audiences or used for any other purpose.

Your participation in this focus group discussion is voluntary and if you do not feel comfortable answering a particular question, please let us know and we will simply go on to the next question.

Do you consent to participate in this interview (confirm everyone’s consent individually)? By saying “yes,” and participating in this study, you are indicating that you have heard this consent statement, had an opportunity to ask any questions about your participation and voluntarily consent to participate.

Do you have any questions for us before we get started? If you have questions or concerns about the study after we leave today, you can contact [name of national or international evaluation team member]; the contact information is on the card I gave you.

KII QUESTIONS BY RESPONDENT CATEGORY

Notes to Facilitator/Interviewer

The interview should be led by the interviewee, and only guided by the interviewer. The interview should be a relaxed conversation. The topics reported below present a list of topics to be covered during interviews. They also include concrete questions to guide the conversation and to cover each topic. The reason for focusing on topics rather than on questions is that the way in which a question would need to be formulated varies considerably depending on the interviewee's specific knowledge, attitude and circumstances. The listed topics will allow the interviewer to achieve clear predetermined interview goals, but the actual questions will be adapted –as one does in a normal conversation- to the conversation tone, interviewee's attitude, and knowledge. It is to be expected that the same key issue may naturally be transformed into several questions with one interviewee and only into one question with another.

KII with Donors

Date:

Purpose:

Location:

Participants:

Organization:

- 1.

SI:

1. Joanna Khater, Senior M&E Specialist
2. Jeffrey Fredericks, Consultant

Issues to be discussed:

1. Scope of Activities
2. Coordination with LWP
3. Persons being Seconded
4. Problems and Issues

KII Questions for Municipalities (Mayors):

- I. Introductions
 - a. Name
 - b. Municipality
 - c. Population
2. What problems do you face in the water sector:
 - a. Drinking water (coverage/pressure/hrs per day)
 - b. Waste water removal (septic tank/central)
 - c. Stream pollution
 - d. GW quality/costs
 - e. Urban drainage/floods
 - f. Solid waste
3. Who provides you with water/waste removal services:
 - a. Drinking water
 - b. Waste water removal
 - c. Solid waste removal
 - d. Urban drainage
 - e. Flood/emergency management
4. What is your connection with LRA? Water Establishment?
5. Do you have funds & expertise for managing water services yourself?
 - a. Planning
 - b. Construction
 - c. O&M
 - d. Billing
6. Is this something you can do? Up to what level?
7. Are the Municipalities involved in the irrigation or ag sector?
8. How has the USAID project helped the municipalities?
9. Do you see the need for a River basin Committee?
 - a. Why?
 - b. What is needed to make this happen?

KII Questions for RWE DG:

1. How long have you held the Position of DG? What was your previous position?
2. Three key issues facing you as DG?
 - 1.
 - 2.
 - 3.
3. Priorities:
 - a. Infrastructure
 - b. Management
 - c. Finance
 - d. O&M
 - e. Staff
 - f. Training
 - g. Customer awareness
 - h. Syrian Refugee Crisis
4. Special Questions:
 - Staffing problems
 - Need for reorganization
 - Demo districts
 - WW
 - PPP
 - Business Plan vs Risk Management Plan
 - Effectiveness of training programs
 - Status of USAID Construction
 - Status of ERP
5. Review list of project deliverables:
 - Useful/ not useful/problems/success stories

6. How do you interact with USAID project
 - a. Monthly meetings
 - b. Utility Coordinator
 - c. LWP committees
 - d. training events
 - e. Review of Year 4 Work Plan
7. Are there any factors that are interfering with implementing LWP activities?
8. Coordination:
 - a. Donors
 - b. MOEW
 - c. LRA/RWEs
 - d. Municipalities
 - e. Customers
9. Sustainability
 - a. How will you ensure sustainability of the LWP activities?
 - b. Do you have the capacity to manage the infrastructure or technology, or what assistance do you need to ensure that capacity is in place?
 - c. Where will follow-on funding or equipment come from? Do you have the capacity to bid for or purchase any follow-on funding, services, or equipment?
 - d. Is there an exit strategy?
 - e. For any procurement action or grant award, do you have capability to sustain the activities, and incorporate conditions to ensure sustainability.
10. Gender
 - a. How does LWP integrate gender issues into their work?
11. Suggested persons to meet/places to see?

KII Questions for RWE Head of Station:

1. Name:
2. Organization:
3. Key issues:
4. Water demand management
 - a. Source meters
 - b. Water levels
 - c. Network meters
 - d. HH meters
 - e. NRW
 - f. Customer engagement
 - g. Handheld devices (#)
 - h. Leak detection
 - i. Asset management/ GIS network mapping
 - j. Training
5. Water Supply system:
 - a. Source (wells, surface)
 - b. Network:
 - c. HH
6. Staff
7. Budget
 - a. O&M
 - b. Labor
 - c. Energy
 - d. Replacement parts
8. Local maintenance contract
 - a. Replacement parts
 - b. Source of pumps
 - c. Turned over to water establishment
 - d. Training
 - e. Ops manual

USAID COR KII Questions

Date:

Purpose:

Location:

Participants:

USAID:

1.

SI:

3. Joanna Khate, Senior M&E Specialist
4. Jeffrey Fredericks, Consultant

Issues to be discussed

5. Original concept for LWP
6. Hope to see at completion
7. Conceptual strategy is being implemented.
8. There are some activities that will be dropped.
9. How does evaluation fit into new USAID CDCS. Old CDCS covers 2014-2018
10. Does fit CDCS
11. Indicators
12. Define Water Governance
13. Project relationships
14. A&E team
15. RWE Budgets:
16. Demo Area
17. CLIN allocation:
18. If project were short on money
19. Defects/Liability period
20. Request for Docs: Ok for all
21. Suggested interviews. or visits

Questions for Farmer/User Association:

9. What is the name of your organization?

10. Who do you represent?

11. Characteristics of system;

- a. # of farmers
- b. Number of ha?
- c. Size of land holdings?
- d. Types of crops?
- e. Types of irrig? How often? Source Surface vs GW? Cost difference? Quality difference?
- f. Major problems in system
- g. Link with LRA
- h. Women farmers? Role of women in agriculture?

12. What are your roles & responsibilities

13. Are you a legal organization?

- a. Can you collect money?
- b. How do you handle violations?
- c. Can you sign contracts?

14. Roles & resp of LRA:

- a. Who is your contact with LRA?
- b. Do you work with MOA or other organizations?

15. How is water delivered?

- a. Schedule? Time & amount?
- b. Quality
- c. Measured
- d. Pay for services?
- e. How often?

16. What training & support have you received from USAID Project?

17. Are you confident you can proceed on your own?

18. What happened before with World Bank WUA initiative?

19. To be successful what do you need?

USAID Suggested Questions:

- 1. New enthusiasm & interest of RWE DG's
- 2. b. Progress since 2014 USAID LWWSS/LRBMS evaluation
- 3. c. RWE key issues such as staffing.
- 4. d. DG perception on need for RWE reorganization
- 5. e. Effectiveness of LWP training programs
- 6. f. Criteria used for selecting Demo districts and validity.
- 7. g. Usefulness of substituting RMP for Business Plan.
- 8. h. Success of Component C with corporate social responsibility as a project implementation tool.
- 9. GOL/RWE/Municipality view of WW sector. Current situation at several of the USAID funded WWTPs.
- 10. j. How well is LWP meeting its deliverables.
- 11. k. Status of construction progress and possible need for project extension.

		LWP Sustainability Table	1. Is there demand for this particular infrastructure, technology, or activity from the recipient?	2. Is there demand for this technology or activity from the recipient's beneficiaries or customers?	3. Does the counterpart have the capacity to manage the infrastructure or technology, or what assistance do they need to ensure that capacity is in place?	4. Where will follow-on funding or equipment come from? Does the recipient have the capacity to bid for or purchase any follow-on funding, services, or equipment?	5. Is there an exit strategy?	6. For any procurement action or grant award, we will require recipients to demonstrate their capability to sustain the activities, and incorporate conditions to ensure sustainability.
Del#	Task	Title	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)
		A.1. STRENGTHEN RWE AND LRA PLANNING AND INTERNAL OPERATIONS MANAGEMENT						
		A.1.1. Strengthen Business Master Planning						
1	A.1.1	Business plans						
3	A.1.1	Water demand management plan in the demonstration area						
4	A.1.1	Water quantity monitoring plan for all rivers in Lebanon including the Upper Litani River Basin						
5	A.1.1	Irrigation master plan						
6	A.1.1	Water and wastewater master plans						
		A.1.2. Fully Implement Enterprise Resource Planning (ERP) and Costing and Operational Analyses						
8.a	A.1.2	ERP						
12	A.1.2	Governance manual						
		A.1.3. Strengthen Assets Valuation and Management						
16.a	A.1.3	Conduct annual updates of assets valuation						
		A.1.4. Improve RWE Internal Performance and Financial Audit						
21.c	A.1.4.	Financial and performance audits will be completed for the utilities that have the staff in place						
125	A.1.4	Organizational structure to reflect current needs						
		A.1.5. Strengthen RWE and LRA Use of GIS for Assets Management and Operations						
22	A.1.5	GIS systems						
23	A.1.5	Plans will be developed to strengthen GIS capacity and systems						
24	A.1.5	Improved use of GIS (on-the-job training) to maintain information on piped networks and equipment, and customers						
25	A.1.5	Mapping demonstration areas of the intervention areas following the area assessments						
		A.2. IMPROVE BILLINGS AND COLLECTION						
27	A.2	Develop communication strategy to improve customer awareness and increase collections in						

		demonstration areas						
28	A.2	Partnership with a bank or financial institution to improve collection efficiency						
30	A.2	Customer register updates in the three demonstration areas						
	A.3. REDUCE NON-REVENUE WATER LOSSES							
32	A.3	Production and district metering for the RWE demonstration areas						
	A.4. WATER QUALITY ASSURANCE PLANS (WQAPs) IN PLACE AND ENFORCED FOR WATER UTILITIES IN THE SELECTED AREAS OF INTERVENTION							
	A.4.1. Strengthen the Capacity of Utilities to Develop WQAPs							
35	A.4.1	Water safety analysis						
39	A.4.1	Service contract to carry out water quality and safety analysis						
40	A.4.1	Public messages/information on water quality in their networks						
41	A.4.1	WQAPs in place						
42	A.4.1	Partnerships between RWEs and municipal governments to conduct joint water quality and safety analysis						
	A.4.2. Strengthen the Capacity of RWEs and LRA in Water Security Analysis and Planning							
43	A.4.2	Water security analysis						
	A.5. TRAINING AND CAPACITY BUILDING TO IMPROVE HOURS OF SERVICE							
48	A.5	Water operator's certification program						
	A.5	Complete ERP and technical training needs assessment for RWEs and the LRA						
	A.6. IMPROVE COMMUNAL WATER SERVICE DELIVERY							
56	A.6	Projects that improve communal water service delivery in affected municipalities/communities						
	A.7. IMPROVE AND EXPAND WATER SERVICES FOR LEBANESE CITIZENS							
	A.7	Infrastructure upgrade projects identified outside of demonstration areas						
63	A.7	Infrastructure upgrade projects completed in demonstration areas						
	A.8. IMPROVE THE EFFICIENCY OF IRRIGATION SYSTEMS IN SELECTED AREAS							
65.b	A.8	Implement selected improvements for LRA facilities						
66	A.8	Partnerships with irrigation equipment suppliers						
	A.9. SUPPORT THE DEVELOPMENT OF CONTEXT-APPROPRIATE MODELS FOR SANITATION SERVICE AND SEWAGE MANAGEMENT							
76	A.9	Sustainable sanitation models will be completed						
	A.10. IMPROVE WATER RESOURCES CONSERVATION/PROTECTION IN THE LITANI BASIN							
82	A.10	Water resources conservation and protection initiatives yielding						
	B.1. IMPROVE CUSTOMER SATISFACTION WITH SERVICES PROVIDED BY PUBLIC WATER UTILITIES							
87	B.1	Develop communication strategies and key messages for at least two RWEs						
90	B.1	Customer Service Centers						
93	B.1	Informative websites that provide up- to-date information on RWE operations and facilitate customers registering complaints						
	B.2. REDUCE NONPRODUCTIVE (WASTEFUL) USES OF WATER IN BOTH RURAL AND URBAN SETTINGS IN SELECTED AREAS OF INTERVENTION							
94	B.2	Incentive rebate program for farmers						
95	B.2	Agro-industry reducing water use						

96	B.2	Farmers switching to more efficient irrigation technologies						
97	B.2	Chambers of commerce and industry associations implementing ISO 14045/46						
98	B.2	Farmers and industries undertake agreed to commitments						
	B.3. INCREASE CIVIL SOCIETY ENGAGEMENT IN IMPROVING WATER USE BEHAVIOR FOR ENVIRONMENT AND WATER RESOURCES PROTECTION							
99	B.3	Partnerships with municipal governments in the Litani Basin						
102	B.3	Media personalities and programs interested in water issues and plan program highlighting water issues in Lebanon						
103	B.3	Partnerships with municipal governments around water use, management, and protection activities						
104	B.3	River clean-up day in the Litani Basin						
106	B.3	Support for student research on water-related challenges						
107.a	B.3	Schools will be using LWP-developed materials on water resources						
107.b	B.3	Support research studies by university students on water related challenges						
109	B.3	Media campaigns will be aired on water resources and conservation challenges in Lebanon						
110	B.3	Civil society group or citizen's organization per area of intervention to identify and implement locally appropriate solutions for improved water use behavior for environment and water resources protection						
	C.1. DEVELOP A PILOT SECTOR PARTNERSHIP TO IMPROVE WATER SUPPLY, WASTEWATER, OR IRRIGATION SERVICE DELIVER							
113	C.1	Service contracts with RWEs for private sector support in reducing NRW						
115	C.1	Contracts used by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems						
	C.2. DEVELOP AT LEAST ONE PILOT PRIVATE SECTOR PARTNERSHIP TO LEVERAGE THE FUNDING OF INNOVATIVE WATER CONSERVATION TECHNOLOGIES							
116	C.2	Incentive-rebate program and prize concept to spur the transition of industries to more efficient water uses						
100	C.2	Meetings with industry associations on water conservation issues						
108	C.2	Partnerships with industry associations to conduct water audits, co- sponsor workshops on water conservation technologies, and award annual prizes						
118	C.2	Innovation grants to develop/promote more efficient water use						
	C.3. DEVELOP AT LEAST ONE PILOT PRIVATE SECTOR PARTNERSHIP TO IMPROVE WATER USAGE AWARENESS							
121	C.3	Programs with industry and business associations, and media to improve water use and awareness among their members and by the general public						
125	A.1.4	Revise the SLWE organizational structure to reflect current needs						
126	A.2	Use of handheld bill collection devices						
127		Risk Management Plan						
129		LRA IT infrastructure and operation standards.						

LWP Deliverable Table

Del#	Task	Title	(Y/ N)
	A.1. STRENGTHEN RWE AND LRA PLANNING AND INTERNAL OPERATIONS MANAGEMENT **		
	A.1.1. Strengthen Business Master Planning		
1	A.1.1	Business plans	
3	A.1.1	Water demand management plan in the demonstration area	
4	A.1.1	Water quantity monitoring plan for all rivers in Lebanon including the Upper Litani River Basin	
5	A.1.1	Irrigation master plan	
6	A.1.1	Water and wastewater master plans	
	A.1.2. Fully Implement Enterprise Resource Planning (ERP) and Costing and Operational Analyses		
8.a	A.1.2	ERP	
12	A.1.2	Governance manual	
	A.1.3. Strengthen Assets Valuation and Management		
16.a	A.1.3	Conduct annual updates of assets valuation	
	A.1.4. Improve RWE Internal Performance and Financial Audit		
21.c	A.1.4	Financial and performance audits will be completed for the utilities that have the staff in place	
125	A.1.4	Organizational structure to reflect current needs	
	A.1.5. Strengthen RWE and LRA Use of GIS for Assets Management and Operations		
22	A.1.5	GIS systems reviewed	
23	A.1.5	Plans will be developed to strengthen GIS capacity and systems	
24	A.1.5	Improved use of GIS (on-the-job training) to maintain information on piped networks and equipment, and customers	
25	A.1.5	Mapping demonstration areas of the intervention areas following the area assessments	
	A.2. IMPROVE BILLINGS AND COLLECTION		
27	A.2	Develop communication strategy to improve customer awareness and increase collections in demonstration areas	
28	A.2	Partnership with a bank or financial institution to improve collection efficiency	
30	A.2	Customer register updates in the three demonstration areas	
	A.3. REDUCE NON-REVENUE WATER LOSSES		
32	A.3	Production and district metering for the RWE demonstration areas	
	A.4. WATER QUALITY ASSURANCE PLANS (WQAPs) IN PLACE AND ENFORCED FOR WATER UTILITIES IN THE SELECTED AREAS OF INTERVENTION		
	A.4.1. Strengthen the Capacity of Utilities to Develop WQAPs		
35	A.4.1	Water safety analysis	
39	A.4.1	Service contract to carry out water quality and safety analysis	
40	A.4.1	Public messages/information on water quality in their networks	
41	A.4.1	WQAPs in place	
42	A.4.1	Partnerships between RWEs and municipal governments to conduct joint water quality and safety analysis	
	A.4.2. Strengthen the Capacity of RWEs and LRA in Water Security Analysis and Planning		
43	A.4.2	Water security analysis	

Del#	Task	Title	(Y/ N)
	A.5. TRAINING AND CAPACITY BUILDING TO IMPROVE HOURS OF SERVICE		
48	A.5	Water operator's certification program	
	A.6. IMPROVE COMMUNAL WATER SERVICE DELIVERY		
56	A.6	Projects that improve communal water service delivery in affected municipalities/communities	
	A.7. IMPROVE AND EXPAND WATER SERVICES FOR LEBANESE CITIZENS		
63	A.7	Infrastructure upgrade projects completed in demonstration areas	
	A.8. IMPROVE THE EFFICIENCY OF IRRIGATION SYSTEMS IN SELECTED AREAS		
65.b	A.8	Implement selected improvements for LRA facilities	
66	A.8	Partnerships with irrigation equipment suppliers	
	A.9. SUPPORT THE DEVELOPMENT OF CONTEXT-APPROPRIATE MODELS FOR SANITATION SERVICE AND SEWAGE MANAGEMENT		
76	A.9	Sustainable sanitation models will be completed	
	A.10. IMPROVE WATER RESOURCES CONSERVATION/PROTECTION IN THE LITANI BASIN		
82	A.10	Water resources conservation and protection initiatives yielding	
	B.1. IMPROVE CUSTOMER SATISFACTION WITH SERVICES PROVIDED BY PUBLIC WATER UTILITIES		
87	B.1	Develop communication strategies and key messages for at least two RWEs	
90	B.1	Customer Service Centers	
93	B.1	Informative websites that provide up- to-date information on RWE operations and facilitate customers registering complaints	
	B.2. REDUCE NONPRODUCTIVE (WASTEFUL) USES OF WATER IN BOTH RURAL AND URBAN SETTINGS IN SELECTED AREAS OF INTERVENTION		
94	B.2	Incentive rebate program for farmers	
95	B.2	Agro-industry reducing water use	
96	B.2	Farmers switching to more efficient irrigation technologies	
97	B.2	Chambers of commerce and industry associations implementing ISO 14045/46	
98	B.2	Farmers and industries undertake agreed to commitments	
	B.3. INCREASE CIVIL SOCIETY ENGAGEMENT IN IMPROVING WATER USE BEHAVIOR FOR ENVIRONMENT AND WATER RESOURCES PROTECTION		
99	B.3	Partnerships with municipal governments in the Litani Basin	
102	B.3	Media personalities and programs interested in water issues and plan program highlighting water issues in Lebanon	
103	B.3	Partnerships with municipal governments around water use, management, and protection activities	
104	B.3	River clean-up day in the Litani Basin	
106	B.3	Support for student research on water-related challenges	
107.a	B.3	Schools will be using LWP-developed materials on water resources	
107.b	B.3	Support research studies by university students on water related challenges	
109	B.3	Media campaigns will be aired on water resources and conservation challenges in Lebanon	
110	B.3	Civil society group or citizen's organization per area of intervention to identify and implement locally appropriate solutions for improved water use behavior for environment and water resources protection	
	C.1. DEVELOP A PILOT SECTOR PARTNERSHIP TO IMPROVE WATER SUPPLY, WASTEWATER, OR IRRIGATION SERVICE DELIVER		
113	C.1	Service contracts with RWEs for private sector support in reducing NRW	
115	C.1	Contracts used by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	

Del#	Task	Title	(Y/ N)
	C.2. DEVELOP AT LEAST ONE PILOT PRIVATE SECTOR PARTNERSHIP TO LEVERAGE THE FUNDING OF INNOVATIVE WATER CONSERVATION TECHNOLOGIES		
116	C.2	Incentive-rebate program and prize concept to spur the transition of industries to more efficient water uses	
100	C.2	Meetings with industry associations on water conservation issues	
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118	C.2	Innovation grants to develop/promote more efficient water use	
	C.3. DEVELOP AT LEAST ONE PILOT PRIVATE SECTOR PARTNERSHIP TO IMPROVE WATER USAGE AWARENESS		
121	C.3	Programs with industry and business associations, and media to improve water use and awareness among their members and by the general public	
125	A.1.4	Revise the SLWE organizational structure to reflect current needs	
126	A.2	<i>Use of handheld bill collection devices</i>	
127		Risk Management Plan	
129		LRA IT infrastructure and operation standards.	

FOCUS GROUP DISCUSSION PROTOCOLS

For each question included in the stakeholder data collection tools, the evaluation team will note the related/relevant evaluation question in parenthesis following the question. This is to assist the team with data analysis post-fieldwork.

Notes to the facilitator/interviewer are provided in brackets [] throughout the protocols.

Protocols will be collated into separate Word documents for printing and use during fieldwork/data collection. The team will take written notes, using recordings in FGDs to assist in later note completion and finalization.

Coversheet, participant sign in, and introductory statement

*Names (of individuals and groups) will be documented in a separate document to protect anonymity

FGD Code:	
Date of FGD:	Time Start:
Team (Sub-Team A, B):	Time End:
Facilitators(s):	Location:
Note taker(s):	Recording Number:
Category of Group:	Age of group:
No. of Interviewees _____ M _____ F _____	
Notes about Consent Provided (if any):	

Good morning/afternoon and thank you for meeting with us today. As mentioned during our focus group discussion request, we are working with USAID to conduct a final evaluation of the LWP Project, which has been implemented by DAI. We work for a company called Social Impact.

The evaluation is intended to provide an informed assessment of LWP progress to date learn lessons for new projects if needed. It is very important for you to know that this study will not determine if you will receive any services/support/funding now or in the future. The way you answer our questions will not determine if you will receive any kind of government or NGO assistance now or in the future. There is no direct benefit to you or your community for your participation in this study, besides toward the goal of improving this project or new project.

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will be kept strictly confidential. This means that your name will not be mentioned anywhere in the report, and will not be provided to anyone, including USAID/DAI/LWP or anyone in your community. Specifically:

- We will collect individuals’ names and the farmer group they belong to. A list of focus group participants will be made available as an annex to the final evaluation report, but those names and positions will not be associated to any particular findings or statements in the report.
- We may include quotes from respondents in the evaluation report, but will not link individual names, organizations, or personally identifiable information to those quotes, unless express written consent is granted by the respondent. Should the team desire to use a particular quote, photograph, or identifiable information in the report, the evaluators will contact the respondent(s) for permission to do so.
- All data gathered will be used for the sole purposes of this evaluation, and will not be shared with other audiences or used for any other purpose.

Your participation in this focus group discussion is voluntary and if you do not feel comfortable answering a particular question, please let us know and we will simply go on to the next question. We will request your consent to record the interview. We will record the interview for the sole purpose of revising and improving our note-taking during our data analysis process. If you would like at any time for us to stop using the recording, please let us know.

Do you consent to participate in this FGDs and have it recorded for our note-taking purposes (confirm everyone’s consent individually)? By saying “yes,” and participating in this study, you are indicating that you have heard this consent statement, had an opportunity to ask any questions about your participation and voluntarily consent to participate.

Do you have any questions for us before we get started? If you have questions or concerns about the study after we leave today, you can contact [name of national or international evaluation team member]; the contact information is on the card I gave you.

Participant List:

#	Name	Verbal or Written Consent (signature or mark)	Sex (M or F)	Age
1				
2				
3				
4				
5				
6				

7				
8				
9				
10				
11				
12				

Instructions for FGD Moderator/Facilitator:

1. Introduction:

The moderator should first introduce herself or himself, instruct participants to sign in (note-taker to monitor), follow the script above, and then welcome and thank all of the focus group discussion (FGD) participants for being there. The moderator should then explain the purpose of the FGD, how participants were selected, and how long it will take. For this study, focus groups will take between 1 – 1.5 hours.

2. Ground Rules:

While the ground rules will vary depending on the FGD, they will generally include the following:

- Everyone is encouraged to share their ideas, and the FGD is stronger if everyone participates.
- There are no wrong answers, and everyone's perspective is equally valued.
- The ideas shared during the FGD should not be shared outside the FGD with non-participants in order to respect participants' privacy.
- Disagreements about ideas can be valuable and productive, but we ask that participants be respectful and courteous to one another.

After establishing these ground rules, the moderator should ask if there are any questions or concerns participants have, and these issues should be addressed and consensus reached as a group before moving on.

Experience with LWP

Facilitators should remind FG participants the activities implemented by LWP with them and the name of the grantees.

1. Please discuss/describe how your group first began working with LWP/USAID. Who did you first interact with from LWP? Who kept interacting with you?
2. Were there any challenges to group formation/start-up/initial work with LWP [as opposed to other donors the group may have worked with in the past]? If yes, please explain. [Probe: Do you understand the project and its goals?]
3. How does LWP communicate with you as a group, to inform you of activities/trainings/program news? How often do you communicate with someone from LWP? Do you have the information/receive the communication you need as a group to actively participate in/benefit from the project (for example, do you know about upcoming trainings)?

Trainings

Facilitators should have a list of these trainings/activities from project documents, and should use the FGD to confirm data. In order to facilitate mutual understanding facilitator should know the name of the LWP sector leader and trainer.

4. Please discuss and list the activities/trainings in which you participated under LWP since you were introduced to the project.
5. Please discuss if this activity met your needs as a group? If yes, why and how?
6. To what extent you believe the facilitator/trainer was an expert on the given topic?
7. To what extent the training taught you something new?
8. To what extent you found the method being discussed useful?
9. To what extent you feel that trainings were properly organized in terms of timing and location?
10. Please discuss the extent to which you feel confident in using the knowledge you gained from this training/activity? Why or why not?
11. Can you provide examples of how you have used this knowledge since the training?
12. The facilitator should use a list of trainings participants attended, for each topic the facilitator should ask whether participants were applying that specific technical before the trainings and whether they are applying that same technique now
13. Were you provided materials/guides/handouts for this activity? If yes, were they provided for each participant, or the group overall? Do you still have these materials? Do you still use/reference these materials?

Access to technical assistance

14. Did you ever need technical assistance after the trainings? If yes, who did you approach? How far is he/she from here?
15. To what extent was the timing and location of trainings suitable for women? Would women have preferred a different time and location of trainings? If so when and where?

Concluding questions

Questions in this section are for everybody

16. Do you have experiences with other donors or international organizations? If yes, can you please tell me main difference? Can you please tell me whether you think the approach used by the other donors you mentioned worked better or worse for you and why?
17. In the hypothetical case that a new project like this were to come again in the future, what would you like to see done differently?
18. Do you have any recommendations for new projects like this in the future?

LWP – TO Deliverables Table from Fee Schedule

CLIN 1										
S.N.	D.N.	DELIVERABLES	Task	Year 1	Year 2	Year 3	Year 4	Year 5		What defines completion
		Task A.1.1								
1	A.1.1-1	Each RWE will have updated their business plans	Task A.1.1			1				Update of the business plans and turn over to the relevant beneficiary as per COR concurrence
2		Removed								
3	A.1.1-3	All RWEs will have a water demand management plan in the demonstration area	Task A.1.1					1		Completion of water demand management plans for the four RWEs and turn over to relevant beneficiary per COR concurrence
4	A.1.1-4	LRA will have completed water quantity monitoring plan for all rivers in Lebanon including the Upper Litani River Basin	Task A.1.1		1					Completion of the water quantity monitoring plan and turn over to the LRA as per COR concurrence
5	A.1.1-5	BWE will have completed irrigation master plan	Task A.1.1				1			Completion of irrigation master plan and turn over to the BWE as per COR concurrence
6	A.1.1-6	Review water and wastewater master plans for consistency with business plans/risk management plans	Task A.1.1			1				Consistency of master plans and business plans/risk management plans verified and reported to the relevant beneficiary as per COR concurrence
7.a	A.1.1-7a	Annual business plans performance monitored and validated for each RWE in Year 2	Task A.1.1			1				Monitor and assess business plans use and provided memorandum on use to relevant beneficiary as per COR concurrence
S.N.		Removed								
7.c		Removed								
127		Prepare Risk Management Plans for NLWE and SLWE					1			RMPs developed in cooperation with NLWE and SLWE, and turned over to relevant beneficiary; verified by COR
128		Prepare two Risk Management Plans for BWE, BMLWE, or LRA					1			RMPs developed in cooperation with BWE, BMLWE, or LRA, and turned over to relevant beneficiary; verified by COR
7.d	A.1.1-7d	Annual business plans updated for each RWE in Year 5	Task A.1.1					1		Update of the business plans and turn over to the relevant beneficiary as per COR concurrence
		Task A.1.2								
8.a	A.1.2-1	Initiate implementation of ERP with NLWE	Task A.1.2			1				Initiate installation of selected ERP modules which includes hardware and ERP software installation; verified by COR
8.b	A.1.2-1	Complete installation of the ERP suite in the NLWE	Task A.1.2			1				Complete installation of ERP software and acceptance by NLWE; verified by COR

9	A.1.2-2	Complete installation of ERP suite and costing and operational analysis in the BMLWE, SLWE, and BWE	Task A.1.2			1				Verifying the installed ERP suite is fully functional and accepted by users; and the ERP is used to complete year-end financial reporting; verified by COR
10	A.1.2-3	Train 50 RWE and LRA staff in ERP use	Task A.1.2	1						Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
11	A.1.2-4	Continue refinements in the use of ERP tools and systems	Task A.1.2			1				ERP refinements completed including costing model, fixed assets, and budget preparation tools. Adoption of the ERP tools and systems by the relevant beneficiary reported with recommendation; verified by COR
129		Provide assessment of LRA IT infrastructure and operation standards					1			Provide assessment report to LRA including recommendations and budgets to upgrade the system as needed; verified by COR
12	A.1.2-5	Deliver a governance manual for the NLWE and SLWE to improve their operation and create a better control environment	Task A.1.2				1			Provide governance manual and turn over to the NLWE and SLWE as per COR concurrence
Task A.1.3										
13	A.1.3-1	Develop Standardized Assets Management Manual	Task A.1.3	1						Completion of Asset Management Manuals and turn over to the relevant beneficiary as per COR concurrence
14.a	A.1.3-1	Conduct assets valuation for the SLWE and NLWE and train staff on maintaining and updating assets in the ERP	Task A.1.3			1				Completion of assets valuation and training for each beneficiary as verified by the COR
14.b	A.1.3-2	Integrate assets valuation into ERP in the SLWE and NLWE	Task A.1.3			1				Completion of integration of selected ERP tools and acceptance by relevant beneficiary; verified by COR
15	A.1.3-3	Integrate assets valuation into ERP in the BMLWE and BWE	Task A.1.3			1				Completion of integration of selected ERP tools and acceptance by relevant beneficiary; verified by COR
16.a	A.1.3-4a	All RWEs will conduct annual updates of asset valuation	Task A.1.3			1				Depreciation figures adopted in ERP Inventory and Fixed Assets module and report issued to RWEs; verified by the COR.
16.b	A.1.3-4b	All RWEs will conduct annual updates of asset valuation	Task A.1.3				1			Depreciation figures adopted in ERP Inventory and Fixed Assets module and report issued to RWEs; verified by the COR.
16.c	A.1.3-4c	All RWEs will conduct annual updates of asset valuation	Task A.1.3					1		Depreciation figures adopted in ERP Inventory and Fixed Assets module and report issued to RWEs; verified by the COR.
17	A.1.3-5	Train RWE staff in updating assets valuations	Task A.1.3			1				Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
Task A.1.4										
18.a	A.1.4-1	Update financial and performance audit manuals for NLWE and SLWE	Task A.1.4	1						Update of the manuals and turn over to the relevant beneficiary as per COR concurrence

18.b	A.1.4-1	Update financial and performance audit manuals for BMLWE and BWE	Task A.1.4					1		Update manuals and turn over to the relevant beneficiary as per COR concurrence. Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
19	A.1.4-2	Provide training to NLWE and SLWE employees and board members in understanding and using audit reports to improve organizational performance	Task A.1.4	1						Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
20	A.1.4-3	Begin to develop a financial and performance audit manual for the LRA	Task A.1.4					1		Completion of audit reports and turn over to the relevant beneficiary as per COR concurrence
21.a	A.1.4-4a	Financial and performance audits will be completed for the utilities that have the staff in place	Task A.1.4			1				Completion of audit reports and turn over to the relevant beneficiary as per COR concurrence
21.b	A.1.4-4b	Financial and performance audits will be completed for the utilities that have the staff in place	Task A.1.4				1			Completion of audit reports and turn over to the relevant beneficiary as per COR concurrence
21.c	A.1.4-4c	Financial and performance audits will be completed for the utilities that have the staff in place	Task A.1.4					1		Completion of audit reports and turn over to the relevant beneficiary as per COR concurrence
125		Revise the SLWE organizational structure to reflect current needs.	Task A.1.4			1				Organization structure developed, turned over, and accepted by the SLWE; verified by the COR
		Task A.1.5								
22	A.1.5-1	GIS system for three of four RWEs will be reviewed	Task A.1.5	1						Completion of GIS system evaluation report including recommendations for next steps, and turn over to the relevant beneficiary as per COR concurrence
23	A.1.5-2	Plans will be developed to strengthen GIS capacity and systems for three of the four RWEs	Task A.1.5	1						Completion of GIS action plans and turn over to the relevant beneficiary per COR concurrence
24	A.1.5-3	Improved use of GIS (on-the-job training) to maintain information on piped networks and equipment and customers	Task A.1.5			1				Adopting and use of GIS plans by the beneficiaries verified and reported with recommendations, and turned over to the relevant beneficiary as per COR concurrence
25	A.1.5-4	Mapping demonstration areas of the intervention following the area assessments	Task A.1.5					1		Completion of GIS maps for demonstration areas and turn over to the relevant beneficiary per COR concurrence
		Task A.2								
26	A.2-1	Initiate updated customer registers in three of the four RWEs demonstration areas	Task A.2		1					Initiate update of customer registers in relevant RWEs completed and reported; verified by COR
27	A.2-2	Develop communication strategy to improve customer awareness and increase collections in demonstration areas	Task A.2		1					Communication strategies (activities) defined to increase subscriptions and collections, provided to relevant RWEs, as per COR concurrence

28	A.2-3	Initiate at least one partnership with a bank or financial institution to improve collection efficiency	Task A.2	1						Contract format with financial institution for billing and/or collection presented to RWE's Board of Directors and reported; verified by COR
29		NOT USED	Task A.2							
30	A.2-5	Complete customer register updates in the three demonstration areas	Task A.2					1		Update of customer registers in relevant RWEs completed and reported; verified by COR
126	A.2-6	Procure and train BWE, NLWE, and SLWE staff on the use of handheld bill collection devices	Task A.2			1				Devices procured, turned over to RWE, and verified by COR. Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
		Task A.3								
31	A.3-1	Launch two projects to install production and/or district meters for the RWEs	Task A.3		1					Project sites selected, engineering designs completed, implementing firms procured, and implementation initiated and reported; verified by COR.
32	A.3-2	Complete production and district metering for the RWE demonstration areas	Task A.3					1		Substantial completion letter provided to the relevant beneficiary; verified by COR
33	A.3-3	Train at least 60 RWE staff in meter reading and maintenance	Task A.3					1		Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
		Task A.4.1								
34	A.4.1-1a	Support development of WQAPs for four RWEs	Task A.4.1				1			Completion of draft WQAPs, turn over to the relevant beneficiary; verified by COR
35	A.4.1-2	Train RWE staff in preparation of WQAPs and water safety analysis	Task A.4.1				1			Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
36		NOT USED								
37	A.4.1-3	Support two partnerships between RWEs and municipal governments in water quality/safety testing and analysis	Task A.4.1				1			Partnership established and reported; verified by COR
38		NOT USED								
39	A.4.1-5	Assist one RWE or LRA to design and implement a service contract to carry out water quality and safety analysis	Task A.4.1				1			Final format of the service contract with appropriate scope finalized and approved by selected RWE or LRA, and signed between the RWE and service provider; reported and verified by COR
40	A.4.1-6	Assist the RWEs in preparing public messages/information on water quality in their networks	Task A.4.1				1			Public messages prepared and disseminated by RWEs and reported; verified by COR
41	A.4.1-1c	Four RWEs will have WQAPs in place	Task A.4.1				1			WQAPs use by RWE reported with recommendations, and turned over to RWEs per COR concurrence

42	A.4.1-7	Six partnerships between RWEs and municipal governments to conduct joint water quality and safety analysis	Task A.4.1					1		Partnerships established and reported; verified by COR
		Task A.4.2								
43	A.4.2.-1	Develop terms of reference for carrying out water security analysis	Task A.4.2	1						Completion of TORs and provision to the relevant beneficiary per COR concurrence
44	A.4.2.-2	Enlist local universities to support water security	Task A.4.2	1						Completion of a list of interested universities including letters of commitment; verified by COR
45	A.4.2.-3a	Launch at least one water security analysis	Task A.4.2		1					Completion of a scope of work for the development of a water security analysis, and award of a subcontractor; verified by COR
46	A.4.2.-3b	Complete water security analyses for all five utilities	Task A.4.2				1			Completion of water security analyses report and provision to the beneficiary, as per COR concurrence
47	A.4.2-4	Produce communications messages and short videos on the water security analyses	Task A.4.2				1			Communications material prepared and disseminated and reported; verified by COR.
		Task A.5								
48	A.5-1	Water operator's certification program is designed in partnership with ACWUA and RWEs	Task A.5		1					Completion of certification program design; verified by COR
49	A.5-2	Complete ERP and technical training needs assessment for RWEs and the LRA	Task A.5		1					Completion of ERP and training needs assessment report and turn over to relevant beneficiary per COR concurrence
50		Removed								
130		RWE ERP service and maintenance fully established.						1		ERP service and maintenance unit established and reported; verified by COR
51	A.5-4	Develop training materials and train RWE staff in pump O&M	Task A.5				1			Completion of training program design and turn over to relevant beneficiary in the demonstration areas per COR concurrence. Training conducted, reported to COR together with attendance sheet, evaluation summary, and certification; determined completed by COR
52		NOT USED								
53	A.5-6	Provide capacity building training based on the training needs assessments for up to 100 RWE staff.	Task A.5				1			Training conducted, reported to COR together with attendance sheet, evaluation summary, and certification; determined completed by COR
		Task A.6								
54	A.6-1	Complete needs assessments with selected INGOs, RWEs and municipalities	Task A.6	1						Completion of needs assessment report approved by COR
55	A.6-2a	Project designs are in process for at least two projects	Task A.6		1					Project designs selected and engineering services procured; verified by COR

56	A.6-2b	Complete at least six projects that improve communal water service delivery in affected municipalities/communities	Task A.6				1			Project site selected, engineering design completed, implementing firm procured, and implementation completed and reported; verified by COR.
		Task A.7								
57	A.7-1	Expressions of Interest (EOI) issued and contracts established with engineering firms to provide engineering studies, designs and construction quality control/assurance	Task A.7	1						Engineering firms selected, subcontractor consent granted, and IQC in place for services. Copy of contracts provided to the COR.
58	A.7-2	Demonstration areas in four RWEs defined and assessments completed to identify the work needed	Task A.7	1						Completion of assessments in the demonstration areas, list of candidate project identified with cost estimates and reported; approved by the COR
59	A.7-3	Infrastructure upgrade projects identified outside of demonstration areas	Task A.7	1						List of candidate project identified with cost estimates and reported; approved by the COR
61	A.7-5	Budgets developed for the demonstration areas in each RWE to finalize the work that will be performed by LWP based on the project budget	Task A.7			1				Completion of a capital investment and operational cost estimate in cooperation with the RWEs. determination of LWP involvement approved by COR
62	A.7-6a	Projects designed and contracts awarded for construction in demonstration areas	Task A.7			1				Completion of design of projects, bidding, and contractors hired to complete the work in the demonstration areas; verified by COR
63	A.7-6b	Infrastructure upgrade projects completed in demonstration areas	Task A.7					1		Substantial completion letter provided to the RWEs and/or the LRA; verified by COR
		Task A.8								
64	A.8-1	Complete rapid assessment	Task A.8	1						Completion of rapid assessment report including priority action plans; approved by COR
65	A.8-2	Identify areas and define baselines	Task A.8	1						Selection of priority action areas for intervention by LWP and determination of baselines reported; approved by COR
65.b	A.8-2	Implement selected improvements for LRA facilities	Task A.8				1			Selected improvements completed; verified by COR
66	A.8-3	Negotiate partnerships with irrigation equipment suppliers	Task A.8	1						List of interested suppliers and companies together with letters of commitment completed, reported; approved by COR.
67		NOT USED								
68		NOT USED								
		Task A.9								
70	A.9-1	Develop and publish case studies	Task A.9			1				Case studies developed, disseminated, and reported; verified by COR

71	A.9-2	Identify at least two potential sites for low-cost sewage/septage collection/treatment in each region	Task A.9			1				Two potential sites in each region identified, evaluated with cost estimates, and reported; approved by COR
72	A.9-3	Hold initial consultations with MOEW, RWEs and local communities on site selection and design	Task A.9			1				Meetings conducted and reported with attendance sheet. Site selected; approved by COR
73	A.9-4a	Project designs completed and approved, and construction subcontracts issued	Task A.9				1			Construction subcontracts issued; verified by COR
60	A.9-5	Feasibility study completed for the design and construction of a wetlands area for wastewater/river water treatment	Task A.9			1				Feasibility study completed in cooperation with the beneficiary; approved by the COR
74		NOT USED								
75		NOT USED								
76	A.9-4d	At least six sustainable sanitation models completed	Task A.9					1		Models implementation completed and operational; verified by COR
		Task A.10								
77	A.10-1	Update baseline information on water quality in the Upper Litani Basin	Task A.10			1				Baseline information completed, disseminated to the relevant stakeholder, and reported. verified by COR
78	A.10-2a	Organize at least four multi-stakeholder discussions about water threats and risks to water resources	Task A.10		1					Workshops conducted, reported to COR together with attendance sheet; verified by COR
79	A.10-3a	Initial plan will be underway for actions to improve water resources protection and conservation	Task A.10			1				Action plan developed and initiated; approved by COR
80		NOT USED								
81		NOT USED								
82	A.10-3c	At least two water resources conservation and protection initiatives will be yielding tangible and measurable results with at least one in the Litani Basin	Task A.10				1			Action plans evaluated and verified to be yielding tangible results; verified by COR
		Reporting								
83	A.R-1	Startup Reporting		1						Start-up reports submitted and approved by COR
84.a	A.R-2	Annual Reporting-Year 1			1					Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
84.b	A.R-3	Annual Reporting-Year 2				1				Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
84.c	A.R-4	Annual Reporting-Year 3					1			Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
84.d	A.R-5	Annual Reporting-Year 4						1		Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
84.e	A.R-6	Annual Reporting-Year 5						1		Quarterly Reports and Annual Report submitted and approved by COR
85	A.R-7	\$100k withholding recovery						1		At the end of the project per COR approval
		CLIN 1 SUBTOTAL		17	10	25	22	17	91	

CLIN 2										Total Value
		DELIVERABLES	Task	Year 1	Year 2	Year 3	Year 4	Year 5		What defines completion
		Task B.1								
86	B.1-1	Complete baseline customer satisfaction surveys for all four RWEs	Task B.1	1						Customer satisfaction survey completed and reported; verified by COR
87	B.1-2	Develop communication strategies and key messages for at least two RWEs	Task B.1			1				Strategies developed and provided to the two RWEs per COR concurrence
88	B.1-3	Train at least 60 RWE staff in communication messages and customer relations	Task B.1	1						Training conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
89	B.1-4a	Create/upgrade at least two RWE or MoEW websites	Task B.1			1				Websites created/updated and accepted by relevant RWEs; verified by COR.
90	B.1-5a	Establish/strengthen Customer Service Centers in at least two RWEs	Task B.1					1		Centers established/rehabilitated and staff capacity strengthened and reported; verified by COR
91	B.1-6	Install ERP customer relations module in NLWE	Task B.1			1				Completion of installation of selected ERP module and acceptance by relevant beneficiary; verified by COR
92	B.1-5b	Corporate videos developed for at least two RWEs	Task B.1			1				Videos accepted by relevant RWE; verified by COR
93	B.1-4b	Three of four RWEs/MoEW will have informative websites that provide up-to-date information on RWE operations and facilitate customers registering complaints.	Task B.1			1				Documentation of operational websites reported; verified by COR
		Task B.2								
94	B.2-1	Design and launch incentive rebate program for farmers	Task B.2		1					Program designed, launched, and reported; verified by COR
95	B.2-2	Identify at least one agro-industry willing to reduce water use	Task B.2			1				At least one industry or agro-industry submits a commitment letter for installing water conservation techniques; verified by COR
69	B.2-6	Support at least five farmer field days	Task B.2				1			Farmer field day completed, evaluated, and reported; verified by COR
96	B.2-3	Secure commitments of at least 20 farmers to switch to more efficient irrigation technologies.	Task B.2			1				Irrigation systems conversion, and verification of operation and use of new system reported; verified by COR
97	B.2-4	Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	Task B.2				1			Presentation conducted, reported to COR together with attendance sheet and evaluation summary, and determined completed by COR
98	B.2-5	Identified farmers and industries undertake agreed to commitments	Task B.2				1			Documentation showing that farmers and industries followed through on their commitments; verified by COR
		Task B.3								
99	B.3-1	Forge partnerships with municipal governments in the Litani Basin	Task B.3	1						Letter of agreement signed with a Municipality/Union of Municipalities and/or other governmental unit; per COR concurrence

117.a	B.3-11a	Launch grant fund	Task B.3		1					Fund launched; verified by COR
117.b	B.3-11b	Award 7 grants to improve water use behavior and conservation.	Task B.3			1				Grants awarded, executed, and reported; per COR approval
101		NOT USED								
102	B.3-4	Identify media personalities and programs interested in water issues and plan program highlighting water issues in Lebanon	Task B.3			1				A list of interested personalities is completed and reported; verified by COR
103	B.3-2b	Establish partnerships with at least 20 municipal governments around water use, management, and protection activities.	Task B.3			1				Letter of agreement signed with a Municipality/Union of Municipalities and/or other governmental unit, and action plan develop and agreed to by singatories; per COR concurrence
104	B.3-5	Co-sponsor at least one river clean-up day in the Litani Basin.	Task B.3				1			Clean-up day implemented and reported; verified by COR
105	B.3-6a	Develop initial education materials on water resources and conservation strategies for use in schools.	Task B.3			1				Educational materials developed, made available to schools or other organizations, and reported; verified by COR
106	B.3-7	Launch support for student research on water-related challenges.	Task B.3			1				Agreement with at least one university is secured and competition for water research launched; verified by COR
107.a	B.3-6b	At least 20 schools will be using LWP-developed materials on water resources	Task B.3				1			Use of Education materials reported; verified by COR
107.b	B.3-6b	Support research studies by university students on water related challenges	Task B.3				1			Supported studies completed ; verified by COR
109	B.3-9	At least three media programs will be aired on water resources and conservation challenges in Lebanon.	Task B.3					1		Media programs aired and reported; verified by COR
110	B.3-10	Engage at least one civil society group or citizen's organization per area of intervention to identify and implement locally appropriate solutions for improved water use behavior for environment and water resources protection.	Task B.3			1				Projects implemented through civil society groups on water resources protection and reported; verified by COR
		Reporting								
111	B.3.R-1	Startup Reporting		1						Start-up reports submitted and approved by COR
111.a	B.3.R-2	Annual Reporting-Year 1			1					Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
111.b	B.3.R-3	Annual Reporting-Year 2				1				Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
111.c	B.3.R-4	Annual Reporting-Year 3					1			Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
111.d	B.3.R-5	Annual Reporting-Year 4						1		Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
111.e	B.3.R-6	Annual Reporting-Year 5						1		Quarterly Reports and Annual Report submitted and approved by COR

112	B.3.R-7	\$100k withholding recovery						1		At the end of the project per COR approval
		CLIN 2 SUBTOTAL		4	3	14	7	5	33	

CLIN 3										Total Value #REF!
		DELIVERABLES	Task	Year 1	Year 2	Year 3	Year 4	Year 5	Total	What defines completion
		Task C.1								
113	C.1.-1a	Develop at least two service contracts with RWEs for private sector support reducing NRW	Task C.1				1			Service contract awarded by the selected RWE and reported; verified by COR
114		NOT USED								
115	C.1-1b	At least three contracts developed for use by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	Task C.1					1		Service contracts signed between RWEs and private sector; verified by COR
		Task C.2								
116	C.2-1	Develop incentive-rebate program and prize concept to spur the transition of industries to more efficient water uses	Task C.2		1					Program and prize concept designed, launched, and reported; verified by COR
100	C.2-3	Hold at least four meetings with industry associations on water conservation issues	Task C.2			1				Meetings conducted and reported with attendance sheet; verified by COR
101		NOT USED								
108	C.2-4	Partnerships will be established with industry associations to conduct water audits, co-sponsor workshops on water conservation technologies, and award annual prizes to industries that significantly reduce water use or pollution.	Task C.2			1				Partnerships established and reported; prizes awarded to industries;verified by COR
118	C.2-2b	Award at least 3 innovation grants to develop/promote more efficient water use	Task C.2				1			Grants awarded, executed, and reported; per COR approval
		Task C.3								
119	C.3-1	Identify at least three interested sectors/industries to do awareness	Task C.3			1				A list of interested industries is prepared including letters of commitment, and approved by COR
120	C.3-2a	Launch at least one pilot with industry to improve water use awareness among their members	Task C.3			1				Pilot program launched, in operation, and reported; verified by COR
121	C.3-2b	Establish at least five programs with industry and business associations and media to improve water use and awareness among their members and by the general public.	Task C.3					1		Program established, in operation, reported, and approved by COR
		Reporting								
122	C.R-1	Startup Reporting		1						Start-up reports submitted and approved by COR

123.a	C.R-2	Annual Reporting-Year 1			1					Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
123.b	C.R-3	Annual Reporting-Year 2				1				Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
123.c	C.R-4	Annual Reporting-Year 3					1			Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
123.d	C.R-5	Annual Reporting-Year 4						1		Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
123.e	C.R-6	Annual Reporting-Year 5						1		Quarterly Reports, Annual Report and Work Plan submitted and approved by COR
124	C.R-7	\$100k withholding recovery						1		At the end of the project per COR approval
	CLIN 3 SUBTOTAL			1	2	5	3	5	16	
TOTAL				22	15	44	32	27	140	



Complete

Year 5 Deliverables are not color coded.

M&E Performance Indicator Mid-Term Status Table

Reference	Indicator	Target Unit	Disaggregation	Baseline Actual	LOP Total Target	Accumulated Yr 3 Target	Accumulated Yr3 Achieved	Accumulated Y3 Achieved/ Accumulated Yr 3 Target (%)	Accumulated Achieved Yr 3/ LOP Target (%)	Notes
1 DO1b	Percentage of water customers indicating satisfaction with their water service	Percentage of customers	Total	72%	87%	—	N/A	—	N/A	
2 DO1d	Number of entities with enhanced capacity as a result of USG support	Number of entities	None	0	5	—	0	—	0%	
3. IR1.2c	Percentage of cost recovery in demonstration areas	Percentage of monetary value	NLWE	21%	36%	—	21%	—	0%	
			BMLWE	112%	127%	—	112%	—	0%	
			SLWE	59%	74%	—	59%	—	0%	
4. IR1.2b	Number of new subscribers to the public water services as a result of USG assistance in demonstration areas	Number of subscribers	Total	0	2,700	—	2,173	—	80%	The original rationale for setting the target of this indicator was based on the organic reach of 2% of the overall subscribers in all four demonstration areas (based on the business plan). LWP expected to impact the number of new subscriptions only in year 5 after all infrastructure projects have been completed. In reality, LWP was able to impact this indicator earlier than expected as a direct result of CSO engagement in Koura and Haouch El Omara, as well as LWP's support to Bekaa Water Establishment for increasing subscriptions in Houch El Omara. Furthermore, during the design phase of infrastructure projects, the contractors conducted customer registration surveys through which they had direct contact with citizens. This led to an increase of citizen subscriptions that is higher than the organic 2%.
5	Number of people receiving improved water service quality as a result of LWP	Number of people	Total	0	720,000	237,000	421,882	178%	59%	Y3 result exceeded the target of Y2 and Y3 combined by around 184,000. The reason for this significant positive deviation is the fact that LWP estimated the initial target from the Central Administrations for Statistics (CAS) for Zahleh Caza, as the activity is implemented in Zahle. When LWP coordinated with BWE, the list of villages that comprise Zahle branch turned out to include villages outside Zahle Caza, which increased the total population number and hence the number of beneficiaries in this indicator. Moreover, the target for 2020 was TBD pending the selection of wastewater treatment plant activities. Activities for the aforementioned were selected in Y3 and the target is less than that anticipated by LWP to reach the LOP target of 600,000. For the above reasons, LWP will revise the targets but not increase the LOP target significantly.
6	Percentage change in non-revenue water in demonstration areas	Percentage of cubic meters	NLWE	54%	39%	—	—	—	—	
			BMLWE	48%	33%	—	—	—	—	
			SLWE	64%	49%	—	—	—	—	

Reference	Indicator	Target Unit	Disaggregation	Baseline Actual	LOP Total Target	Accumulated Yr 3 Target	Accumulated Yr3 Achieved	Accumulated Y3 Achieved/ Accumulated Yr 3 Target (%)	Accumulated Achieved Yr 3/ LOP Target (%)	Notes
7	Percentage of lost service hours in demonstration areas	Percentage of hours	NLWE	75%	60%	—	—	—	—	
			BMLWE	85%	70%	—	—	—	—	
			SLWE	75%	60%	—	—	—	—	
8.1.2.1a	Percentage of water users who pay their bills in demonstration areas	Percentage of subscribers	NLWE	78%	63%	—	TBD	—	—	
			BWE	59%	44%	—	52%	—	N/A	
			BMLWE	77%	62%	—	80%	—	N/A	
			SLWE	81%	66%	—	76%	—	N/A	
9. 1.2.1c	Number of participants in on-the-job training and workshops	Number of people	Total	0	863	573	603	105%	70%	
10	Number of new/updated management tools adopted by RWEs and LRA	Number of tools	Total	0	47	23	34	148%	72%	In the last annual reporting, this indicator negatively deviated from the target by 50% for several reasons (please check previous PPR reporting). This year, the indicator made up for the unreached target of last year and hence the positive deviation by 50%. This year LWP exceeded the target for both reporting years Y2017 and Y2018.
11	Percentage change in efficiency of irrigation systems	Percentage of m3	None	32%	47%	47%	56%	119%	119%	
12	Volume of water treated	Cubic meters/day	Potable	0	51,000	20,000	34,770	174%	68%	The original target was set based on initial production volume of wells where chlorinators will be installed (result of BWE meters and chlorinators project). LWP retrieved more accurate data on water produced after installing source meters and reading the data accordingly.
			Wastewater	0	600	—	—	—	—	
13	Number of new water resource conservation and protection initiatives implemented	Number of initiatives	None	0	6	4	4	100%	67%	
14	Number of water quality assurance plans developed for RWEs and	Number of plans	None	0	5	5	0	0%	0%	The reason for not achieving this target is the delay caused by lack of data, lack of access to data, and the change of DGs. In addition to combining the deliverables. Initially, we were going to do two and then the others in multiple deliverables. Then we decided to do them all in the same deliverable. Status: 3 out of 5 WQAPs are completed pending the sign off letter from DGs after presenting the findings. The other 2 WQAPs are almost completed by the subcontractor Issam Fares Institute- AIJB
15. IRI.2.2a	Percentage of technical losses of water in demonstration areas	Percentage of cubic meters	NLWE	0	(-10%)	—	—	—	—	
			BMLWE		(-10%)	—	—	—	—	
			SLWE		(-10%)	—	—	—	—	
16. 1.2.2b	Number of functioning water facilities constructed or rehabilitated with USG assistance	Number of facilities	Total	0	53	18	19	106%	36%	
B										
17	Percentage change in wasteful uses of water in both rural and urban settings	Percentage of Cubic meters	Industry	0%	(-15%)	—	—	—	—	
			Agriculture	0%	-15%		-36%	—	N/A	

Reference	Indicator	Target Unit	Disaggregation	Baseline Actual	LOP Total Target	Accumulated Yr 3 Target	Accumulated Yr3 Achieved	Accumulated Y3 Achieved/ Accumulated Yr 3 Target (%)	Accumulated Achieved Yr 3/ LOP Target (%)	Notes
18	Percentage of citizens who trust RWEs as public water service providers in demonstration areas	Percentage of people	Total	38%	53%	—	—	—	—	
19	Number of organizations and farmers who have applied new water saving technologies and/or management practices	Number of organizations	Total	0	46	41	117	285%	254%	The initial target was set excluding farmers of the Chabrouh project as it wasn't fully planned yet.
20 STIR02	Number of tools, technologies, or practices introduced to the commercial sector	Numbers of tools and technologies	None	0	5	5	10	200%	200%	
21. 1.2.1b	Number of water users trained on conservation and preservation of water resources	Number of people	Total	0	5,800	5,000	7,001	140%	121%	
22	Percentage of citizens who have taken steps to conserve water after seeing or hearing LWP messages in demonstration areas	Percentage of people	Total	0	(+25%)	—	—	—	—	
23	Percentage of customers who report satisfaction with the service and response of RWEs' customer service center in demonstration areas	Percentage of people	Total	77%	87%	—	—	—	—	
24	Number of USAID0 assisted CSOs engaged in community, regional, and national programs	Number of CSOs	Total	0	5	5	9	180%	180%	After achieving the LOP target (5), LWP found the need to mobilize more CSOs inside demonstration areas in order to reach the project's overall objective of enhancing customer satisfaction and raising awareness on water conservation.
25	Number of media campaigns implemented	Number of media campaigns	Total	0	7	3	5	167%	71%	
26	Number of citizens reached through media campaigns	Number of people	Lebanese	0	114,000	114,000	1,173,912	1030%	1030%	The water conservation awareness campaign was planned for demo areas when the initial target was set. After signing a stewardship program with Fransabank, the campaign received leverage and was aired on national TV.
			Syrians	0	22,600	22,600	—	—	—	
27	Number of customer service related interventions	Number of interventions	Total	0	22	20	24	120%	109%	
28	Number of PSPs piloted and developed to improve water service delivery, leverage funding, or improve water use behavior	Number of PSPs	Total	0	12	8	12	150%	100%	

LWP Project - USAID - Oct 2015-Sept 2020

LWP Timeline comparison table

Date: 26 November 2018

By: GT, JJR - SI A&E

[illegible]

Design		
Construction		
Current Month		

Note: this table is based on LWP's various submitted schedules

LWP Project - USAID - Oct 2015-Sept 2020
Planned vs Actual
By: GT, JJR - SI A&E
Date: 26 Nov 2018

LWP#	Project	Schedule	Design Period (Months)	Tender Period (Months)	Construction Period (Months)	Total Period (Months)	End Date	Current Status	Comments
1	Chlorinators & Meters	Planned	4	2	4	10	Jul-18	Completed	Variation Order Time is not included in Total Period
		Actual	5	7	12	24			
		Delay %	25%	246%	206%	141%			
2	BWE PODA	Planned	3	1	5	9	10-Oct-18	2 projects completed/1 project on hold till Feb 2019	Bar Elias well activity is not included in Total Period
		Actual	4	3	9	16			
		Delay %	33%	194%	79%	76%			
3	Jezzine DA	Planned	7	2	19	28	1-Feb-20	Under Construction	Construction sheduled to start Oct 2017; started Sept 2018
		Actual	11	4	18	33			
		Delay %	58%	100%	-5%	18%			
4	Metn DA	Planned	7	2	19	28	19-May-20	Contractor Selected	Construction to start Oct 2017; planned to start Dec 2018
		Actual	15	5	19	40			
		Delay %	116%	151%	0%	40%			
5	Koura DA	Planned	6	2	19	27	28-Mar-20	Tender Phase	Construction scheduled to start Sept 2017; still in tender phase
		Actual	18	3	15	36			
		Delay %	203%	49%	-21%	34%			
6	NLWE PODA	Planned	5	3	5	13	25-Jul-19	Design Phase	Construction scheduled to start Sept 2018; still in design phase
		Actual	12	1	6	19			
		Delay %	143%	-66%	18%	46%			
7	WWTP & Networks	Planned	9	3	7	19	2-Oct-19	Design Phase	
		Actual	7	3	7	17			
		Delay %	-22%	0%	0%	-11%			
8	Constructed Wetlands	Planned	8	2	6	16	24-Sep-19	Design Phase	
		Actual	8	2	6	16			
		Delay %	0%	0%	0%	0%			

Additional Activities outside Project Scope

WE	Activity	Task	Details
1 BMLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
2 BMLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
3 BMLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
4 BWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
5 BWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
6 BWE	ERP	New Billing & Collection module	Redesign, migration of data and implementation of a new billing and collection module in addition to staff training
7 BWE	ERP	Upgrade Accounting Module	Upgrade the accounting module and clean up data
8 BWE	ERP	Extended Support	During the absence of maintenance contract, provided daily extended remote and onsite support
9 BWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
10 NLWE	Audit	Financial Reports	Preparing all historical end of year financial reports for the period from 2006-2017
11 NLWE	ERP	Medical Module	Design and implementation of a new Module for medication and hospitalization with reconciliation to NSSF
12 NLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
13 NLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
14 NLWE	ERP	x7 Data clean up	Clean up all subscribers data extracted from x7 billing system (more than 33,000)
15 NLWE	ERP	Dashboard	Design and implementation of a new Dashboard for Director General on ERP
16 NLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
17 SLWE	Audit	Financial Reports & Analysis	Prepared historical end of year financial reports for the period from 2015-2017 along with detailed analysis
18 SLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
19 SLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
20 SLWE	ERP	Dashboard	Design and implementation of a new Dashboard for Director General on ERP
21 SLWE	ERP	Upgrade HR Module	Upgrade HR Module to communicate with attendance machine and export all reports
22 SLWE	ERP	Extended Support	During the absence of maintenance contract, provided daily extended remote and onsite support
23 SLWE	ERP	Capacity Building for IT team	Provide weekly on the job training sessions for the new IT staff
24 SLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws

GIS training at LRA

Training/Induction of new employees (SLWE/BWE)

Water inspector training at LRA

Org structure and job description for BWE

LWP Additional Activities outside Project Scope - Effectiveness

	WE	Activity	Task	Details
1	BMLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
2	BMLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
3	BMLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
4	BWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
5	BWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
6	BWE	ERP	New Billing & Collection module	Redesign, migration of data and implementation of a new billing and collection module in addition to staff training
7	BWE	ERP	Upgrade Accounting Module	Upgrade the accounting module and clean up data
8	BWE	ERP	Extended Support	During the absence of maintenance contract, provided daily extended remote and onsite support
9	BWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
10	BWE	Recruitment Plan	Job Description for new Employees	Preparation of proposal for new employee needs with job description
11	NLWE	Audit	Financial Reports	Preparing all historical end of year financial reports for the period from 2006-2017
12	NLWE	ERP	Medical Module	Design and implementation of a new Module for medication and hospitalization with reconciliation to NSSF
13	NLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
14	NLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
15	NLWE	ERP	x7 Data clean up	Clean up all subscribers data extracted from x7 billing system (more than 33,000)
16	NLWE	ERP	Dashboard	Design and implementation of a new Dashboard for Director General on ERP
17	NLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
18	SLWE	Audit	Financial Reports & Analysis	Prepared historical end of year financial reports for the period from 2015-2017 along with detailed analysis
19	SLWE	ERP	New Salary Scale Advance	New Salary Scale Advance on the payroll module to allow for an advance based on new salary scale for staff
20	SLWE	ERP	New Salary Scale Implementation	Implementation of the new Salary Scale on the payroll module and reconcile all advances
21	SLWE	ERP	Dashboard	Design and implementation of a new Dashboard for Director General on ERP
22	SLWE	ERP	Upgrade HR Module	Upgrade HR Module to communicate with attendance machine and export all reports
23	SLWE	ERP	Extended Support	During the absence of maintenance contract, provided daily extended remote and onsite support
24	SLWE	ERP	Capacity Building for IT team	Provide weekly on the job training sessions for the new IT staff
25	SLWE	ERP	Changes in VAT & Stamp	Introduction of the changes in VAT and Stamp laws
26	SLWE	Induction Training	O&M	O&M training for newly recruited employees
27	LRA	GIS	Follow up training on GIS	Additional on-the-job training on the geodatabase for the gauging stations

Deliverable and Task Nos.	Start Date	Title	Status	Related Workplan Activity	Target	Actual	Total	Female	Male
126: A.2-6 Procure and train BWE, NLWE, and SLWE staff on the use of <u>handheld bill collection devices</u>	5/29/2018	NLWE Hand held device training	Completed	Task A.2 Improve Billings and Collections			82	14	68
126: A.2-6 Procure and train BWE, NLWE, and SLWE staff on the use of <u>handheld bill collection devices</u>	2/26/2018	BWE Hand held devices training	Completed	Task A.2 Improve Billings and Collections			40	1	39
126: A.2-6 Procure and train BWE, NLWE, and SLWE staff on the use of <u>handheld bill collection devices</u>	1/29/2018	SLWE Hand-held device training	Completed	Task A.2 Improve Billings and Collections			68	19	49
115: C.1.-2 At least three contracts developed for use by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	1/31/2018	BWE Training of WE's PPP teams	Completed	Task C.1 Develop a Pilot Private Sector Partnership to Improve Water Supply, Wastewater, or Irrigation Service Delivery			9	4	5
115: C.1.-2 At least three contracts developed for use by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	1/25/2018	NLWE Training of WE's PPP teams	Completed	Task C.1 Develop a Pilot Private Sector Partnership to Improve Water Supply, Wastewater, or Irrigation Service Delivery			9	3	6
115: C.1.-2 At least three contracts developed for use by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	1/24/2018	SLWE Training of WE's PPP teams	Completed	Task C.1 Develop a Pilot Private Sector Partnership to Improve Water Supply, Wastewater, or Irrigation Service Delivery			4	0	4
97: B.2-4 Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	7/19/2018	Beirut ISO-14045 and ISO-14046 for for Agro food Industry	Completed	Task B.2 Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in the Selected Areas of <u>Intervention</u>			21	14	7
97: B.2-4 Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	7/12/2018	Beirut -ISO-14045 and ISO-14046 for Rock cutting industry	Completed	Task B.2 Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in the Selected Areas of <u>Intervention</u>			9	1	8
97: B.2-4 Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	6/28/2018	Beirut -ISO-14045 and ISO-14046 cosmetics industry	Completed	Task B.2 Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in the Selected Areas of <u>Intervention</u>			15	9	6
97: B.2-4 Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	5/29/2018	BWE- ISO-14045 and ISO-14046 Winery	Completed	Task B.2 Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in the Selected Areas of <u>Intervention</u>			14	6	8
97: B.2-4 Develop and give at least 5 presentations to chambers of commerce and industry associations on ISO 14045/46.	4/27/2018	7: BWE -ISO awareness session Training for the Dairy industries	Completed	Task B.2 Reduce Nonproductive (Wasteful) Uses of Water in Both Rural and Urban Settings in the Selected Areas of <u>Intervention</u>			32	10	22
93: B.1-4b Three of four RWEs/MoEW will have informative websites that provide up-to-date information on RWE operations and facilitate customers <u>registering complaints</u> .	7/24/2018	85-B.1- BWE-CRM-Web Site	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			2	1	1
93: B.1-4b Three of four RWEs/MoEW will have informative websites that provide up-to-date information on RWE operations and facilitate customers <u>registering complaints</u> .	3/29/2018	SLWE Web site training	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			6	2	4
88: B.1-3 Train at least 60 RWE staff in communication messages and customer relations	10/16/2018	BWE CRM - Management of technical application -Training on Customer Service Management	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities	60	74	14	6	8
88: B.1-3 Train at least 60 RWE staff in communication messages and customer relations	10/14/2016	BMLWE Communications and Customer Relations Training	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			6	4	2
88: B.1-3 Train at least 60 RWE staff in communication messages and customer relations	10/5/2016	BWE Communications and Customer Relations Training	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			20	8	12
88: B.1-3 Train at least 60 RWE staff in communication messages and customer relations	9/27/2016	SLWE Communications and Customer Relations Training	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			17	11	6
88: B.1-3 Train at least 60 RWE staff in communication messages and customer relations	9/1/2016	NLWE Communications and Customer Relations Training	Completed	Task B1. Improve Customer Satisfaction with Services Provided by Public Water Utilities			17	5	12
08.b: A.1.2-1 Complete installation of the ERP suite in the NLWE; 53: A.5-6 Provide capacity building training based on the training needs assessments for up to 100 RWE staff	1/8/2018	NLWE Microsoft (Word, Excel)	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model; Task A.5 Improve Hours of Water Service by the 4 RWEs			73	30	43
51: A.5-4 Develop training materials and train RWE staff in pump O&M	9/25/2018	SLWE orientation on O & M	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	0	15
51: A.5-4 Develop training materials and train RWE staff in pump O&M	6/26/2018	SLWE Jezzini Predictive Maintenance pump O&M	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			11	0	11
49: A.5-2 Complete ERP and technical training needs assessment for RWEs and the LRA	3/14/2017	E- Waste Environmental	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			6	2	4
53: A.5-6 Provide capacity building training based on the training needs assessments for up to 100 RWE staff	10/18/2018	BMLWE Water Operators Certification Training program - Waste Water Treatment Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			16	4	12
53: A.5-6 Provide capacity building training based on the training needs assessments for up to 100 RWE staff	10/15/2018	SLWE Water Operators Certification program- Waste Water Treatment Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	1	14

Deliverable and Task Nos.	Start Date	Title	Status	Related Workplan Activity	Target	Actual	Total	Female	Male
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	4/16/2018	NLWE Water Operators Certification Training program - Waste Water Treatment L1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs	100	151*	15	5	10
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	2/19/2018	SLWE Water Operators Certification Training program -Water Distribution Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	4	11
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	4/25/2017	NLWE Water Operators Certification Training program- Water Distribution Level 2	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			14	3	11
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	3/28/2017	NLWE Water Operators Certification Training program- Water Treatment Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			16	3	13
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	2/21/2017	NLWE Water Operators Certification Training program-Water Distribution Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	3	12
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	11/29/2016	BWE Water Operators Certification Training program - Water Treatment Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	1	14
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	9/20/2016	SLWE Water Operators Certification Training program - Water Treatment Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	2	13
48: A.5-1 Water operator's certification program is designed in partnership with ACWUA and RWEs	8/23/2016	SLWE Water Operators Certification Training program - Water Distribution Level 1	Completed	Task A.5 Improve Hours of Water Service by the 4 RWEs			15	1	14
35: A.4.1-2 Train RWE staff in preparation of WQAPs and water safety analysis	6/25/2018	SLWE- WQAP	Completed	A.4.1 Strengthen the Capacity of RWEs to Develop Water Quality Assurance Plans			8	6	2
35: A.4.1-2 Train RWE staff in preparation of WQAPs and water safety analysis	8/7/2017	WQAP	Completed	A.4.1 Strengthen the Capacity of RWEs to Develop Water Quality Assurance Plans			4	1	3
33: A.3-3 Train at least 60 RWE staff in meter reading and maintenance	9/25/2018	BWE Ghazze-Meter reading	Completed	Task A.3 Reduce Non-Revenue Water Losses	60	33*	11	0	11
33: A.3-3 Train at least 60 RWE staff in meter reading and maintenance	11/6/2017	Meter reading-BWE	Completed	Task A.3 Reduce Non-Revenue Water Losses			11	0	11
33: A.3-3 Train at least 60 RWE staff in meter reading and maintenance	11/6/2017	BWE Chlorination Training	Completed	Task A.3 Reduce Non-Revenue Water Losses			11	0	11
24: A.1.5-3 Improved use of GIS (through formal and on-the-job training) to maintain information on piped networks and equipment and customers	3/6/2017	GIS- BWE	Completed				5	2	3
24: A.1.5-3 Improved use of GIS (through formal and on-the-job training) to maintain information on piped networks and equipment and customers	2/6/2017	GIS SLWE- NLWE	Completed				10	3	7
24: A.1.5-3 Improved use of GIS (on-the-job training) to maintain information on <u>piped networks and equipment and customers</u>	10/23/2018	BWE -GIS Application - Assets valuation	Completed	A.1.5 Strengthen RWE and LRA use of GIS for assets management and operations			9	2	7
24: A.1.5-3 Improved use of GIS (on-the-job training) to maintain information on <u>piped networks and equipment and customers</u>	12/12/2017	GIS BWE under Asset Valuation	Completed	A.1.5 Strengthen RWE and LRA use of GIS for assets management and operations			8	2	6
24: A.1.5-3 Improved use of GIS (on-the-job training) to maintain information on <u>piped networks and equipment and customers</u>	9/25/2017	GIS NLWE under Assets valuation	Completed	A.1.5 Strengthen RWE and LRA use of GIS for assets management and operations			14	1	13
24: A.1.5-3 Improved use of GIS (on-the-job training) to maintain information on <u>piped networks and equipment and customers</u>	9/11/2017	GIS SLWE under Assets valuation	Completed	A.1.5 Strengthen RWE and LRA use of GIS for assets management and operations			15	6	9
15: A.1.3-3 Integrate assets valuation into ERP in the BMLWE and BWE	9/8/2017	Assets valuation BMLWE	Completed	A.1.3 Strengthen Assets Valuation and Management			5	4	1
15: A.1.3-3 Integrate assets valuation into ERP in the BMLWE and BWE	8/22/2017	Assets valuation BWE	Completed	A.1.3 Strengthen Assets Valuation and Management			2	2	0
14.b: A.1.3-2 Integrate assets valuation into ERP in the SLWE and NLWE	9/18/2017	Assets valuation- NLWE	Completed	A.1.3 Strengthen Assets Valuation and Management			3	2	1
14.a: A.1.3-1 Conduct assets valuation for the SLWE and NLWE and train staff on <u>maintaining and updating assets in the ERP</u>	8/18/2017	Assets valuation SLWE	Completed	A.1.3 Strengthen Assets Valuation and Management			4	0	4
10: A.1.2-3 Train 50 RWE and LRA staff in ERP use	11/29/2016	SLWE International Financial Accounting system training	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model	50	125	12	6	6
10: A.1.2-3 Train 50 RWE and LRA staff in ERP use	11/24/2016	NLWE International Financial Accounting system training	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model			13	7	6
10: A.1.2-3 Train 50 RWE and LRA staff in ERP use	9/5/2016	SLWE Training on the Enterprise Resource Planning	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model			43	21	22
10: A.1.2-3 Train 50 RWE and LRA staff in ERP use	7/8/2016	Training for NLWE IT department on Microsoft Dynamics NAV 2016 for ERP implementation	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model			8	2	6
10: A.1.2-3 Train 50 RWE and LRA staff in ERP use	3/11/2016	BMLWE ERP Process	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model			49	26	23
08.b: A.1.2-1 Complete installation of the ERP suite in the NLWE; 53: A.5-6 Provide capacity building training based on the training needs assessments for <u>up to 100 RWE staff</u>	1/8/2018	NLWE Microsoft(Word,Excel)	Completed	A.1.2 Fully Implement the Enterprise Resource Planning and Cost Tariff Analysis Model; Task A.5 Improve Hours of Water Service by the 4 RWEs			73	30	43
04: A.1.1-4 LRA will have completed water quantity monitoring plan for all rivers in Lebanon including the Upper Litani River Basin	11/6/2017	GIS LRA	Completed	A.1.1 Strengthen Business and Master Planning			5	1	4

Deliverable and Task Nos.	Start Date	Title	Status	Related Workplan Activity	Target	Actual	Total	Female	Male
							964	301	663

#	WE/Organization	Title of the Training	Type of the Training	Number of Trainees	Number of Days	Fiscal Year
1	BMLWE	Enterprise Resource Planning Capacity Strengthening Program at BMLWE – ERP Procedures	49 staff from BMLWE attended ERP Process workshop. The participants included all BMLWE ERP users. The aim was to enable participants understand the ERP procedures.	49	4	Y1
2	SLWE	Enterprise Resource Planning Capacity Strengthening Program at SLWE – ERP procedures	43 staff from SLWE attended ERP Process workshop. The participants included all SLWE ERP users. The aim was to enable participants understand the ERP procedures.	43	4	Y1
3	NLWE	ERP Technical Training (Microsoft) at NLWE	8 staff from the IT department of NLWE attended this Microsoft NAV technical training. The aim of this training was to enhance the technical capacities of IT staff at NLWE, through best practices and techniques on ERP. This activity will ultimately help the LWP team with the effective implementation and management of ERP at NLWE.	8	20	Y1
4	SLWE	ACWUA WOCTP Water Distribution WD Level 1 at SLWE	15 staff attended this course from SLWE. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water distribution, while maximizing the performance of water facilities.	15	10	Y1
5	SLWE	ACWUA WOCTP Water Treatment WT Level 1 at SLWE	15 staff attended this course from SLWE. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water treatment, while maximizing the performance of water facilities.	15	10	Y1
6	NLWE	Communications and Customer Relations at NLWE	17 staff from NLWE attended the Communications and Customer Relations training. The aim of these sessions was to improve the capacity of the customer service staff to efficiently manage customers' inquiries and complaints while working under pressure and dealing with difficult personalities.	17	3	Y1
7	SLWE	Communication and Customer Relations at SLWE	17 staff from SLWE attended the Communications and Customer Relations training. The aim of these sessions was to improve the capacity of the customer service staff to efficiently manage customers' inquiries and complaints while working under pressure and dealing with difficult personalities.	17	3	Y1
8	BWE	Communications and Customer Relations at BWE	20 staff from BWE attended the Communications and Customer Relations training. The aim of these sessions was to improve the capacity of the customer service staff to efficiently manage customers' inquiries and complaints while working under pressure and dealing with difficult personalities.	20	3	Y2
9	BMLWE	Communications and Customer Relations at BMLWE	6 staff from BMLWE attended the Communications and Customer Relations training. The aim of these sessions was to improve the capacity of the customer service staff to efficiently manage customers' inquiries and complaints while working under pressure and dealing with difficult personalities.	6	3	Y2
10	NLWE	International Financial Reporting Standards at NLWE	13 staff from NLWE attended the IFRS training. The aim of this training is to familiarize RWEs staff with the IFRS. IFRS are a set of accounting standards that can be applied on a globally consistent basis. IFRS constitute the basis for the ERP's accounting and financial approach. They have also been mandated by the Ministry of Finance.	13	1	Y2
11	SLWE	International Financial Reporting Standards at SLWE	12 staff from SLWE attended the IFRS training. The aim of this training is to familiarize RWEs staff with IFRS. IFRS are a set of accounting standards that can be applied on a globally consistent basis. IFRS constitute the basis for the ERP's accounting and financial approach. They have also been mandated by the Ministry of Finance.	12	1	Y2
12	BWE	ACWUA WOCTP Water Treatment WT Level 1 at BWE	15 staff from BWE attended this 10-day course. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water treatment, while maximizing the performance of water facilities.	15	10	Y2
13	NLWE and SLWE	GIS Training for NLWE & SLWE	6 NLWE staff and 4 SLWE staff attended the GIS training delivered by the international supplier of GIS software, ESRI. The purpose of this course is to acquire the skills to perform the most common ArcGIS workflows. Primarily using ArcMap, the course allows users to explore, manage, and analyze geographic data and create informative maps. It also teaches users techniques to share effectively ArcGIS work with decision makers, colleagues, and the public.	10	7	Y2
14	NLWE	ACWUA WOCP Water Distribution Level 1 at NLWE	15 staff from NLWE attended this 10-day course. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water distribution, while maximizing the performance of water facilities.	15	10	Y2
15	BWE	GIS Training for BWE	5 BWE staff attended the GIS training ESRI delivered. The purpose of this course is to acquire the skills to perform the most common ArcGIS workflows. Primarily using ArcMap, the course allows users to explore, manage, and analyze geographic data and create informative maps. It also teaches users techniques to effectively share ArcGIS work with decision makers, colleagues, and the public.	5	5	Y2
16	NLWE	ACWUA WOCP Water Treatment Level 1 at NLWE	16 staff from NLWE attended this 10-day course. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water treatment, while maximizing the performance of water facilities.	16	10	Y2

17	NLWE	ACWUA WOCF Water Distribution Level 2 at NLWE	Fourteen (14) staff from NLWE attended this 10-day course. The purpose of this training is to enhance the practical skills of managers/operators, provide them with proven techniques and best practices knowledge in water distribution, while maximizing the performance of water facilities.	14	10	Y2
18	BWE and LRA	Water Quality Assurance Plan for BWE and LRA	This training is a three-day training, was attended by BWE and LRA personnel and focused on laboratory procedures, processes, and requirements to implement the WQAP.	3	3	Y2
19	BWE,	Assets Valuation for For BWE, SLWE, NLWE and BMLWE	Fourteen staff from RWEs from all RWEs attended this “in-class” session and were trained on	14	4	Y2
20						
21	BWE	GIS Training on Asset Valuation for BWE	8 BWE staff attended this GIS training on asset valuation. The purpose of this course is to acquire the skills to perform the most common ArcGIS workflows. Primarily using ArcMap, the course allows users to explore, manage, and analyze geographic data and create informative maps. It also teaches users techniques to share effectively ArcGIS work with decision makers, colleagues, and the public	8	4	Y3
22	LRA	GIS Training for LRA	5 LRA staff attended this training. To ensure the sustainability and the integrity of the newly developed GIS geodatabase, the training included updating data, editing, modifying, displaying information on maps and analyzing the data. It also included the application of GIS in planning, design, and implementation in the water sector. The training aimed to introduce participants to the basic GIS concepts and ArcGIS methods: GIS data types, editing GIS data and spatial data analysis cartographic models (raster, vector), conversion of GIS models, GIS terminology, GIS vector functions/operations, data representation and integration.	5	13	Y3
23	BWE	Meter Reading Training for BWE	11 staff of BWE completed this training. The training focused on meter reading and meter maintenance. The objective of the training is to deepen participants' knowledge of meters installed in Zahleh, enhance their capacity, improve the management of water resources, and determine the quantities of production from the sources supplied with meters in Zahleh.	11	3	Y3
24	BWE	Chlorination Training for BWE	11 BWE staff completed this training. The purpose of this training was to demonstrate and explain the general operation of the chlorination, the basic components of chlorinators, troubleshooting issues, and safety issues when operating such equipment and handling water treatment chemicals.	11	3	Y3
25	NLWE	MS Office Training	72 NLWE staff attended this MS office training. This course helps employees acquire skills to use	72	16	Y3
26						
27	SLWE	PPP Training at SLWE	4 SLWE staff attended this interactive training. SLWE nominated an internal committee to	4	1	Y3
28						
29	NLWE	PPP Training at NLWE	9 NLWE staff attended this interactive training. NLWE nominated an internal committee to	9	1	Y3
30						
31	BWE	PPP Training at BWE	9 BWE staff attended this interactive training. BWE nominated an internal committee to follow	9	1	Y3
32						
33	SLWE	Training on Hand-	This training activity will improve billing and collection at SLWE. 51staff of SLWE completed the	51	3	Y3
34						
35	BWE	Training on Hand-Held Units (HHU)- BWE bill collectors	This training activity will improve billing and collection at BWE. 40 staff of BWE completed the training for BWE. They included BWE’s bill collectors and some back office staff.	40	2	Y3
36	SLWE	SLWE ACWUA Water	15 Staff of SLWE completed this training, which prepares utility operators and managers of	15	10	Y3
37						
38	NLWE	NLWE ACWUA	15 NLWE staff attended this water certification-training program. This course helps employees	15	10	Y3
39						
40	Dairy	ISO 14045 and ISO-	Attendees from the Lebanese dairy industry were introduced to the two ISO standards, 14045	32	1	Y3
41						
42	NLWE	Training on Hand-	This training activity will improve billing and collection at SLWE. 86 staff of NLWE completed the	86	3	Y3
43						
44	Wine	ISO-14045 and ISO-	Attendees from various wineries were introduced to the two ISO standards, 14045 and 14046.	14	1	Y3
45						
46	SLWE	Jezzine Predictive	11 SLWE staff attended this newly applied computerized system, considered a pilot project. The	11	3	Y3
47						
48	Cosmetic	ISO-14045 and ISO-	Attendees from the cosmetics industry were introduced to the two ISO standards, 14045 and	15	1	Y3
49						
50	Rock cutting industry	ISO-14045 and ISO-14046 Training for the Rock Cutting Industry	Attendees from the rock cutting industry were introduced to the two ISO standards, 14045 and 14046. Specifically, they learnt the basics of the environmental eco-efficiency standards and the water footprint standards.	9	1	Y3
51	Agro-food industry	ISO-14045 and ISO-14046 Training for the Agro- Food Industry	Attendees from agro-food industries were introduced to the two ISO standards, 14045 and 14046. Specifically, they learnt the basics of the environmental eco-efficiency standards and the water footprint standards.	21	1	Y3

52	BWE	BWE-CRM-Web Site Training	2 BWE staff received training on social media management and content development.	2	1	Y3
53	SLWE	SLWE Orientation Training on Pumps O&M for New Engineers	11 SLWE new hired engineers attended this orientation training on pumps components, wells, motor control center, operation and maintenance procedures; this training will be repeated to cover all SLWE related technical staff.	11	1	Y3
54	BWE	BWE Ghazze-Meter /PV/Chlorination Training for Technical Staff	11 BWE technical completed a two-day training on the newly installed metes, the solar - photovoltaic (PV) and the chlorination system, within a project to improve communal water service delivery in affected communities/municipalities.	11	2	Y3
				769	203	

LWP Sustainability Table			1. Is there demand for this particular infrastructure, technology, or activity from the recipient?	2. Is there demand for this technology or activity from the recipient's beneficiaries or customers?	3. Does the counterpart have the capacity to manage the infrastructure or technology, or what assistance do they need to ensure that capacity is in place?	4. Where will follow-on funding or equipment come from? Does the recipient have the capacity to bid for or purchase any follow-on funding, services, or equipment?	5. Is there an exit strategy?	6. For any procurement action or grant award, we will require recipients to demonstrate their capability to sustain the activities, and incorporate conditions to ensure sustainability.
Del#	Task	Title	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)
	A.I. STRENGTHEN RWE AND LRA PLANNING AND INTERNAL OPERATIONS MANAGEMENT **							
	A.I.1. Strengthen Business Master Planning							
1	A.I.1	Business plans	N. This a continued activity from previous USAID projects. The RWEs are not using the business plans. That is why LWP changed the focus to the Risk Management Plans that will be used in the development of the Y5 business plans.	N/A	LWP trained RWE staff on developing and updating business plans.	N/A	RWEs will develop the 2020-2024 business plans with support from LWP. The focus will be on training the RWE staff on how to update existing plans and develop new plans in the future.	N/A
3	A.I.1	Water demand management (WDM) plan in the demonstration area	Y	Y	LWP conducted WDM training to staff at BWE, and plans to conduct the same training in other establishments. In addition, LWP worked with DGs to incorporate this activity within the staff's job descriptions.	Donors have already expressed interest in replicating this activity in other areas./ Yes	LWP will form WDM teams in RWEs . These teams will receive trainings on all procedures of this activity. LWP is developing a procedures manual for the RWEs.	N/A
4	A.I.1	Water quantity monitoring plan for all rivers in Lebanon including the Upper Litani River Basin	Y	N/A	LRA has the needed IT infrastructure to run and operate the geodatabase. LWP provided training to relevant LRA staff.	Using the newly developed Geodatabase, LRA already purchased new gauging stations and installed them based on the provided recommendation. /Y	LWP provided training to LRA team. This team has started the monitoring and will continue the efforts post LWP.	N/A
5	A.I.1	Irrigation master plan	Y	Y	LWP is assisting BWE in forming a team to manage and support the irrigation within BWE mandate.	Part of the capital investment will be financed by the Ministry of Energy and Water. The ministry is one of the stakeholders that are assisting BWE in their irrigation mandate. Central government will seek financing from the government's budget and donor agencies.	The irrigation master plan itself will provide the needed institutional support for managing the irrigation systems at BWE.	N/A
6	A.I.1	Water and wastewater master plans	Deliverable to be cancelled. The work was being conducted by other donors or the MoEW.					
	A.I.2. Fully Implement Enterprise Resource Planning							
8.a	A.I.2	ERP	Y	Y - Indirectly as they stand to benefit from improved management and transparency.	Yes. LWP trained users through formal and on-the-job trainings.	The RWEs committed to renew the annual fees and will include it in their annual budget.	LWP is working with RWEs to create a common ERP Support Unit to ensure the sustainability of the system. They will benefit from shared experience and cost-sharing.	LWP received commitment letters from RWEs to maintain the system and renew the license.
12	A.I.2	Governance manual	This is a natural progression building on previous USAID technical assistance for RWEs that have the capacity in place. RWEs expressed the need for consolidated internal policies and procedures, that are included in the governance framework.	Y - Indirectly as they stand to benefit from improved management and transparency.	Yes. LWP formed committees for each management tool developed. These committees received training on the use of respective tools to ensure ownership and learning.	N/A	LWP's approach of forming committees in RWEs is key for the sustainability of this task. LWP will handover the governance manuals to RWEs. Governance tools will also be linked be linked to the ERP system.	N/A
	A.I.3. Strengthen Assets Valuation and Management							
16.a	A.I.3	Conduct annual updates of assets valuation	Y	N/A	Yes, LWP trained RWE staff on updating asset data both on the GIS and ERP systems.	N/A	LWP integrated asset valuation into the ERP. This will ensure automatic update for the data initiated at the purchase order level.	N/A
	A.I.4. Improve RWE Internal Performance and							
21.c	A.I.4.	Financial and performance audits will be completed for the utilities that have the staff in place	Y	Y- Indirectly as they stand to benefit from improved performance.	Yes. LWP formed committees for each management tool developed. These committees received training on the use of respective tools to ensure ownership and learning.	N/A	LWP's approach of forming committees in RWEs is key for the sustainability of this task. LWP will handover audit manuals for future reference.	N/A
125	A.I.4	Organizational structure to reflect current needs	Y	N/A	N/A	N/A	N/A	N/A
	A.I.5. Strengthen RWE and LRA Use of GIS for Assets							
22	A.I.5	GIS systems	Y	Y- Indirectly as they stand to benefit from improved management and transparency.	Yes, the RWEs have GIS teams and LWP provided GIS training.	Yes, RWEs have the capacity to renew the GIS license. Staff can perform technical updates needed to maintain their database.	LWP will integrate GIS data into the ERP. This will be an incentive to maintain both systems.	Yes, the RWEs signed a commitment letter to continue paying for the license renewal.
23	A.I.5	Plans will be developed to strengthen GIS capacity and systems	Refer to deliverable 22 responses					
24	A.I.5	Improved use of GIS (on-the-job training) to maintain information on piped networks and equipment, and customers	Y	Y- Indirectly as they stand to benefit from improved management and transparency.	Yes, the RWEs have GIS teams and LWP provided GIS training.	Yes, RWEs have the capacity to renew the GIS license. Staff can perform technical updates needed to maintain their database.	LWP provided post training support as needed to ensure staff have a good grasp of GIS as it relates to their daily work. The RWEs are hiring staff to manage the GIS.	N/A
25	A.I.5	Mapping demonstration areas of the intervention areas following the area assessments	As-built drawings will be provided to the GIS units for future use by the RWEs.	N/A	The RWE staff are being trained on how to manage the as-built drawings in the GIS system.	N/A	Hand over of the mapping to the RWEs.	N/A

A.2. IMPROVE BILLINGS AND COLLECTION									
27	A.2	Develop communication strategy to improve customer awareness and increase collections in demonstration areas	Y		Y	RWEs are hiring communication officers to continue the work. In the meantime, LWP is working with those officers to support and build their capacities.	RWEs or other donors. There are many donors that are interested in offering support to RWEs, which have the capacity to bid for such funding.	LWP developed and handed over the communication strategise to RWEs. These strategies will be the tool used by communication officers for future campaigns.	N/A
28	A.2	Partnership with a bank or financial institution to improve collection efficiency	Y		Y	Y (no major assistance needed - a typical service provision contract with clear tangible expecations and targets)	No funding needed. The bill collection service only charges a nominal fee to the customers.	LWP acted as a mediator. Contract is being renewed bilaterally as per due date.	N/A
30	A.2	Customer register updates in the three demonstration areas	Y		Y	LWP trained RWEs have staff to maintain and update customer registers. LWP is assisting them with data consolidation.	No follow-up funding required.	LWP trained RWEs have staff to maintain and update customer registers. LWP is assisting them with data consolidation.	N/A
A.3. REDUCE NON-REVENUE WATER LOSSES									
32	A.3	Production and district metering for the RWE demonstration areas	Y		N	Y- LWP also provided training on meters use and chlorination system operation and maintenance.	Y-RWEs have put the cost of maintenance and chlorine in their budgets.	The training provided is the exit strategy for sustainability. In addition, the RWE has developed a chlorination maintenance team.	N/A
A.4. WATER QUALITY ASSURANCE PLANS									
A.4.1. Strengthen the Capacity of Utilities to Develop									
35	A.4.1	Water safety analysis	Y		Y	Y- RWE staff fully understand the WSA indicator as they participation in their development. RWEs need to hire qualified engineers to monitor the implementation.	Follow-on acitivitis should be funded to improve the rating on WSA. Funds can come from revenues, central government, Donors and international financial instututions.	LWP developed WSAs as tools to be used by RWE senior management to monitor their performance rating according to international standards and benchmarks. DGs at RWEs will refer to this document as their action plan to improve water security in their areas.	N/A
39	A.4.1	Service contract to carry out water quality and safety analysis	Y		Y	Y	NA	Under this deliverable LWP is working on presenting the concept of partnerships with accredited labs and centralizing infrequent tests for economies of scale to RWEs accompanied with the required contractual framework. LWP will develop draft contractual documents legalizing the relationship between the RWE and the service provider. Once the contract is in place, the involved parties will manage its implementation.	N/A
40	A.4.1	Public messages/information on water quality in their networks	Y		Y	Y- LWP is conducting training and building capacity of communication staff.	RWEs or other donors. Many donors are interested in offering support to RWEs, which have the capacity to bid for such funding.	LWP provided designs for key messages to be used frequently by RWEs. Newly hired communication officers will build on material deveoped by LWP	N/A
41	A.4.1	WQAPs in place	Y		Y	LWP is conducting training to all lab technicians at RWEs on implementing protocols. RWEs may require outsourcing to accredited labs for some tests.	RWEs may seek to outsource to accredited labs. Funding can come from thier budgets or other donors such as Swiss Development Cooperation.	LWP will handover the lab assessment with a list of recommendations for equipment and tests to buy and outsource.	N/A
42	A.4.1	Partnerships between RWEs and municipal governments to conduct joint water quality and safety analysis	Y		Y	Y	N/A	LWP will establish MOUs between local authorities and RWEs. These MOUs will be within the respective legal mandates of all parties to make sure they share responsibility in water management.	N/A
A.4.2. Strengthen the Capacity of RWEs and LRA in									
43	A.4.2	Water security analysis							
A.5. TRAINING AND CAPACITY BUILDING TO									
48	A.5	Water operator's certification program	This deliverable has been cancelled.						
49	A.5	Complete ERP and technical training needs assessment for RWEs and the LRA	N/A		Y-Indirectly as they stand to benefit from improved performance resulting from trainings.	N/A - this is a needs assessment report.	N/A - this is a needs assessment report.	N/A - this is a needs assessment report.	N/A - this is a needs assessment report.
A.6. IMPROVE COMMUNAL WATER SERVICE									
56	A.6	Projects that improve communal water service delivery in affected municipalities/communities	Y		Y	Y - RWEs are currently managing the systems in the areas of intervention and have the capacity to operate the new systems.	The follow on funding will come from water service fees.	LWP trained the RWEs staff. LWP also provided a cooperation framework between the RWEs and relevant municipalities.	Yes, the municipalities have signed commitment letters for each project.
A.7. IMPROVE AND EXPAND WATER SERVICES									
	A.7	Infrastructure upgrade projects identified outside of demonstration areas	Y		Y	Y - RWEs are currently managing the systems in the areas of intervention and have the capacity to operate the new systems.	The follow on funding will come from water service fees.	LWP trained the RWEs staff. LWP also provided a cooperation framework between the RWEs and relevant municipalities.	Yes, the municipalities have signed commitment letters for each project.
63	A.7	Infrastructure upgrade projects completed in demonstration areas	Same as above		Same as above	Same as above	Same as above	Same as above	Same as above
A.8. IMPROVE THE EFFICIENCY OF IRRIGATION									
65.b	A.8	Implement selected improvements for LRA facilities	Y		Y	Yes- LRA has been managing the Canal 900 and constructed wetland (CW) .	This is currently not applicable for Canal 900, since it is not operating. As for the CW, minimal funding is required for opration and maintenance.	For Canal 900, LWP developed and handed over a performance improvement plan to enhance the management of the Canal. As for the CW, LWP will provide training to LRA staff on operation and maintenance of the newly installed equipment.	N/A
66	A.8	Partnerships with irrigation equipment suppliers	N/A		N/A	N/A	N/A	N/A	N/A
A.9. SUPPORT THE DEVELOPMENT OF CONTEXT-APPROPRIATE MODELS FOR SANITATION SERVICE AND SEWAGE MANAGEMENT									

76	A.9	Sustainable sanitation models will be completed	Y	Y	LWP will provide the needed capacity building that will help the establishment to operate and maintain the newly implemented sanitation models	The establishments and the municipalities are willing to cost share the operation and maintenance of the newly implemented sanitation models	LWP secured commitment from the all relevent RWEs to manage and sustain these projects. LWP will provide the necessary training to operate and maintain the newly implemented sanitation models.	Yes
82	A.10	Water resources conservation and protection initiatives yielding	Y	Y	LWP supported BMLWE in designing the irrigation network for the Chabrouh Project. LWP provided training for BMLWE team on operating and maintaining the network	BMLWE has the resources to follow up on this project and replicate it in other areas.	Training BMLWE staff on operating and maintaining the network and the irrigation schedule. Farmers have been trained to operate and maintain the on farm networks	During this phase, the recipient launched their own procurement parallel to that of LWP and showed efficiency in performance.
87	B.1	Develop communication strategies and key messages for at least two RWEs	Y	Y	RWEs are hiring communication officers to continue the work. In the meantime, LWP is working with those officers to support and build their capacities.	RWEs or other donors. There are many donors that are interested in offering support to RWEs, which have the capacity to bid for such funding.	LWP developed and handed over the communication strategise to RWEs. These strategies will be the tool used by communication officers for future campaigns.	N/A
90	B.1	Customer Service Centers	Y	Y	The RWEs have been managing the CSCs in the past. This activity is to improve their management as well as the image of the RWEs.	The follow on funding will come from water service fees.	Provide training throughout the remaining contract and by forming citizen committees to hold the RWE CSC staff accountable.	N/A
93	B.1	Informative websites that provide up- to-date information on RWE operations and facilitate customers registering complaints	Y	Y	LWP conducted trainings to all staff that will handle and manage the websites. Additionally LWP continues to work closely with communication officers who could help foresee aspects of website content; LWP also provided reusable content to the RWEs for which we developed websites/facebook pages	RWEs or other donors. There are many donors that are interested in offering support to RWEs, which have the capacity to bid for such funding.	LWP developed and handed over the social media platforms to RWEs. These platforms will be regularly updated by newly hired communication officers.	N/A
94	B.2	Incentive rebate program for farmers	Y	Y	Y- Service provider training/ field days and after sale services secured	Funding will come from the business generated income, with potential linkages. Projects' average return on investment is 3 to 5 years	Y- LWP created linkages between farmers and financing institutions. The objective of these projects is to showcase innovative water conservation technoogies	Y- Beneficiaries are well established actors and have contributed through cost sharing (at least 50%).
95	B.2	Agro-industry reducing water use	Y	Y	N/A	N/A	N/A	N/A
96	B.2	Farmers switching to more efficient irrigation technologies	Y	Y	Yes. LWP trained farmers on new technology installed.	Future funding can be autofinanced by the farmers or available through the Central Bank of Lebanon and Lebanese Envonmental Action LEA (Subsidized laons).	LVP strategically selected key farmers in corresponding areas in order to show case the efficiency of applied technologies. LVP also introduced other farmers in the vicinity (who are willing to switch) to soft financing schemes under LEA. These financing shcemes will provide farmers with the needed money to install similar technologies replicating LWP's efforts with the key farmers.	The economic return on investement that was proven by LWP field experiments showed improved yield and reduction of cost. This will enable the farmers to sustain this technology.
97	B.2	Chambers of commerce and industry associations implementing ISO 14045/46	Y	Y	N/A	N/A	N/A	N/A
98	B.2	Farmers and industries undertake agreed to commitments	Did not start yet. Planned for 2019					
99	B.3	Partnerships with municipal governments in the Litani Basin	Y	Y	Yes. Counterparts are both RWEs and municipalities.	Yes, LWP funded some projects based on the action plans. A list of other projects is available for other donors to fund. The new USAID CSP project will be funding some of these identified projects.	LWP coordinated with RWEs and municipalities to assess the needs for priority projects. These projects are now the roadmap for more than 28 municipaities. This roadmap is the tool that these municipalities will use to channel funding most efficiently. LWP also formalized those acion plans in an MOU signed between the municipalities and RWEs for ensuring future coordination and consent from both parties.	N/A
102	B.3	Media personalities and programs interested in water issues and plan program highlighting water issues in Lebanon	N/A	Y	N/A	N/A	N/A	N/A
103	B.3	Partnerships with municipal governments around water use, management, and protection activities	Y	Y	Yes. Counterparts are both RWEs and municipalities.	Yes, LWP funded some projects based on the action plans. A list of other projects is available for other donors to fund. The new USAID CSP project will be funding some of these identified projects.	LWP coordinated with RWEs and municipalities to assess the needs for priority projects. These projects are now the roadmap for more than 28 municipaities. This roadmap is the tool that these municipalities will use to channel funding most efficiently. LWP also formalized those acion plans in an MOU signed between the municipalities and RWEs for ensuring future coordination and consent from both parties.	N/A
104	B.3	River clean-up day in the Litani Basin	Y	Y	N. With the new management, LRA has started to enhance it's media presence through better use of communication platforms. LRA would need further professional guidance on delivering the right messages for the protection of the Litani.	This will need a political commitment to implement the laws and punish polluters, rather than funding. Other donors as available.	The community mobilization created by LWP clean-up campaign, triggered a momentum among local authorities specifical Litani River Authority (LRA) who has already launched a Bekaa wide campaign against polluters	N/A
106	B.3	Support for student research on water-related challenges	Y	N/A	N/A	N/A	N/A	N/A

107.a	B.3	Schools will be using LWP-developed materials on water resources	Y	N/A	Yes, schools can update the material later on.	N/A	LWP conducted a training of trainers for school teachers and parents committees on the material produced. LWP also handed over all material to the schools. All of the above will ensure the use of these material after LWP ends.	N/A
107.b	B.3	Support research studies by university students on water related challenges	N/A	N/A	N/A	N/A	LWP funded research will produce material that can be used for tackling eminent water challenges by other donors and NGOs who are working in the water sector.	N/A
109	B.3	Media campaigns will be aired on water resources and conservation challenges in Lebanon	Y	Y	N/A	RWEs or other donors. Many donors are interested in offering support to RWEs, which have the capacity to bid for such funding.	LWP mobilized champions in different sectors as advocates on water conservation and protection. LWP is also coaching the DGs on media appearances and communicating efficient messages.	N/A
110	B.3	Civil society group or citizen's organization per area of intervention to identify and implement locally appropriate solutions for improved water use behavior for environment and water resources	Y	Y	N/A	Y.	CSOs supported by LWP created water units in respective intervention areas. These units will continue following up on water issues and coordinating with both the municipality and RWEs to ensure better water management in local communities.	N/A
C.1. DEVELOP A PILOT SECTOR PARTNERSHIP TO								
113	C.1	Service contracts with RWEs for private sector support in reducing NRW	Y	Y	Y (no major assistance needed - a typical service provision contract with clear tangible expecations and targets)	No funding needed. The bill collection service only charges a nominal fee to the customers.	LWP acted as a mediator. Contract is being renewed bilaterally as per due date.	N/A
115	C.1	Contracts used by RWEs with private companies to improve operations, deliver improved services, and manage water and/or wastewater systems	Y	Y	Y- LWP provided on the job trainings for contract management	Governmental funds, own capital reserve, revenues forecast, international financial institutions.	Y- LWP will provide RWEs with full tender documents and contracts that can be used for service biddings.	Y- RWEs endorsed the creation of PPP units and the strategic PPP steering committees.
C.2. DEVELOP AT LEAST ONE PILOT PRIVATE								
116	C.2	Incentive-rebate program and prize concept to spur the transition of industries to more efficient water uses	Y	Y- indirectly	Y	Follow on funding through own capital.	Beneficiary signs off a completion certificate that includes an unconditional commitment for sustained operation of provided equipment	Project improves economic returns which ensures financial sustainability of the activity.
100	C.2	Meetings with industry associations on water conservation issues	Y	Y	NA	NA	NA	N/A
108	C.2	Partnerships with industry associations to conduct water audits, co- sponsor workshops on water conservation technologies and award annual prizes	refer to 116					
118	C.2	Innovation grants to develop/promote more efficient water use	Y	Y	Q1- Y Q2- Service provider training/ field days and after sale services secured	Linkages with financing institutions and development agencies for potential replication. (case study predictive maintenance)	Y- Projects are meant to showcase innovative water conservation technoogies Created Linkages with financing institutions	Y- Beneficiaries are well established actors and has contributed through cost sharing
C.3. DEVELOP AT LEAST ONE PILOT PRIVATE								
121	C.3	Programs with industry and business associations, and media to improve water use and awareness among their members and by the general public	Y	N/A	N/a	NA	Businesses and media companies incorporated water as part of their CSR strategy	N/A
125	A.1.4	Revise the SLWE organizational structure to reflect current needs	Already reported in row 17 above					
126	A.2	Use of handheld bill collection devices	Y	Y -Customers will have automated/printed bills.	LWP trained staff on use of handheld devices (HH). The devices do not need much maintenance.	N/A	LWP provided a two-year maintenance contract for troubleshooting.	LWP received written commitment from RWEs to renew the maintenance contract with the provider.
127		Risk Management Plan	Y	N/A	Yes. LWP established risk management plan (RMP) committees to ensure capacity building and ownership.	N/A	Yes, the RMP committees are being trained to perform periodic RMP updates which is important for business planning.	N/A
129		LRA IT infrastructure and operation standards.	Y	N/A	N/A	N/A	LWP handed over the assessment report to LRA. LRA will use this report to evaluate current IT infrastruaction and determine if it is capable of supporting current LRA IT requirements and ERP in the future.	N/A

Gender Review prepared by Ms. Najwa Andraos, Gender Specialist

General Observations:

Overall, there is a clear-cut gender division of labor in the specific roles and involvement of women versus men in the LWP project. Like in other cases from a number of assessments done on Gender in the Water and EG sectors, it is noted that in LWP, this division of labor across these sectors, could be due to both, sector policies as well as to cultural perceptions and the people's own perceptions of their roles as men and women in the community and in development processes.

Above said, LWP has been successful on mainstreaming and implementing gender throughout planned activities and based mainly on its Gender strategy. It made sufficient efforts to implement many recommendations of its gender strategy and to engage as many women as possible throughout the project, from LWP internal staff hiring to women farmers and municipal members.

LWP has a woman focused communication strategy, conducted a gender needs assessment targeted men and women and aimed at building the capacity of both. LWP tries to involve women on audit and financial committees. Moreover, LWP works on closing the existing gender gaps through conducting gender workshops for staff with their Dutch partners Waternet .

Existing Gender Gaps:

It is apparent from LWP's training data that women were more involved in trainings related to Cosmetics Industry, water labs, and agro-food industries, environmental eco-efficiency standards, and to some extent, in customer service, capacity building and IT.

However, in other capacity building trainings, the number of M/F is nearly equal.

In other areas, males exceed females substantially. These areas are mainly related to water treatment and technical / IT support and in techniques and best practices knowledge in water distribution. meters, bill collection and chlorination and water security procedures.

The above manifested role division is a manifestation of a typical stereotype gender division of labor.

Main achievements:

In pushing for gender inclusion, LWP focused on strengthening the capacities and the role of women in the RWEs through multiple delivered trainings, when not being able to increase hiring of women employees.

LWP also reached out to women in municipalities of Koura, seeking their input and advice on local water matters. As women farmers are a rarity, LWP made sure to look for women farmers to attend the farmers' field days and women farmers benefitted from its incentive rebate program or other water saving technologies.

LWP appointed a woman member of a water user association in the Qobayat region. LWP also worked on engaging women as household managers of water through a door-to-door/face-to-face approach and feedback solicitation. LWP shared its strategy with another donor who adopted it. As a result, the donor and LWP, in cooperation with a foreign university, successfully led two gender awareness workshops with LWP beneficiaries and donor beneficiaries. Also, through its work with and support for women

SMEs, LWP opened new doors for women led micro and SMEs to engage and build new capacities in the water sector, thus becoming a reference for water related activities such as water testing and water conservation awareness actions.

Challenges:

Worth noting is that LWP exerts good efforts to close the gender gap by targeting equal numbers of M/F. However, LWP faces major legal or cultural challenges, such as the hiring freeze imposed by the government on the regional water establishments and the low numbers of women in municipalities, in addition to the fact that the numbers of female employees in the water sector is low to start with, hence their representation in the different LWP activities is low. This gets even more challenging in LWP sectors which are field based and regarded male specific sectors. Worth mentioning is that more and more women are switching to new irrigation methods such as drip irrigation in LWP's effort to encourage farmers to switch to more efficient irrigation technologies.

Recommendations:

It would be interesting to investigate how the gender balanced trainings could impact other gender biased training, to reduce the big gender gap.

Even if the women don't directly work in specific sectors, it is important to make an effort to involve them and to increase their knowledge on these issues even if just for their own information.

Consider helping to setup a gender focal point at each RWE.