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EVALUATION

Middle East and North Africa Water Sector Evaluation

Performance Evaluation Report

March 2, 2018

This document was produced for review by the United States Agency for International Development. It was prepared by ECODIT LLC under the MENA Water Sector Evaluation Task Order under the WADI IDIQ.

MIDDLE EAST AND NORTH AFRICA WATER SECTOR EVALUATION

Performance Evaluation Report

March 2, 2018

Task Order Contract: AID-OAA-TO-17-00023 (WADI IDIQ: AID-OAA-I-14-00069)

This report was prepared by the MENA Water Sector Evaluation project team, composed of ECODIT LLC and Social Impact.

CONTENTS

ACRONYMS

ACWUA	Arab Countries Water Utilities Association
ASU	Arizona State University
CALMIT	Center for Advanced Land Management Information Technologies
CDCS	Country Development Coordination Strategy
CEDARE	Centre for Environment and Development for the Arab Region and Europe (Egypt)
CRTS	Centre Royal de Télédetection Spatiale/Royal Remote Sensing Centre
CSO	Civil Society Organization
DEC	USAID's Development Experience Clearinghouse
DECOE	Developing & Expanding Certification to Cover Business Management and Operational Excellence
DO	Development Objective
EQ	Evaluation Question
ET	Evaluation Team
FABRI	Further Advancing the Blue Revolution
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GETF	Global Environment & Technology Foundation
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSFC	Goddard Space Flight Center
IAA	Inter-agency Agreement
ICBA	International Center for Biosaline Agriculture
IDIQ	Indefinite Delivery/Indefinite Quantity
IP	Implementing Partner
IWMI	International Water Management Institute
IWSMR	Improving Water & Sanitation Services in the MENA Region
KII	Key Informant Interview
LEAP II	Learning, Evaluation & Analysis Project-II
LDAS	Land Data Assimilation System
LIS	Land Information System
MAWRED	Modeling and Monitoring Agriculture & Water Resources Development
MEB	Middle East Bureau
MEDRC	Middle Eastern Desalination Research Institute (Oman)
MENA	Middle East and North Africa
MER	Middle East Regional
ME/TS	Middle East Bureau/Technical Services
MIT	Massachusetts Institute of Technology
MODIS	Moderate Resolution Imaging Spectroradiometer
MWSE	MENA Water Sector Evaluation
MWSI	Middle East Water Security Initiative
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NDMC	National Drought Mitigation Center
NGO	Non-governmental organization
NWRC	The National Water Resources Centre (Egypt)
OMEP	Office of Middle East Programs
OMT	USAID's Operations, Maintenance & Training program

OU	Operational Unit
PAD	Project Appraisal Document
PEER	Partnerships for Enhanced Engagement in Research
PPP	Public-private partnership
PV-EDR	Photovoltaic-powered electrodialysis reversal
RDCS	Regional Development Cooperation Strategy
RDMS	Regional Drought Management System
RS	Remote sensing
SDC	Swiss Agency for Development and Cooperation
SOW	Scope of Work
TO	Task Order
ToC	Theories of change
UNICEF	United Nations International Children's Emergency Fund
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USBR	United States Bureau of Reclamation
USG	United States Government
USGS	United States Geological Survey
VEO	Violent extremist organization
WADI	Water and Development IDIQ
WASH	Water, Sanitation, & Hygiene
WISP	Water Information System Platform
WR	Water Resources
WRE	Water Resources & Environment
WSS	Water Supply and Sanitation

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report is an evaluation of water sector activities in the Middle East and North Africa (MENA) region, funded by USAID's Middle East Bureau. The Middle East Bureau supports regional activities in water and environment to address long-term sustainable access to water in the region.

The purpose of the evaluation is to provide lessons learned and recommendations for future programming in anticipation of limited funding scenarios. In particular, this evaluation will inform the following:

1) Lessons learned from design and implementation of past programs, and considerations for future activities.
2) Recommendations for three funding level scenarios:
    a. Annual program budget of $0–1 million
    b. Annual program budget of $1–3 million
    c. Annual program budget of $3–6 million
3) Ways in which the Middle East Bureau can design programs to complement bilateral activities to increase development impact.

1.2 EVALUATION QUESTIONS

There are three evaluation questions for the MENA Water Sector Evaluation (MWSE) Project:

1. Did/do USAID Office of Middle East Programs (OMEP) and Middle East Regional (MER) activities in the water, environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?
    a. USAID Water and Development Strategy, 2013–2018
    b. USAID Climate Change & Development Strategy, 2012
    c. USG Global Food Security Strategy, FY 2017–2021
2. Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?
3. Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

1.3 EVALUATION METHODOLOGY

The evaluation methodology consisted of a comprehensive desk review of program and activity literature, as well as primary source data collection via Key Informant Interviews in the United States,

Jordan, Lebanon, and Morocco. The desk review followed a rigorous analysis protocol. For each activity, the Evaluation Team (ET) read all relevant documents (activity documents provided by USAID, country plans, Country Development Coordination Strategies (CDCSs), workplans, Regional Development Cooperation Strategy (RDCSs)). These initial hypotheses and themes generated via the desk review helped the ET synthesize them with the field work data into a comprehensive set of findings, conclusions, and recommendations for the final report.

To supplement the desk review, the ET conducted Key Informant Interviews (KIIs). Qualitative data collection provided detailed insight on local as well as regional perceptions of how and why activities were, or were not, contributing to USAID objectives; how or why activities were overlapping or were uncoordinated; and how ongoing water activities were aligned with national security and foreign policy objectives of the current administration. For the KIIs conducted for this evaluation, the ET compiled a provisional list of possible respondents. This list was generated in consultation with USAID representatives in the Middle East Bureau. Beyond this initial list, the ET employed a snowball sampling technique with KII participants in order to obtain a relevant number of interview participants and thereby collect the most detailed information.

Unfortunately, due to issues related to project timing, limited support from the Jordan Mission, a compressed field schedule, and the slow rate at which the ET's interview requests were answered, the ET was only able to complete 39 KIIs, instead of the 54 aspired to. For the KIIs, the ET developed interview protocols contextualized for each country as well as the type of organizations interviewed (Implementing Partner [IP], Government Ministry, or Civil Society Organization [CSO]).

Prior to the ET's arrival in Lebanon, the team tested the KII protocols by conducting a few pilot interviews in Washington, DC, to ensure that the tools were appropriate for the local context and that the interviews did not exceed the time limit. This piloting process took place in English, Arabic, and French. The ET adjusted the protocols based on these pilots. Piloting took roughly one day.

This evaluation faced several challenges and limitations in its execution that necessitate careful discussion. Key evaluation limitations included: a change in field work location, a change in field work timeline, limitation in the number of interviews accomplished, and a related change in field work context.

1.4 FINDINGS

Evaluation Question 1: Did/do USAID OMEP and MER activities in the water, environment, and agriculture sector contribute to USAID strategies and initiatives, and to what extent?

From the findings and analyses, the ET concluded that the water strategy was targeted more than any other strategy. There was an especially large focus on IR 1.1 (Increase access to, and improve the quality of, sustainable water supply services). The second largest focus was on IR 2.2 for the climate change strategy (Establish effective governance systems). Closely following these was IR 6, (Improved adaptation to and recovery from shocks and stresses). In contrast, there were no activities targeting SO3 under the Food Security Strategy.

Three main themes can be identified in the 17 projects implemented by the Middle East Bureau (MEB) over the past 10 years. These themes are the three main threads running through the whole program during this time. The themes are knowledge management, water supply and sanitation, and agriculture. These themes are used to illustrate the findings. Two case studies, one on the Arab Countries Water Utilities Association (ACWUA) and one on Water Information System Platform (WISP), provide further details as to how the activities contributed to the USAID strategies and initiatives.

The extent to which the activities contributed to USAID strategies and initiatives is found to be "significant" as there were sufficient projects focusing on the three main themes of water supply and sanitation (WSS), water resources (WR) for agriculture, and knowledge that targeted the strategies.

Evaluation Question 2: Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?

There seems to be very little duplication of work between the bilateral and the regional programs, possibly because there are only few bilateral programs in the target countries focusing on water or related activities.

The regional program and the bilateral programs do not seem to have interacted much within the projects reviewed. Whereas the regional programs are understood to tackle macro-issues at a higher level of abstraction, the bilateral programs are appreciated for the financing of the practical application of these issues (such as capacity building). Respondents agreed that this differentiation of tasks could be improved in those cases where bilateral Missions and the regional program did not integrate effectively, which seems to have been the case in some instances.

One of the items flagged by some respondents was that the regional program has less accountability within the countries and with key stakeholders due to the broad scope and spread. One of the respondents described accountability as "diffuse."

It also came to light that it might be necessary to redefine the "region" for regional programs. In terms of the definition of the region and the way that the bilateral and regional programs cooperate, this may have to be reviewed considering the national security concerns that need to be addressed.

Evaluation Question 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

The ET found that because every water sector activity has downstream consequences, these consequences can impact American national security priorities. Although there is no clear and direct relationship between water sector activities, violent extremism, and American national security objectives, the data collected for this evaluation question suggest that water sector activities can positively impact factors that might lead people to be sympathetic to violent extremist ideas, and therefore affect American national security.

The major emergent themes here that relate to American national security processes include: water and perceptions of governance; the impact of water on youth and youth employment; and the impact of water scarcity on national and international migration. These themes indicate that access to water and water sector activities impact three processes that relate to American national security objectives (both locally and in the US). First, a lack of water provision can erode confidence in the capability and legitimacy of governing institutions in allied countries. Second, limited access to water can drive the migration of populations. Third, the migration of populations from rural to urban areas can make people vulnerable to crime and pernicious ideas promulgated by violent extremists.

1.5 RECOMMENDATIONS

Evaluation Question 1: Did/do USAID OMEP and MER activities in the water, environment, and agriculture sector contribute to USAID strategies and initiatives, and to what extent?

- Become more focused when undertaking regional programming. The ET proposes knowledge management as a main and overarching theme for water management, agriculture, flood forecasting, drought forecasting, etc. One of the key elements in this work would be to promote accessibility of data at the national level, and more generic (key) data at the regional level. Another key element would be capacity building for analysis, adaptation (down-scaling), and application/planning of water resources use and availability.

- Work more intensively with regional centers of excellence. There are a number of options that could be considered across the region. Key requirements for possible centers of excellence in which USAID would invest are presented in the text.

Evaluation Question 2: Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?

- Increased coordination and communication between the regional and bilateral program is imperative, certainly as programs are being designed, and more so when they are set to be implemented.

- Develop regional knowledge and data hubs that provide open access data for drought and flood early warning systems, locust plagues, water use and re-use, crop statistics, related water-use efficiency, and so forth.

- Make the focus even more regional, especially given Jordan's perceived outsized role in the regional programs and very large bilateral program.

Evaluation Question 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

- Education, employment, and sustainable livelihoods are critical for youth, who make up large percentages of many MENA countries. Water sector activities that take up these issues can also have the cross-cutting outcome of keeping youth away from violent militancy.

- Strengthening governance in the form of more sustainable provision of water services by the state, especially in countries like Lebanon, Syria, and the West Bank and Gaza, should help maintain confidence in public institutions and prevent the proliferation of alternative forms of governance like violent extremist organizations (VEOs).

Funding Scenarios

- Preliminarily, the ET has found that several MER-funded programs, including the Modeling and Monitoring Agriculture & Water Resources Development (MAWRED), MIT Drip Irrigation, H2O Maghreb, and Power Agricultural Hydroponics programs, are recommended for funding at the $1–3 million level. Respondents did not find that programs could be funded for under $1 million, and no KII respondents discussed any programs necessitating more than $3 million in funding. The ET recommends these programs at the $1–3 million funding level because they address cross-cutting issues like capacity building in the water sector and investing in small scale, locally sustainable projects (MIT Drip Irrigation).

- In terms of local sustainability, the ET recommends programs that in some instances can function as public-private partnerships (PPPs) that are locally sustainable based on context. For example, if donors and IPs could work with local farmers to have them invest their own funds (which allows for programs funded at the $1–3 million level), programming would be much

more sustainable. Water sector activities should grow on the basis of demand. Programming should begin with mapping the local economic landscape, and then technologies that are applicable to that environment can be developed that naturally scale and sustain themselves based on the context.

2. INTRODUCTION

On October 1, 2017, the United States Agency for International Development (USAID) Management Office of Acquisition and Assistance awarded ECODIT LLC Task Order (TO) AID-OAA-TO-17-00023 under the Water and Development (WADI) Indefinite Delivery Indefinite Quantity (IDIQ) Contract AID-OAA-I-14-00069, entitled MENA Water Sector Evaluation. The purpose of this TO was to conduct an evaluation of 17 regional water, environment, and agriculture sector activities funded by the Middle East Bureau since 2007. This evaluation would provide lessons learned and recommendations for future programming with regards to three potential budget level scenarios. The contract ran until the end of January, after which a 30 day extension was given to answer additional questions and to have time to conduct more KIIs with USAID staff.

Exhibit 1 lays out the 17 activities to be evaluated.

Exhibit 1. Past and current MER/OMEP mechanisms for evaluation review

Activity Name	Implementer	Cooperative Agreement/ Contract #	TEC	Life of Award	Active Geographic Regions
1. Middle East and North Africa Regional Drought Management System	International Center for Biosaline Agriculture (ICBA) (based in Dubai)	AID-ME-IO-15-00003	$4,131,742	9/17/2015–9/30/2018	Morocco, Tunisia, Lebanon, Jordan
2. Acceleration of Aquifer Storage and Recovery	United States Geological Survey (USGS)	AID-OAA-T-16-00001	$2,368,000	9/1/2016–8/30/2019	Jordan, Lebanon, West Bank
3. Water and Development Alliance	Global Environment & Technology Foundation (GETF)	AID-EPP-A-00-05-00007	$1,000,000 ($300k Egypt, $700k Iraq)	06/01/2016–8/1/2017 (Egypt)	Egypt, Iraq (pending approval)
4. Ultra Low Energy Drip Irrigation	Massachusetts Institute of Technology (MIT)	AID-OAA-A-16-00058	$2,343,759	9/20/2016–9/19/2019	Jordan, Morocco
5. Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)	ACWUA (based in Amman)	AID-280-F-16-00001	$300,000	2/15/2016–2/14/2018	MENA-wide
6. Sahara Forest Project in Jordan	Sahara Forest Project Foundation	AID-280-A-16-00001	$285,548	2/11/2016–12/31/2017	Jordan

7. Groundwater Governance in the Arab World	International Water Management Institute (IWMI)	AID-263-IO-13-00005	$1,065,000	9/24/2013–4/14/2017	MENA-wide
8. A Holistic Water Solution for Underserved & Refugee Host Communities	Arizona State University (ASU)	AID-280-A-16-00002	$1,947,462	2016–2018	Jordan, Lebanon
9. Partnerships for Enhanced Engagement in Research (PEER)	National Academy of Sciences (NAS)	AID-OAA-A-11-00012	$284,814	7/25/2011–7/23/2021	MENA-wide, based in Washington, DC
10. U.S. Bureau of Reclamation Inter-agency Agreement (IAA)	United States Bureau of Reclamation (USBR)	AID-ASIA-T-13-00002	$150,000	5/31/2014–9/30/2017	Jordan
11. H20 Maghreb	United Nations Industrial Development Organization (UNIDO)	608-DO-608-14-AY240-A11-A	$1,400,000	2016–TBD	Morocco
12. MIT Desalination Technology in Gaza	MIT	AID-294-IO-15-00002	$349,870	1/28/2015–10/28/2016	Gaza
13. Powering Agriculture Hydroponic Green Farming Initiative	Eco Consult	AID-263-A-13-00004	$1,149,707	9/30/2013–6/30/2017	Jordan
14. Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)	ICBA (based in Dubai)	AID-263-G-00-09-00014	$4,300,000	3/15/2009–6/30/2015	Morocco, Egypt, Jordan, Lebanon, Yemen, Iraq, Tunisia
15. Water Information System Platform (WISP)	National Aeronautics and Space Administration (NASA)	AID-263-T-11-00001	$2,841,208	2011–2015	Lebanon, Jordan, Egypt, Morocco, Tunisia
16. Further Advancing the Blue Revolution (FABRI)	DAI	AID-OAA-TO-11-00049	$15,004,837	9/8/2011–6/30/2016	MENA-wide
17. Improving Water and Sanitation Services in the MENA Region (IWSMR)	Chemonics	AID-263-TO-13-00003	$1,991,240	9/30/2013–9/29/2015	MENA-wide

3. PROJECT BACKGROUND

The Middle East Bureau supports regional activities in water and environment to address long-term sustainable access to water in the Middle East and North Africa (MENA) region. A majority of the activities evaluated contribute to the USAID Water and Development Strategy (2013–2018), and funds must be in line with, and therefore attributed to, the Water, Sanitation and Hygiene (WASH) earmark as governed in the Water for the World Act of 2014. The 17 activities evaluated focus on water supply, improved service delivery, desalination, and water conservation. Of the 17 activities covered in this evaluation, 11 are currently under implementation, and six have been completed.

Ultimately, the Middle East Bureau supports regional activities in water and environment to address the Mission Objective, "Long-term sustainable access to water in the region improved." Current Middle East Regional (MER) water and environment activities fall under the Middle East Water Security Initiative (MWSI) Project Appraisal Document (PAD), a four-year project valid from FY 2015 to FY 2018. Most MWSI activities are designed to contribute to the USAID Water and Development Strategy (2013–2018) including both Strategic Objective 1 (Water for Health) and Strategic Objective 2 (Water for Food). Cross-cutting issues, like conformance with environmental compliance regulations, training, and integrating climate resilience into development, are also led by the MWSI.

USAID is a trusted partner to MENA governments, with a history of achieving results. USAID's continued engagement in the water sector in the MENA region is a strategic priority for the U.S. Government (USG). However, there are indications that foreign assistance levels will shift due to a change in focus of the Trump administration. President Trump has highlighted broad priorities in his America First Foreign Policy issue statement. Given these circumstances, it may be necessary to consider different budget scenarios as future development programs are designed. This evaluation is intended to provide information to support such a thought process and internal USAID dialogue.

4. EVALUATION PURPOSE AND MAIN EVALUATION QUESTIONS

4.1 EVALUATION PURPOSE

The USAID Middle East Bureau (MEB) supports regional activities in water and environment to address long-term sustainable access to water in the Middle East and North Africa (MENA) region. This MENA Water Sector Evaluation (MWSE) is an evaluation of MEB water, environment, and agriculture activities since 2007, covering 17 projects in total. This evaluation should allow the MEB to make informed decisions on effective programming moving forward.

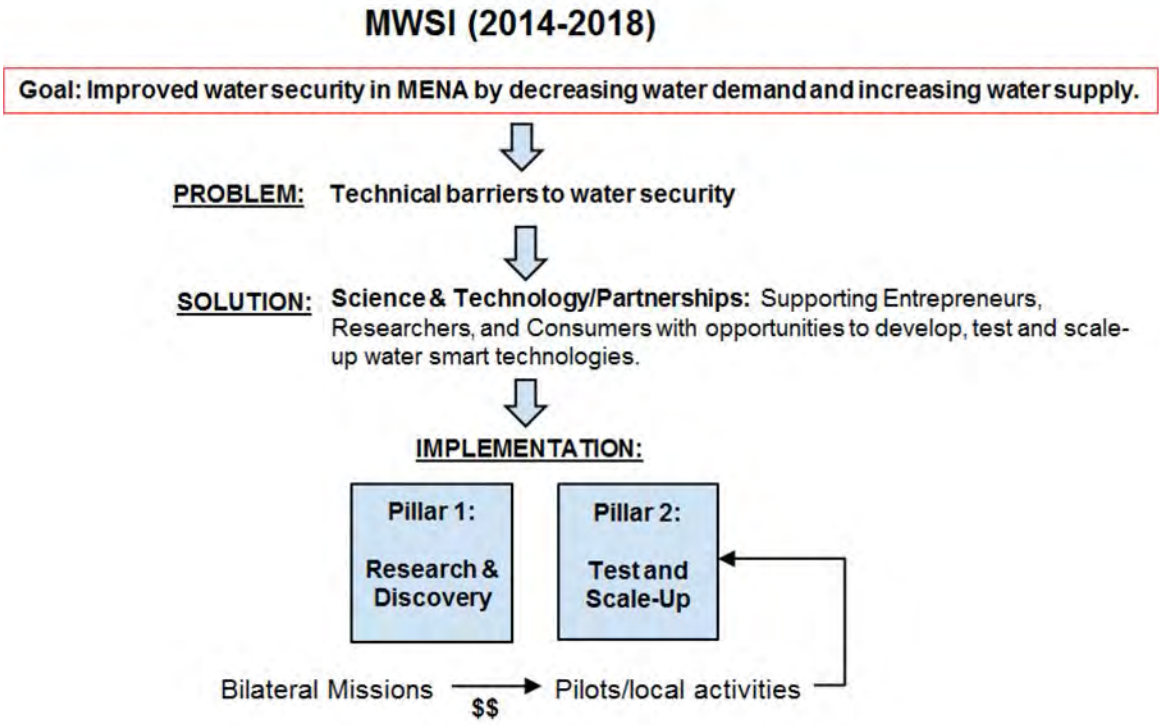
The purpose of this evaluation is 1) to provide lessons learned from past projects and considerations for future activities, 2) to provide recommendations for three possible funding level scenarios, and 3) to suggest ways that the MEB can complement bilateral programs to increase development impact.

Under his America First Foreign Policy issue statement, President Trump has indicated that foreign assistance budget levels may change due to a shift in priorities for this administration. Given these anticipated changes, Operational Units (OUs) may want to consider different budget scenarios as future development programs are designed. This evaluation is intended to provide information to support USAID decision making for projects going forward. In particular, this evaluation will inform the following purposes:

1. **Lessons learned:** What are lessons learned, if any, from the design and implementation, to date, that the Middle East Bureau should take into consideration for future programs in these areas? What adjustments, if any, should be made to improve future activities' ability to improve long-term sustainable access to water in the region?
2. **Future funding scenarios:** Recommendations should be given for three funding level scenarios:
    a. Annual program budget of $0–1 million
    b. Annual program budget of $1–3 million
    c. Annual program budget of $3–6 million
3. **Mission alignment:** How can the Middle East Bureau best design and implement regional activities to complement bilateral programs and increase development impact?

The key objective of the interventions of the MEB is "long-term sustainable access to water in the region improved." The theory of change indicates that this is to be achieved by "decreasing water demand and increasing water supply."

Exhibit 2: Theory of Change from the Scope of Work (SOW)



4.2 MAIN EVALUATION QUESTIONS

There are three evaluation questions for the MWSE Project:

1. Did/do USAID OMEP and MER activities in the water, environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?
    a. USAID Water and Development Strategy, 2013–2018
    b. USAID Climate Change & Development Strategy, 2012–2016
    c. USG Global Food Security Strategy, FY 2017–2021
2. Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?
3. Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

The three strategy documents each have Strategic Objectives and Intermediate Results outlined to address the goals of the strategies. They are presented in Exhibit 3 below.

Exhibit 3: Strategic Objectives and Intermediate Results of the three strategies

Strategy	Strategic Objectives	Intermediate Results
USAID Water and Development Strategy, 2013–2018	(1) Improve health outcomes through the provision of sustainable WASH	(1.1) Increase first time and improved access to sustainable water supply
		(1.2) Increase first time and improved access to sustainable sanitation
		(1.3) Increase adoption of key hygiene behaviors
	(2) Manage water for agriculture sustainably and more productively to enhance food security	(2.1) Improve the efficiency and sustainability of food production in rain-fed agricultural systems
		(2.2) Improve the efficiency and sustainability of food production from irrigated agricultural systems
USAID Climate Change and Development Strategy, 2012–2016	(1) Accelerate the transition to low emissions development through investments in clean energy and sustainable landscapes	(1.1) Establish foundation for low carbon energy systems
		(1.2) Invest in land use practices that stop, slow, and reverse emissions from deforestation and degradation of forest and other landscapes
	(2) Increase resilience of people, places and livelihoods through investments in adaptation	(2.1) Improve access to science and analysis for decision-making
		(2.2) Establish effective governance systems
		(2.3) Identify and take actions that increase climate resilience
	(3) Strengthen development outcomes by integrating climate change in Agency programming, learning, policy dialogues and operations	(3.1) Integrate climate change across USAID's development portfolio
		(3.2) Elevate the role of development in climate change dialogues and policies
		(3.3) Lead by example through adoption of low emissions and energy-saving operations
USG Global Food Security Strategy, FY 2017–2021	(1) Inclusive and sustainable agricultural-led economic growth	(1) Strengthened inclusive agriculture systems that are productive and profitable
		(2) Strengthened and expandable access to markets and trade
		(3) Increased employment and entrepreneurship
	(2) Strengthen resilience among people and systems	(4) Increased sustainable productivity, particularly through climate-smart approaches
		(5) Improved proactive risk reduction, mitigation, and

		management
		(6) Improved adaptation to and recovery from shocks and stresses
	(3) A well-nourished population, especially among women and children	(7) Increased consumption of nutritious and safe diets
		(8) Increased use of direct nutrition interventions and services
		(9) More hygienic household and community environments

5. METHODOLOGY

The evaluation methodology consisted of a comprehensive desk review of program and activity literature, as well as primary source data collection via Key Informant Interviews in Lebanon, Morocco, and Jordan, as well as several in Washington, DC.[1] The core strength of this approach was that it provided a detailed description of USAID programming, as well as how and why activities did or did not meet USAID strategic objectives, and on-the-ground perspectives regarding several of the 17 activities that the ET was tasked with evaluating.

Desk Review

The desk review followed a rigorous analysis protocol. For each activity, the ET read all relevant documents (activity documents provided by USAID, country plans, CDCSs, workplans, RDCSs). For every activity, the ET identified a set of findings per reviewed document and recorded them in an Excel workbook. All activities evaluated for this study had a unique Excel workbook in which every available document's name and findings were recorded. After an activity's documents were reviewed and findings recorded, the ET developed a set of provisional conclusions and recommendations based on their findings. These findings were also recorded in the activity Excel workbook. These were provisional conclusions, revised based on relevant data points collected during fieldwork. This process was repeated for all 17 activities evaluated. Recommendations for future programming generated from the foregoing findings and conclusions were also recorded in activity-specific workbooks. The set of findings, conclusions, and recommendations served as an outline for portions of the *Draft Evaluation Report.* It is important to note that all provisional findings, conclusions, and recommendations were segregated by evaluation question. Thus, for a given activity document, the findings, conclusions, and recommendations generated could have been applicable to only one evaluation question, or to all three.

As a stand-alone element of this study, the desk review facilitated the identification of emergent conclusions about past programming and recommendations for the future. Specifically, the desk review shed light on the interaction between regional and bilateral programs as well as program sustainability. Additionally, the desk review helped the ET draw conclusions about completed activities and their contribution to addressing the highlighted USAID strategies in the SOW—Water and Development, Climate Change and Development, and Global Food Security—as well as relevant USAID strategic goals. The desk review also guided the development of recommendations for the design of new regional activities to complement bilateral water sector activities.

For the purposes of this evaluation, program sustainability was defined as an instance in which "host country partners and communities take ownership of the development processes and when the local systems and resources are in place to deliver and maintain results beyond the life of external support."[2]

These initial hypotheses and themes generated via the desk review helped the ET synthesize the desk review and field work data into a comprehensive set of findings, conclusions, and recommendations for the final report. Moreover, the initial hypotheses and themes drawn from the desk review helped highlight gaps and lacunae in existing as well as completed programs. The desk review also helped the ET triangulate information across sources from discrete projects, which was useful in identifying new areas of synergy for future USAID programs.

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[1] An attempt was made to complete a remote interview with USAID/Jordan but the respondent only replied to three of the KII questions, yielding little data usable for analysis. The ET did also manage to speak briefly with the USAID Director for the Office of Water Resources and Environment (WRE).

[2] USAID, *Safeguarding the World's Water: Report of Water Sector Activities, Fiscal Year 2015.*

Key Informant Interviews

The ET conducted Key Informant Interviews (KIIs) to supplement desk research. Qualitative data collection provided detailed insight on local as well as regional perceptions of how and why activities were, or were not, contributing to USAID objectives; how or why activities were overlapping or were uncoordinated; and how ongoing water activities were aligned with national security and foreign policy objectives of the current administration. Moreover, qualitative data collection can provide insight on how to better align ongoing water activities with the Trump administration's America First Foreign Policy. Finally, this approach to data collection allowed for simple quantitative data analysis. The ET employed emergent thematic analysis to track and code KII responses for common themes/responses and to disaggregate qualitative data by respondent type where possible.

The ET used a simple quantification process for respondent answers, when feasible, in the research app Dedoose: The number of times a given theme or issue was mentioned was be tracked to provide basic summary statistics on how many people share similar ideas. This helped show the scope of certain ideas among interview subjects in the narrative of the evaluation report.

For the KIIs conducted for this evaluation, the ET compiled a provisional list of possible respondents based on Exhibit 1 above. This list was generated in consultation with USAID representatives in the Middle East Bureau. Beyond this initial list, the ET employed a snowball sampling technique with KII participants, in order to obtain a relevant number of interview participants and thereby collect the most detailed information.[3] KIIs provided detailed descriptions of how USAID programs have functioned, how they fit with USAID strategies and objectives, how regional activities have complemented (or duplicated) bilateral programs as articulated in each country's CDCS, and how water sector activities aligned with or could better align with US national security objectives.

The snowball sampling technique allowed the ET to ask interview participants to recommend other potential participants that would help the ET disaggregate qualitative data findings by occupation. Therefore, the team asked for connections with respondents in specific ministries or other relevant CSOs, IPs, and water sector non-governmental organizations (NGOs). It was hoped that this approach would help the ET factor in how occupations impact perceptions of activities. From a sampling perspective, the ET consulted with USAID to identify relevant ministries, IPs, CSOs, and NGOs. The ET sought to obtain two key informant interviews with relevant organizations willing to participate in data collection, to afford all interviewed actors equal representation in the sample, and to facilitate data quantification by occupation and organization. Given the large number of organizations involved in the projects under evaluation, the ET prioritized several organizations. USAID staff, IPs, and national government officials were the priority interview subjects of the ET (specific interview subjects were identified in consultation with USAID HQ and Mission staff). KII protocols used exclusively for these priority actors allowed respondents to be forthcoming with the ET.

With USAID Mission staff (in Lebanon and Morocco), the ET sought to complete five KIIs in each Mission. The ET hoped that this figure would allow responses from water sector, food security, climate change, and security-focus staff in the Missions as well as the heads of each Mission, if available. For each IP that was available to speak to the ET, the team sought to complete at least one KII. Similarly, in coordination with the local Missions, the ET sought to complete at least one KII with representatives of each relevant government ministry and agency focused on water (as it pertains to clean water access, food security, and climate change).

[3] A snowball sample is a type of non-probability sampling in which existing evaluation participants help recruit future study participants from among their acquaintances and colleagues.

In terms of sampling, theoretical saturation for the proposed snowball sample should have been reached when no new themes would emerge from additional data collection. It was assumed that if the ET could reach this saturation point during data collection, then the field team would endeavor to complete 54 KIIs. This figure assumed that the ET could complete 10 total interviews with USAID officials in Lebanon and Morocco as well as meet with relevant IPs (assuming 12 IPs based on the 12 of 17 water sector projects in either Lebanon or Morocco), government ministries (five KIIs per country), and CSOs/NGOs (five KIIs) in each country. Ideally, this approach was designed to yield roughly 27 interviews per country, or 54 interviews total, which would have been a sufficient number of high-quality data points for analysis.

Unfortunately, due to issues related to project timing, limited support from the Jordan Mission, a compressed field schedule, and the slow rate at which interview requests were answered, the ET was only able to complete 39 KIIs. Exhibit 4 below highlights the breakdown of interviews proposed versus those that were achieved. As a result of this skewed sample, the ET's ability to disaggregate the qualitative data collected was limited. Nonetheless, an effort to offer occupation-specific insights in the report was made.

Exhibit 4. Total Number of KIIs

Organization	KIIs per country	Total	Actually Achieved
USAID Staff[4]	5	10	8
Implementing Partners	12	24	23
Government Ministries	5	10	6
CSOs and NGOs	5	10	2
Total	**27**	**54**	**39**

The ET also proposed to conduct Focus Group Discussions (FGDs)in both Lebanon and Morocco. For these, the ET proposed to employ a convenience sample.[5] However, due to limited time as well as a poor response rate to interview requests, no FGDs could be conducted.

For both the KIIs, the ET developed interview protocols contextualized for each country, the type of organizations interviewed (IP, Government Ministry, or CSO). All KII protocols were semi-structured so that interviewers collected information that was comparable across respondent groups, but also allowed the ET and respondents the flexibility to explore certain topics in greater depth as necessary and appropriate. In order to maximize responsiveness given limited respondent time and attentiveness, the ET designed questionnaires that were intended to last no longer than one hour (see tools in Annex 3). In each interview, notes were taken by hand or, where possible, on laptops. The ET staff was fluent in English, Arabic, and French, as well as in local Arabic and French dialects. Thus, where notes were taken by hand, the ET transcribed all notes into an English language Excel file; all handwritten notes were

[4] The ET attempted to contact all staff related to the programs being evaluated; however, many staff were unable to participate in interviews. Also, in Morocco, the available staff participated in a joint interview; therefore, although the ET interviewed two people, it only yielded one interview transcript. In Jordan, incomplete KIIs were completed with two USAID officials.

[5] A convenience sample is a type of non-probability sampling in which individuals are selected based on who is readily available and/or who is willing to volunteer to participate in a study. The ET recommends a convenience sample for FGDs because many field-based staff may be out of the office or unavailable to be interviewed during evaluation field work, so the ET should be able to work with individuals who are readily available. Additionally, given people's schedules, it may be very difficult to get 8–10 specific individuals together at the same time when the ET is in the field; a convenience sample helps mitigate these issues.

transcribed nightly. No audio recordings of KIIs were completed for this evaluation. All translations were validated by the Team Leader; translations were reviewed by the Team Leader and the translator to ensure fidelity based on interview notes.

Prior to the ET's arrival in Lebanon, the team tested the KII protocols by conducting a few pilot interviews in Washington, DC, to ensure that the tools were appropriate for the local context and that the interviews did not exceed the time limit. This piloting process took place in English, Arabic, and French. The ET adjusted the protocols based on these pilots. Piloting took roughly one day.

The findings, conclusions, and recommendations developed through the desk review process also informed the coding process for the qualitative data component of this evaluation by helping generate emergent themes that were used to code the qualitative data.

Data Analysis

Data analysis for this evaluation included a number of qualitative analysis techniques. To draw out thematic content from qualitative interviews, the ET employed Dedoose qualitative data coding software. In general, Dedoose is valuable for extracting common themes from a large number of interviews and can facilitate limited quantification of qualitative data. The ET imported all finalized interview notes into Dedoose, then used it to analyze the notes based on qualitative codes that emerged from the desk review, from daily ET debriefs conducted following a day of interviews during data collection, and from codes generated based on the evaluation questions. These predetermined codes were used to search all interview notes in Dedoose to identify how often concepts like program sustainability, program success, best practices, and overlap between bilateral and regional programming (among many others) were discussed by interview participants, and allowed the ET to understand why, how, and in what context these concepts were discussed by interview participants. In this way, the ET was able to quantify the number of people who thought a given way about an activity, as well as understand why a given number of people shared this view.

Additionally, with the differences between Lebanon and Morocco taken into account, a case study of the relevant water sector programs in each country were written based on the data collected. These case studies sought to highlight particularly useful programs to compare and/or contrast the factors that contributed to water sector outcomes in the countries under study.

Findings generated during the desk review were tracked by evaluation question as well as evaluation objective in order to provide the most comprehensive answers to each. Data from the review activities were quantified to the extent possible to answer the evaluation questions. Thus, for each indicator, data from the desk review was compiled and recorded in an effort to offer a systematic answer to the relevant evaluation question. The desk review protocol discussed above was critical for this process.

Based on the qualitative coding discussed above, data from the two phases of research were combined to generate a final set of findings, conclusions, and recommendations for this evaluation. Thus, findings from the desk review (drawn from the process highlighted above) were synthesized with KII findings (generated in Dedoose) to inform an overarching set of findings, which fed into a cumulative set of conclusions and recommendations. Additionally, desk review and primary source data collection fed into two short case studies covering each of the field locations (Lebanon and Morocco). This process provided answers to the aforementioned evaluation questions.

6. LIMITATIONS TO THE EVALUATION

This evaluation faced several challenges and limitations in its execution that necessitate careful discussion. Key evaluation limitations included: a change in field work location, a change in field work timeline, limitation in the number of interviews accomplished, limitation in the number of documents available for the desk review, and a related change in field work context.

This project was initially designed to take place in Jordan and Morocco, but immediately prior to the commencement of field work, Jordan was removed from the field work schedule and replaced with Lebanon. This change had a major impact on the scale and detail of the data collected. Jordan is one of the largest USAID Missions in the world, and activities in Jordan make up a large chunk of USAID MER water sector programming. Indeed, programming in Jordan has a direct impact on the entire MENA region. For example, the Chemonics-implemented Improving Water and Sanitation Services in the MENA Region (IWSMR) activity helped build up the capacity of the Arab Countries Water Utility Association (ACWUA). ACWUA has, in turn, trained people in Lebanon and throughout the MENA region. Indeed, ACWUA has played a key role in the Lebanese Water Project implemented by DAI. By limiting the ET's access in Jordan, it was difficult for the ET to investigate the full impact of USAID MER programming in the region. Similarly, the Power Agricultural Hydroponics Program was piloted in Jordan. The ET was able to mitigate the challenge of not working in Jordan by having a Jordanian member of the ET conduct three face-to-face interviews with the ACWUA Secretary General; the Certification, Capacity and HR Director; and a Project Officer. Additionally, two incomplete KIIs were conducted with USAID/Jordan.

The change in field work location had a detrimental impact on the ET's ability to get interviews in Lebanon and Morocco, as well as on the field work schedule. Prior to the location change, the ET had scheduled nine days of data collection in each country. However, due to the Jordan Mission's limited staffing resources, they could not host the ET, and the time it took for this fact to be shared with the ET necessitated that field work startup be pushed back. This had the ultimate impact of limiting the amount of time the ET could spend in the field. Additionally, since the ET had initially planned to conduct interviews in Jordan, and had developed an interview list to accomplish this objective, significant time was lost in working to develop a new interview schedule for Lebanon, as well as on reworking the data collection tool to adapt to the more sensitive interview environment in Lebanon, especially with regards to Evaluation Question 3. The interviews that the ET was able to conduct after field work in Lebanon and Morocco had begun pertained only to the case studies presented below, as the ET was unable to complete a full KII with any USAID/Jordan official.

There were two practical implications of the change in location. The first was a compression of the time the team could spend in the field (because the evaluation's timeline from the Scope of Work was not amended after the field work location change). The ET was offered the opportunity to change the field work schedule; however, due to other commitments, the ET was unable to significantly alter its field work schedule for this evaluation. Therefore, instead of nine days in each country, the ET only worked in Lebanon for five days, due to weekends and a national holiday that coincided with field work, and Morocco for five days. The ET attempted to mitigate the impact of this issue by emailing all potential KII participants prior to initiating field work, in an effort to maximize the number of KIIs that could be conducted in the time available.

Secondly, given these challenges, the ET was unable to obtain the targeted number of interviews. The response rate for interview requests in Lebanon was low given the fact that field work took place over American Thanksgiving as well as during the Lebanese Independence holiday. Additionally, since the ET had to develop a new list of interview participants for Lebanon, it was not able to interview people

whose schedules did not allow them to participate in interviews when the team was in the field. This also impacted the ET's ability to complete interviews in Morocco, where the team spent only one work week. As a consequence, the ET was unable to obtain the planned number of interviews, and it is possible that the qualitative data collection did not reach theoretical saturation (the point at which no new themes emerge from additional interviews).

Finally, it is worth pointing out that working in Lebanon changed the data collection context. That is, security as well as water sector programming in Lebanon must negotiate the challenges of Hezbollah. Hezbollah is both a political party and an armed non-state actor. Posing questions about national security, violent extremism, and water therefore requires a discussion of Hezbollah. However, Hezbollah is an especially sensitive subject in Lebanon, especially in the context of American-funded development programming. The KII tool had to be rapidly amended for this sensitive context, through the introduction of a question about the impact of water on the social aspects of people's lives. This may not have been sufficiently sensitive to collect as in-depth data as could have been obtained if the ET had more time to plan for work in the Lebanese context.

A 30-day extension of the contract of the ET did allow the team to conduct more KIIs with selected USAID staff, thereby broadening the data set. This has allowed the ET to mitigate some of the effects of the limitations described above.

7. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

7.1 EVALUATION QUESTION 1

Evaluation Question 1: Did/do USAID OMEP and MER activities in the water, environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?[6]

7.1.1 EVALUATION QUESTION 1: FINDINGS

To answer this question, the ET has developed theories of change (ToC) on the basis of the three strategies named above (see Exhibit 3: Strategic Objectives and Intermediate Results of the three strategies). These ToC have identified Strategic Objectives and Intermediate Results for each of the strategies. In Exhibit 5 below, these ToC are summarized in a tabular format. The ET answered evaluation questions by referring to these ToC when doing the desk review and recording the number of times a specific element of a strategy was targeted.[7] In other words, the number of times that an SO or IR was addressed was recorded and is listed in the right-hand column.[8]

Based on Exhibit 5, it can be concluded that the water strategy was targeted more than any other strategy. There was an especially large focus on IR 1.1 (Increase access to, and improve the quality of, sustainable water supply services). The second IR on which the projects focused most was IR 2.2 for the climate change strategy (Establish effective governance systems). Closely following these was IR 6, (Improved adaptation to and recovery from shocks and stresses). In contrast, there were no activities targeting SO3 under the Food Security Strategy.

In terms of SOs, SO1 for water (Improve health outcome through the provision of sustainable WASH) was the most targeted, followed by SO2 for climate change (Increase resilience of people, places and livelihoods). Activities that reflect this focus are the mainstay of the 17 projects evaluated, such as the DECOE project which focused on supporting the Arab utilities in providing customers with the best services possible. This included developing and updating certification programs. An example for SO2 is the Middle East and North Africa Regional Drought Management System (MENA RDMS), of which the overall objective was to build capacity of decision-makers to plan for and manage the impacts of droughts on food and water security.

The food security strategy was mainly targeted through activities focusing on more efficient use of water and improving resilience of people and systems. Improving resilience is a more overarching objective which has been addressed through projects focusing on water use efficiency, but also projects focusing on climate change adaptation and improved potable water and sanitation services. Some examples of projects that addressed this are the Powering Agriculture Hydroponic Green Farming Initiative, which focused on introducing integrated hydroponic-photovoltaic farming systems at the household and

[6] These strategies and initiatives include:

- USAID Water and Development Strategy, 2013–2018
- USAID Climate Change and Development Strategy, 2012–2016
- USG Global Food Security Strategy, FY 2017–2021

[7] See also section 5 on methodology for more details.

[8] We should note here that this does not reflect on the time or the resources allocated for each specific project. For some activities or countries, the targeted IR or SO might be minimal, and thus the impact was minimal.

commercial levels, and the MIT Desalination Technology in Gaza project, which focused on the design and development of a photovoltaic-powered electrodialysis reversal (PV-EDR) system specifically for use in Gaza.

Exhibit 5: SOs and IRs addressed in activities evaluated

	Strategic Objective	Intermediate Result	Aligned Activities
Water Strategy	(1) Improve health outcome through the provision of sustainable WASH		
		(1.1) Increase first time an improved access to sustainable water	12
		(1.2) Increase first time and improved access to sustainable	8
		(1.3) Increase adoption of key hygiene behaviors	6
	(2) Manage water for agriculture sustainably and more productively to enhance food security		
		(2.1) Improve the efficiency and sustainability of food production in rainfed agricultural systems	6
		(2.2) Improve the efficiency and sustainability of food production from irrigated agricultural systems	6
Climate Change Strategy	(1) Accelerate transition to low emissions development		
		(1.1) Establish foundation for low carbon energy systems	3
		(1.2) Invest in land use practices that stop, slow, and reverse emissions from deforestation and degradation of forest and other	6
	(2) Increase resilience of people, places and livelihoods		
		(2.1) Improve access to science and analysis for decision-making	7
		(2.2) Establish effective governance systems	9
		(2.3) Identify and take actions that increase climate resilience	7
	(3) Strengthen development outcomes by integrating climate change in Agency programming, learning, policy dialogues and operations		
		(3.1) Integrate climate change across USAID's development portfolio	3
		(3.2) Elevate the role of development in climate change dialogues	0
		(3.3) Lead by example through adoption of low emissions and energy-saving operations	3
Food Security Strategy	(1) Inclusive and sustainable agricultural-led economic		
		(1) Strengthened inclusive agriculture systems that are productive and profitable	6
		(2) Strengthened and expandable access to markets and trade	2
		(3) Increased employment and entrepreneurship	6
	(2) Strengthen resilience among people and systems		
		(4) Increased sustainable productivity, particularly through climate-smart approaches	4
		(5) Improved proactive risk reduction, mitigation, and management	6
		(6) Improved adaptation to and recovery from shocks and stresses	8
	(3) A well-nourished population, especially among women		
		(7) Increased consumption or nutritious and safe diets	0
		(8) Increased use of direct nutrition interventions and services	0
		(9) More hygienic household and community environments	0

An example of how the regional activities contributed to the water strategy can be found in many of the projects that addressed training and capacity building for water supply and sanitation (waste water operators) through ACWUA. The training directly improved sanitation services in many of the target countries through improved operations of the treatment plants. More details on the ACWUA work can be found in Case Study 1. This case study is relevant for Evaluation Question (EQ)1, but also provides interesting examples of how the regional and bilateral program were complementary, which is addressed under EQ2.

Case Study 1: ACWUA

In this case study, the synergy between the bilateral and regional programs of USAID and the added cooperation with other bilateral donors is illustrated.

In 2009, the Arab Countries Water Utilities Association (ACWUA) was officially launched as a global center of excellence that partners with water supply and wastewater utilities in Arab countries. Its main objective was to focus on building capacities within the utilities and on instituting best practices for the utilities to achieve their objectives. The idea was that improving the operations and maintenance practices in water and wastewater utilities would lead to an improved utilization of the limited available resources, **and thus reduce the demand and increase the supply**.

This objective resonated positively with the goals of the USAID Operations, Maintenance and Training program (OMT). The program was a **bilateral project**, implemented in Jordan from 2008 to 2012. The project aimed to provide standardized training linked to best operations and maintenance practices for operator certifications in water treatment and distribution, wastewater treatment and collection, and utility management. To maintain the sustainability of the program, **ACWUA** was incorporated to act as a **regional trainer and marketer for the certification program.**

In 2013, USAID started the Improving Water and Sanitation Services in the Middle East and North Africa Region (IWSMR) activity under the Learning, Evaluation and Analysis Project-II (LEAP II). IWSMR was a two-year, $1.9 million water activity, managed by USAID's Middle East Bureau/Technical Services (ME/TS). One of IWSMR's objectives was to help ACWUA build its capacity to sustainably carry out its mandate to promote certification and accreditation, capacity development, and information exchange among water and wastewater utilities and professionals during and beyond project completion. In July 2014, ACWUA was put through a Non-U.S. Organization Pre-award Survey, to evaluate its capability for receiving independent funding in the future. Scores received at that evaluation (2014), put ACWUA between "weak" and "adequate" with respect to control weaknesses and exposure to risk. ACWUA worked to upgrade and improve points of weakness.

As a result, ACWUA became eligible to receive grants towards the implementation of the Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE) project, another regional project of the USAID Middle East Bureau. The grant was signed in February 2016, to be completed before April 2018. On February 20, 2017, due to DECOE support and funding, ACWUA received the three certificates (ISO 9001:2015 for quality management, ISO 14001:2015 for environmental management, and OHSAS 18001:2007 for occupational health and safety) from SGS Switzerland for the following activities: provision of training, certification, and technical support (project management, research and development, and studies), and events management in the field of water and wastewater.

Through the DECOE project, ACWUA was able to:

- expand ACWUA's reach regionally and internationally through improved marketing and branding;
- attain ISO certification for ACWUA operations; and
- update the existing certification programs for water utilities.

The services of ACWUA as a regional trainer were acquired in Jordan, Palestine, and Lebanon. The funding for those services came from USAID, OXFAM, and the Spanish Government.

ACWUA has successfully participated with both regional and bilateral USAID programs.

ACWUA has completed DECOE activities and submitted the Final Report in October 2017, six months ahead of the agreed upon schedule.

Three main themes can be identified in the 17 projects implemented by the MEB over the past 10 years, and illustrate the cohesiveness of the regional program. This means that the three themes are cross-cutting across the regional program, so they implicitly also align with the strategies. The themes are as follows:

1. Agriculture: This theme relates to all three strategies as it addresses food security, climate change, and water use efficiency. It is also one of the drivers of migration in those cases where agriculture fails. One example is the Groundwater Governance in the Arab World project, which addresses challenges associated with unsustainable use of groundwater in the MENA region, especially water use for agriculture, leading to depletion of aquifers, saltwater intrusion, and abandoning of agricultural schemes.
2. Water Supply and Sanitation: Many of the projects addressed water supply and sanitation (WSS). WSS addresses SO1 of the water strategy, but also addresses IR 2.3 of the climate change strategy. An example is the IWSMR project, which provides technical and capacity building resources to ACWUA to support development of regionally recognized water and wastewater operation certifications.
3. Knowledge Management: One of the key elements of the projects of the MEB has been the improvement of access to data and knowledge to improve planning, water allocations, and research. Three key examples are the Modeling and Monitoring Agriculture & Water Resources Development (MAWRED) project, the Water Information System Platform (WISP) project, and the MENA Regional Drought Management System. These projects focused to a considerable extent on capacity building for data management, analysis, and application of models.

Exhibit 6: Classifying each project within one (or more) of the three themes

	Agriculture	Water Supply and Sanitation	Knowledge Management
Groundwater Governance in the Arab World	X		X
Water Information System Platform (WISP)			X
Improving Water and Sanitation Services in the MENA Region (IWSMR)		X	X
Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)		X	X
Sahara Forest Project in Jordan	X		
A Holistic Water Solution for Underserved & Refugee Host Communities		X	

Partnerships for Enhanced Engagement in Research (PEER)			X
U.S. Bureau of Reclamation IAA		X	
H20 Maghreb	X	X	
MIT Desalination Technology in Gaza		X	
Powering Agriculture Hydroponic Green Farming Initiative	X		
Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)	X		X
Further Advancing the Blue Revolution (FABRI)	X	X	X
Middle East and North Africa Regional Drought Management System			X
Acceleration of Aquifer Storage and Recovery			X
Water and Development Alliance		X	X
Ultra Low Energy Drip Irrigation	X		

One of the cross-cutting issues addressed by numerous projects of the regional program, such as MAWRED and WISP, has been knowledge management.[9] Knowledge management has shown to be an important theme for all three strategies, which was corroborated by various respondents from KIIs. Additionally, 9 of the 17 projects listed above have a clearly defined knowledge management component. One IP stated, "For example, in WISP, we adapted the [Land Information System] LIS for the Moroccan context, but it could be adapted (with the right data) to the whole region. [International Center for Biosaline Agriculture] ICBA does it for the MENA region." An IP in Lebanon indicated that knowledge management was one of the themes on which they cooperate extensively with other donors: "[We work with] [Swiss Agency for Development and Cooperation] SDC [flood risk assessment for all of Lebanon], [Deutsche Gesellschaft für Internationale Zusammenarbeit] GIZ [remote sensing], [and the] Italian cooperation. [With] SDC and [United Nations Development Programme] UNDP Lebanon: applications of early warning systems, disaster risk evaluations, with the Ministry of Water and Energy." Knowledge (and data) is considered to be crucial for policy development and resource planning for agriculture, water supply, and climate change adaptation and mitigation. To this end, reference was made to the need for additional capacity building for knowledge management. A national official stated, "We have multiple colleagues that have been working on WISP with USAID funding. We are building capacity in [Royal Remote Sensing Centre] CRTS through this project." As a cross-cutting theme, knowledge

[9] **Knowledge management** is a process of generating, sharing, applying, and storing (for access and retrieval) knowledge and information.

management contributed strongly to the strategies and can continue to do so. More details on the work on knowledge management can be found in Case Study 2.

There were other cases in which technological innovations were introduced through the regional program, such as virtual reality and augmented reality for learning, and renewable energy-based drip-irrigation systems and GIS/RS systems for water resources planning. One KII respondent noted that some of the projects "were too ambitious and tried to implement unproven technologies. End users are not researchers, they need something that works." Another KII respondent suggested that governmental institutions might fear failure, and thus receiving the blame of failure if the projects do not work out. In other words, the fear of failure can be holding back the involvement of these institutions, which may be manifesting that fear through their refusal to share data and low enthusiasm for getting involved with new technologies. Other barriers to upscaling of technological innovations were often a lack of data due to entrenched notions of the value of data at both the national and regional level. This still offers significant opportunities for USAID to invest in at a regional level.

Case Study 2: WISP

The Water Information System Platforms (WISP) is an activity implemented by the National Aeronautics and Space Administration's (NASA) Goddard Space Flight Center (GSFC) in Lebanon, Jordan, Egypt, Morocco, and Tunisia over the period April 2011 to September 2017. The primary objective of the WISP activities is to achieve improved water resources management and planning within and across the beneficiary MENA countries. The activities aim to deliver, implement, and operationalize a set of quantitative and spatial-based decision-making tools primarily using the WISP platform, which is based on NASA products.

A multitude of different types of models, as suggested by NASA, were explored and/or used by the implementing agencies in the implementing countries for achieving the goals of the projects. They include the Land Data Assimilation System for the MENA region (MENA-LDAS) and Land Information System (LIS). After installation and approximately 18 months of customization and implementation with the LDAS, efforts and experience gained were transferred to utilizing the NASA LIS platform, which contains all the models required to implement a successful water resource management and planning program across the MENA region. However, necessary customization, downscaling, and ground-truthing due to the use of global and regional models and low-resolution data were the responsibility of the individual countries. The ET found that Morocco was the only country (out of five) that installed and successfully implemented the LIS, which is still operational.

Participating country institutions have different priorities and capacity levels, and different training needs according to the stage of their research. The WISP activity requires a high level of expertise and motivation if beneficiary countries are to maximize the benefits from high-level technical interactions with NASA and ICBA. Thus, those countries with good existing capacity and skills in remote sensing (RS) and a strong institution have been able to take advantage of the program. This is the case, Morocco has a strong lead institution, Centre Royal de Télédetection Spatiale (CRTS), and good project management and coordination within the diverse components, all of which are housed within the one institution. CRTS is the national institution responsible for the promotion, use, and development of RS applications in Morocco. It was founded in 1992 and has an experienced and dynamic team and high-performance equipment, and offers services in terms of satellite data acquisition and distribution, as well as information system conception and realization. CRTS also provides expertise in RS to national and regional organizations, ranging from private sector companies to government and non-government institutions involved in resource management and environmental assessment projects. CRTS promotes technology transfer and develops cooperation at the international level.

CRTS is the implementing partner for WISP and coordinates and carries out the national program of RS in collaboration with ministerial departments, private operators, and universities. It was able to achieve good outcomes in all of the WISP component areas. Some of the outcomes of the WISP activity that were developed by the CRTS are as follows:

- Drought early warning using a new composite drought index to assess conditions in areas used for non-irrigated cereal crops or for grazing. This index was developed with backing from the World Bank

and with technical assistance from the ICBA, National Drought Mitigation Center (NDMC) and Center for Advanced Land Management Information Technologies (CALMIT). It is mainly intended to be used by government agencies, such as the Moroccan Ministry of Agriculture and the Ministry of Energy, Mines, Water and Environment, but others who may use it include insurance companies, researchers, and individual agricultural producers.

- Monitoring locust invasion risk—using RS data supported by field ground-truthing in collaboration with Food and Agriculture Organization (FAO) and other countries in the Sahel region—and producing locust risk maps and early warning.
- Crop mapping and irrigation using the Moderate Resolution Imaging Spectroradiometer (MODIS) model to quantify the acreage.
- Water sector: There was good cooperation between NASA/ICBA and CRTS on model and data source selection from the LIS platform. CRTS received the LIS model and one week of training from ICBA and 12 LIS water models selected for implementation by the Activity Manager to determine floods and quantify water resources.

Finally, it should be mentioned that the ET was tasked with examining 17 regional projects that have a large variety in scope and duration. The ET found that there are two larger projects among the 17 (i.e., there was sufficient time and resources to really work on substantive matters in a structured fashion). These projects were MAWRED and Further Advancing the Blue Revolution (FABRI). The total funding for these two is $19.3 million. They run for five years and five and a half years respectively. The remaining 15 projects have a total value of $21.6 million, and most are three years or less in length.

The idea here is that only two projects seem to have had the time horizon and resources to work on multiple elements of the regional program theory of change. Key here is the project's ability to provide resources to establish robust partnerships, undertake pilot activities, and move to a first phase of scaling up with an initial application of the results of the pilot testing.

Findings related to the extent to which the water, environment, and agriculture sector contributed to USAID strategies and initiatives are mainly defined as the number of times a specific element of a ToC (derived from USAID strategies) was addressed in a project evaluated under this contract (see Exhibit 6 above). However, this is only a partial answer, as the project documents reviewed by the ET for the 17 projects may refer to specific element of the ToC, but this does not necessarily indicate the extent to which the projects evaluated contributed to USAID strategies and initiatives. The extent to which they contributed is also contingent upon how they complemented bilateral activities, and whether there were bilateral activities in the water sector to complement (e.g., Morocco does not currently have any water-oriented projects), the funding allocated for water as compared to other sectors, and the relative size of the bilateral intervention as compared to the regional intervention.

7.1.2 EVALUATION QUESTION 1: CONCLUSIONS

It is important to contextualize MER's water sector activities of the past 10 years and their alignment with USAID's strategies and initiatives. The intentional contribution of MER water sector activities must be understood in light of the fact that many of the 17 projects under review were initiated before USAID strategies and initiatives (specifically the three strategies and initiatives that the ET was asked to review) were defined. Four MER water projects began before the 2012 Climate Change Strategy could have impacted their design; three additional projects began before the 2013 Water and Development Strategy would have been considered, which leaves 10 projects that were funded in years after these two strategies were launched. No projects were funded after the Global Food Security Strategy was launched in 2017.

Responses from KIIs for substantiation:

> "It is important to note that a lot of these projects were started before those goals were defined. Not necessarily designed to align with those goals—especially climate change goals."

Several projects were designed to fit within WASH funding requirements, which were not specifically designed to overlap with other water, environment, and agriculture sector strategies and initiatives.

Responses from KIIs for substantiation:

> "As you might have seen, most of our funding has been WASH focused, that drives our programs."

> "We have two sets—one that definitely fits within the water strategy, that was designed that way—WASH/water earmark. There are stringent ways you can spend money…The WASH earmark is the only one that shaped our awards."

For projects initiated in 2014, funding was linked to the water security initiative, meaning that projects were funded because of their alignment with this initiative, which may (or may not) overlap with other water sector strategies and initiatives.

On the basis of the findings, the main conclusions are therefore as follows:

- The USAID OMEP and MER activities in the water, environment, and agriculture sector contributed to USAID strategies and initiatives significantly, with the strongest contribution to the water sector. Funding was mainly targeted at water, which may account for the contribution that strategy being more than to the other two strategies. The conclusion is based upon both the number of activities that targeted SOs of the strategies and from the KIIs, in which many respondents provided details on how the SOs were addressed.

- The ET concluded that there was a cohesiveness and logic in the way the regional program was developed during the period evaluated. As indicated in the sections on findings for EQ1, there are three themes that recur within the program; (i) agriculture, (ii) water supply and sanitation, and (iii) knowledge management. These three themes addressed many of the bilateral programs and many of the cross-sectional themes, and provided a kind of logical cohesiveness that is visible throughout the 10-year period evaluated.

- Capacity building was referred to various times as a very important continuing need for water and agricultural institutions in the MENA region, whether water utilities, river basin organizations, knowledge institutions, or national/regional government. Capacity building is certainly an important activity to continue working with. Over the past 10 years, capacity building was part of the 17 projects reviewed, but not in a structural manner.[10] Capacity building at a regional level is also a thorny issue, as levels of education, capacity building needs, and the potential for using the knowledge/skills acquired vary across the region. Although capacity building needs to remain an essential element in the regional program, this would require more cooperation with the bilateral program to ensure that capacity building activities are complementary. This also links in with the accountability of the projects at the national level.

[10] Structural in this context refers to a structured approach to capacity building as a cross-cutting theme.

- The variety in scope and duration of projects is an issue of concern. There is a lack of focus, and resources are spread very thin in some cases. This is also reflected in the skewed way that the various SOs and IRs of the strategies are addressed throughout the 10-year evaluation period.
- End users need to be educated on the implications and benefits of being involved in regional projects, and understand what will be expected from them. At the same time, regional projects need to allow and budget for on-ground backstopping from implementing partners, to enable them to work directly with the local institutions toward localizing developed products, as well as easing their fears and misunderstandings as to how the project is evolving.

7.1.3 EVALUATION QUESTION 1: RECOMMENDATIONS

- Become more focused when working on regional programming. Choose one of the three themes as a focus. The ET proposes knowledge management as a main and overarching theme for water management, agriculture, flood forecasting, drought forecasting, and so forth. Promoting accessibility of data at the national level, and more generic (key) data at regional levels, is important. So is capacity building for analysis, adaptation (down-scaling), and application/planning of water resources use and availability.
- Work more intensively with regional centers of excellence. There are a number of options that could be considered. Some of these are:
  - NWRC (The National Water Resources Centre) (Egypt)
  - CEDARE (Centre for Environment and Development for the Arab Region and Europe) (Egypt)
  - MEDRC (Middle Eastern Desalination Research Institute) (Oman)
  - ICBA International Centre for Biosaline Agriculture (Dubai – UAE)

  This list is not exhaustive—there are more centers in the region that could be considered. The ET recommends selecting one or two centers of excellence and making a sustainable effort to strengthen these. The first step would be to define key requirements that possible centers of excellence would have to meet for USAID to consider investing in them. Some suggestions are:
  - Legitimacy of the organizations (its legal status, acceptance among the target group, how long has it operated, what are its linkages to US-based knowledge institutes, etc.?)
  - Relevance of the organization (does it address the issues relevant for the regional program, does it have the capacity needed, does it have dedicated budget lines that ensure continued operations?)

  An organizational capacity scan based on the questions above could be helpful in terms of identifying suitable centers of excellence.
- Develop a more focused approach to project design with a longer-term vision that allows allocation of resources to be more methodical and for each project to achieve significant results.

7.2 EVALUATION QUESTION 2

Evaluation Question 2: Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?

7.2.1 EVALUATION QUESTION 2: FINDINGS

A desk review of the Country Development Cooperation Strategies (CDCS) of the four main countries shows that only Jordan and Lebanon have water as a development objective (DO) within the CDCS, and only Jordan has a climate change focus. This is illustrated in Exhibit 7 below.

Exhibit 7: CDCS and strategies addressed

CDCS	Strategies addressed in CDCS
Morocco	None
Lebanon	Water
Jordan	Climate Change, Water
Tunisia	None

There seems to be very little duplication of work between the bilateral and the regional programs. On cross-cutting themes (gender, youth employment, etc.), there might be overlap, especially in Jordan with its large water program. The ET, however, feels that the regional programs have managed to operate at a more regional/integrative level, hence little duplication. This is strongly illustrated by Case Study 1 (see findings EQ1), as well as by the regional water resources management- and knowledge management-oriented projects such as MAWRED and WISP.

The regional and the bilateral programs do not seem to have interacted much within the projects reviewed. In terms of programming, respondents from the Missions running the bilateral programs said that they were not involved in such a way that they felt a kind of ownership or a sense that the regional program benefited them. One of the respondents who has been active in both indicated that there was an organizational culture of non-interference between the two. Many of the USAID officials interviewed as part of this study indicated that they believe the regional program hinders the bilateral work at some level. Most USAID respondents did not feel the regional program was very complementary.

The differentiation and complementarity between the regional and bilateral programs is, however, accepted and appreciated by most national officials and implementing partners. Whereas the regional programs are understood to tackle macro-issues at a higher level of abstraction, the bilateral programs are valued for financing the practical application of these issues (such as capacity building). Respondents agreed that this differentiation of tasks could be improved in those cases where bilateral Missions and the regional program did not integrate effectively, which, as indicated above, happened sometimes.

One of the items flagged by some respondents was that the regional program has less accountability within the countries and with key stakeholders due to its broad scope and spread. One of the respondents described accountability as "diffuse." This does not negate the relevance of the regional work; however, the bilateral programs are better able to attain ownership and accountability within their associated countries and institutions.

The ET also found that it might be necessary to redefine the "region" for regional programs. Specifically, people in Morocco said they feel that they have more to share with and learn from Algeria and Tunisia than countries in the Middle East (Levant). Defining the region and the way that the bilateral and regional programs cooperate should be reviewed with an eye to national security concerns, specifically curbing migration and violent extremism. To that end, a region could be defined to include the countries from which many migrants stem (e.g., Chad, Nigeria, South Sudan, etc.) and the countries that are at the receiving end of these migrant flows (the MENA region). For Jordan and Lebanon, this situation is different as the countries from which refugees have fled are already part of the region as defined by USAID. USAID respondents pointed out that including sub-Saharan countries in that region would be difficult due to organizational sectioning between MENA and sub-Saharan Africa.

From responses and the literature review, the ET notes that Jordan plays an outsized role in the regional programs. This has not always been appreciated by some of the national partners in the region. Many projects focus on Jordan, ACWUA is based in Jordan, many workshops and training sessions are held in Jordan, and the role of Jordan is perceived to be disproportional to the relevance of its water issues in the regional context. A simple calculation shows that Jordan probably also receives the largest amount of the regional funding.[11] This calculation is not a hard fact, but an "order of size" calculation that serves to illustrate the finding.

Respondents noted that creating the water security initiatives resulted in major changes in the MER water sector. In 2013, the regional program (which had been split between Egypt and Washington) transferred to Washington, and a new office in Frankfurt was established.

One respondent noted, "It is tricky to look at regional water over the last 10 years because there was a big break that upended everything. All the old plans were thrown away to create the water security initiative. Culturally, management, funding, it was all upended. Any growing pains that you see between 2013–2016 reflect that. I think since that move from OMEP (when it folded into the bureau), there was never a thoughtful conversation about the comparative advantage of the bureau. The funding has been stable but unpredictable. The bureau has found itself saying, 'We have our earmark, what do we do now?' They don't discuss what they are good at and where they are needed as much as they should. There is very little planning."

Another individual noted, "The communication between the two evolved. The regional program was split between Washington and Egypt. Egypt was shut down and then everything was transferred to Washington. A new office opened in Frankfurt and half of them moved there. This was in 2013. There were different consultative processes to engage with the Mission depending on if the project was designed in Egypt, Washington, or Frankfurt. The cultures are different and so were the protocols. The pre-2013 that came out of Washington did not consult the mission. The ones from Egypt gave an FYI to the Mission, not approval. The Frankfurt office put an emphasis on making Missions aware and getting approval for projects, so it depends what project you are talking about."

7.2.2 EVALUATION QUESTION 2: CONCLUSIONS

- Over the past 10 years, the implementation of the regional programs has provided relevant inputs for bilateral programs. An example is described in Case Study 1, on ACWUA. In other cases, the inputs could have been used to greater advantage by the bilateral programs. Communication between the bilateral and regional programs has not always been adequate. This is corroborated by most of the USAID respondents. As a result, opportunities were lost. Therefore, the main conclusion is that regional activities complemented bilateral programs in some cases, but through improved cooperation and coordination, this complementarity could have been put to better use.

[11] The calculation was made for the regional projects for which beneficiary countries are identified (i.e., MENA-wide projects are not included in this calculation). The calculation was simply to divide the TEC for each project by the number of beneficiary countries. The summation for each country is as follows:

Jordan	$6.74 million
Morocco	$4.79 million
Tunisia	$2.22 million
Gaza & WB	$1.14 million
Egypt	$1.48 million
Lebanon	$3.98 million
Yemen	$0.61 million
Iraq	$1.31 million

- The findings have shown that there is little duplication of effort between the regional and bilateral programs. Design of the regional programs seems to have taken into account the development cooperation strategies prevalent at the Missions during the design phase. Yet again, this does not seem to have been communicated effectively to the bilateral programs during implementation.
- There is a difference in appreciation and valuation of the regional program between USAID respondents, national partners, and implementing partners. Whereas USAID respondents did not feel the regional program was very complementary, national and implementing partners appreciated the differentiation and complementarity between the regional and bilateral programs.

7.2.3 EVALUATION QUESTION 2: RECOMMENDATIONS

- Make the focus truly regional, with a better spread of resources. As it is now, Jordan has a perceived outsized role in the regional programs and an already very large bilateral program.
- Redefine the region. There are major contextual differences in MENA country water sectors, and within countries.
- Increased coordination and communication between the regional and bilateral program, certainly as programs are being designed, and more so when they are set to be implemented. Both programs can benefit each other much more, provided this coordination and acceptance of each others' merits takes place. This can be improved through joint programming, joint or shared reviews, meetings at which both programs are discussed as part of a single Mission, and in which a common objective is not only a "paper tiger" but sincerely adopted as a shared objective by both the regional and bilateral program. This would require strong leadership.
- Develop regional knowledge and data hubs that provide open access data for drought and flood early warning systems, locust plagues, water use and re-use, crop statistics, related water use efficiency, and so forth. As indicated above, selection of one or two regional hubs needs to be done systematically to ensure both the legitimacy and relevance of the institutions as well as the degree to which they would be accepted by other countries in the region. The main rationale for this recommendation stems from two items: (i) the importance of knowledge management as identified under EQ1, and (ii) the need for a regional approach to water management, early warning systems for droughts and pests, and transboundary management of mainly groundwater. The regional program is ideally suited for the development of these regional knowledge and data hubs as it has already invested in some of these. Add an improved synergy with the bilateral program, and it would be able to achieve concrete results while building on the past 10 years.

7.2.4 INTERMEZZO

Did the approach of many small activities testing innovations contribute to the larger goals of USAID's strategies and mission strategies?

This brief section seeks to answer the question as to whether the USAID MEB approach of initiating many small activities/pilots to test innovations over the past 10 years contributed to the larger goals of USAID's strategies and Mission strategies.[12]

For the record, the ET was not asked to undertake an outcome/impact evaluation. The three EQs from the SOW do not ask the ET to look at the impact or effectiveness of the projects. This means that the

[12] This question was added after review of the first draft report submitted by the contractor.

ET has not actively collected data on impacts. As a result, the question above cannot be answered in a robust manner. Nonetheless, the ET appreciates the importance USAID attaches to this issue and has tried to provide some answers in this section using data points from the KIIs and the desk review.

We note that:

- There were six projects between $0 and $1 million.
- There were nine projects between $1 million and $3 million.
- There were two projects between $3 million and $6 million.

This confirms that there was a significant focus on smaller and medium-sized projects.

The smallest projects (up to $1 million) were:

1. Water and Development Alliance
2. Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)
3. Sahara Forest Project in Jordan
4. Partnerships for Enhanced Engagement in Research (PEER)
5. US Bureau of Reclamation IAA
6. MIT Desalination Technology in Gaza

From these projects, some had an impact that can be assumed to address USAID's strategies and Missions. Specifically, the DECOE project (which is also described in Case Study 1) had an impact and contributed to the broader USAID strategies.

What is noticeable is that many of these pilot activities (e.g., Groundwater Governance in the Arab World, MIT Desalination Technology in Gaza, and Powering Agriculture Hydroponic Green Farming Initiative) are focused on answering questions that had already been partially addressed by other donors or during other periods. Responses of KIIs with USAID staff corroborates this:

> "Donor mapping should be prioritized—what is already being funded by other donors and countries. Make sure we are funding the right kind of organizations and not be redundant. We need clear donor mapping first."
>
> "You have to align with other donors and other USAID Missions. My mode of operations was always to look for opportunities in the field and hopefully be useful to the Missions."

The ET found that implementing smaller activities started late in the 10-year period and seems fairly random at first, as the topics are quite diverse, and the timing of these activities also seems ad hoc. As stated by one of the respondents, "MEB received money and they had to spend it by a certain time—some of it was planned for and there was a clear vision (maybe half). They asked for the funding and it was a bit of a rush—how are we going to spend this money. We had a bunch of these activities pop up that weren't a huge monetary value."

But as the work progressed, impacts started adding up. As already indicated in other sections of this report, a fairly clear line can be drawn at the end of the 10-year period, suggesting a focus on knowledge management and technology through regional institutions and a possible focus on early warning systems for climate change impacts that can affect livelihoods and contribute to large-scale migrations.

In terms of answering the question, the conclusion would have to be that some of the smaller projects contributed to larger USAID strategies and goals, but not many. Some have also been pilots that have potential for scalability, replication, and address USAID strategies (such as H2O Maghreb). The outcome of the smaller projects over a period of ten years has also allowed USAID MEB to develop a scope for the future.

7.3 EVALUATION QUESTION 3

Evaluation Question 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

7.3.1 EVALUATION QUESTION 3: FINDINGS

The 2017 US Government Water Strategy, USAID's Water and Development Strategy 2013–2018, and most recently, the Trump administration's National Security Strategy all highlight the fact that access to clean water for drinking and sanitation is a key American national security concern.[13] From the current administration's perspective, water programming is aligned with its priorities to the extent that access to potable water can mitigate the threat of violent extremism.[14] In many cases, individuals from poor rural and peri-urban communities—but not exclusively—lacking access to social services, as well as refugee communities, are vulnerable to ideas promulgated by violent extremist organization because their needs are not being met by their governments.[15] Providing these populations with sustainable access to clean water is one of several key steps in countering the threat of violent militant groups. Access to clean water helps ensure food security and good health outcomes for vulnerable populations in need of humanitarian assistance; water for irrigation ensures food security; and potable water ensures that waterborne illnesses are limited. Food security, good health outcomes, and the ability to have a livelihood, all of which are attainable with regular access to potable water, are necessary components of any strategy designed to counter the threat of violent extremism, especially in the Middle East and North Africa.

As a participant in a Key Informant Interview for this evaluation (completed in Morocco) stated, in the Middle East and North Africa, where desertification, drought, and migration (both internal and international) are key concerns, "Water is power. Water [in the MENA region] is a contested resource. Any project to do with water is highly political." Put differently, every water sector activity has downstream consequences, and these consequences can impact American national security priorities. Although there is no clear and direct relationship between water sector activities, violent extremism, and American national security objectives, the data collected for this evaluation question suggest that water sector activities can positively impact factors that might lead people to be sympathetic to violent extremist ideas, and therefore affect American national security.

The major emergent themes of this evaluation question that relate to American national security processes include: water and perceptions of governance; the impact of water on youth and youth

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[13] US Government Global Water Strategy. 2017. Accessed December 19, 2017, https://www.usaid.gov/sites/default/files/documents/1865/Global_Water_Strategy_2017_final_508v2.pdf; USAID Water and Development Strategy 2013-2018. Accessed December 19, 2017, https://www.usaid.gov/sites/default/files/documents/1865/USAID_Water_Strategy_3.pdf; The White House. 2017. The National Security Strategy of the United States of America, December 2017. Accessed December 20, 2017, https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

[14] The White House. 2017. The National Security Strategy of the United States of America, December 2017. Accessed December 20, 2017, https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

[15] Heger, Lindsay L., and Danielle F. Jung. "Negotiating with rebels: The effect of rebel service provision on conflict negotiations." *Journal of Conflict Resolution* 61, no. 6 (2017): 1203-1229.

employment; and the impact of water scarcity on national and international migration. These themes indicate that access to water and water sector activities impact three processes that relate to American national security objectives (both locally and in the US): 1) A lack of water provision can erode confidence in the capability and legitimacy of governing institutions in allied countries. 2) Limited access to water can drive the migration of populations. In MENA countries, where agriculture is a key part of national economic output, a lack of water can drive unemployment in the countryside and thereby push people to migrate internally (rural to urban migration) and internationally in search of work, thereby exacerbating problems with already strained urban and/or peri-urban water and sanitation systems. 3) The migration of populations from rural to urban areas can make people vulnerable to crime and pernicious ideas promulgated by violent extremists.

Based on the activity documents reviewed for this evaluation, as well as on KIIs in Morocco with USAID staff, the ET found that H20 Maghreb was specifically designed to address the interaction of water, migration, technical capability, youth, and employment—thereby addressing national security concerns. That is, a key national security concern is countering violent extremism. People who are young, unemployed, or underemployed, as well as those who are underserved by their governments, are believed to be more vulnerable to violent extremist messaging. H2O Maghreb is a pilot activity designed to improve the technical and professional skills of youth and engage employees in the water sector, through the use of virtual reality training methods.[16] This type of cross-cutting program design addresses core needs of unemployed, undereducated, or disenfranchised youth. Skillbuilding through virtual reality training will help youth and other underemployed members of Moroccan society obtain employment in the water sector as well as learn skills that will be transferable to other industries should they choose not to work in the water sector.

Similarly, based on KII participants' input, the ET found that both ongoing work in Gaza (UNICEF and MIT funded drip irrigation in Gaza) and the investigation of hydroponic technologies in Jordan (Powering Agricultural Hydroponics) are aligned with the current administration's national security objectives. Given that a key focus of this administration is on the prevention of the proliferation of pernicious and violent extremist ideas, by using water sector employment and educational opportunities, vulnerable populations can be pulled away from violent extremist organizations (VEOs). Based on empirical evidence from Gaza (and buttressed by data from Nigeria), employing youth and underemployed segments of the Jordanian and Gazan populations, as well as by providing them on-the-job training, will blunt the appeal of VEO ideas; in effect, people who are working will be less likely to join VEOs, or will be less likely to be drawn back into them once they have left.[17]

Water and Perceptions of Governance

Access to water is often related to popular perceptions of good governance in the target countries of the regional program. Where a state can provide regular access to potable water, as well as treat wastewater, its governance capabilities are likely to be viewed more positively than those of a state that cannot provide these services in a systematic fashion. According to a Key Informant from the World Bank, the Bank explicitly recognizes that water services are viewed by local populations as an example of the functionality of their government. If people don't receive effective water services, it may undermine their confidence in their government. According to a UNICEF staff member working in Lebanon, when there is dissatisfaction with public service, people find their own ways of getting things done, like digging

[16] USAID.gov. H20 Maghreb. Accessed January 23, 2018, https://www.usaid.gov/morocco/fact-sheets/h2o-maghreb.

[17] Roy, Sarah. 'If Israel Were Smart." *London Review of Books,* Vol 39, No.12, 15 June 2017. Accessed December 22, 2017, https://www.lrb.co.uk/v39/n12/sara-roy/if-israel-were-smart. Zuri Linetsky, "Jobs Not Bombs, Will Win the War on Terror: New polling data indicate that it's unemployment, not religion, fueling extremist groups like Boko Haram." *Foreign Policy*. March 13, 2017. http://foreignpolicy.com/2017/03/13/this-poll-proves-that-trumps-counterterrorism-strategy-will-fail-africa-nigeria-boko-haram.

private wells and finding private service delivery, which may undermine perceptions of a country's capacity for governance.

The search for public water provision and wastewater treatment can create an opportunity for non-state actors such as the Muslim Brotherhood or other more militant factions to provide these services, which can degrade public trust in weak states.[18] A Key Informant in Lebanon said, "Any time you have competition on a resource in an unstable country it is a recipe for strife. Water resources are limited, there is competition between Lebanese … between Lebanon and Syria, between Lebanese sects, and between Israel and Lebanon [for water]. Also, on the subject of Hezbollah, we don't work at the community level and we do not work with the central government or the ministry, therefore [we provide] no money to the ministry. … Therefore, we do not work in communities dominated by Hezbollah."

Poor governance in the water sector can create opportunities for alternative purveyors of governance, or cause conflicts over water rights and access that could be prevented. These alternative forms of government can contest the power of the state, and might negatively impact American national security objectives.

Water and Migration

Concerns over government capacity in the water sector—especially in rural areas—combined with the increasing threat of drought and desertification due to climate change, have the effect of driving internal migration. Potable water, however, is not the sole driver of internal migration; a lack of water for agriculture is a major factor as well. According to three Key Informants who worked on the USAID-funded FABRI activity, the biggest driver of rural-to-urban-migration was (and likely remains) drought. The lack of access to water for agriculture forced rural populations to move to cities in large numbers in search of livelihoods and food security. According to the United Nations Population Division, in 1950 only 26.2 percent of Moroccans lived in urban areas, but by 2014 this figure had more than doubled to 59.2 percent, with the largest urban population growth occurring between 1960 and 1990. Indeed, in each decade between 1960 and 1990, the percent of people migrating to urban areas increased, from 5.1 percent (1960–70), to 6.7 percent (1970–80) and then to 7.2 percent (1980–90).[19] This coincided with a major Sahel region drought that lasted from the mid-1960s through the early 1980s.[20]

Additionally, according to three Moroccan academics who worked on USAID's FABRI activity, many of the people who migrated from the countryside were not sufficiently educated to live and work in cities, leaving them vulnerable to extreme ideas. In fact, according to these three respondents, when formerly rural populations moved to cities and concentrated in urban slums, many water and sanitation challenges occurred, as well as an increase in crime, which, in some cases, police were unable to control (e.g., the May 2003 terrorist attack in Casablanca, carried out by youth recruited from an urban slum).

Between 1950 and 2014, Lebanon's urban population grew from 32 percent to 87.7 percent. This influx of rural populations into urban areas had a dramatic impact on Lebanese infrastructure. The central government has been unable to provide regular and sustainable access to potable water for the entire population. Indeed, in many cases, households pay three bills: one for government-provided water, one for bottled water, and one for the provision of private water delivered by truck. Additionally, the Lebanese state has been unable to treat wastewater; only 8 percent is being treated. While the

[18] Heger, Lindsay L., and Danielle F. Jung. "Negotiating with rebels: The effect of rebel service provision on conflict negotiations." *Journal of Conflict Resolution* 61, no. 6 (2017): 1203-1229.

[19] United Nations, Department of Economic and Social Affairs, Population Division (2014): *World Urbanization Prospects: The 2014 Revision.*

[20] Khazan, Olga. "Coal-burning in the U.S. and Europe Caused a Massive African Drought: A drought in the '60s and '70s that killed thousands was previously attributed to bad farming practices. The real cause is even worse." *The Atlantic.* 2013, June 10. Accessed December 20, 2017, https://www.theatlantic.com/international/archive/2013/06/coal-burning-in-the-us-and-europe-caused-a-massive-african-drought/276702/.

foregoing is not all attributable to urban migration, internal migration has stressed the country's weak water infrastructure.

Relatedly, a five-year drought in Syria immediately preceded the onset of the civil war. Beginning in 2006 and lasting into 2011, Syria was subject to extreme drought conditions that contributed to crop failures, economic shocks, and population displacements. By 2011, the UN estimated that some 2 million Syrians had been affected by the drought, and more than 1.5 million people had migrated from rural areas to cities or peri-urban areas surrounding major cities; this coincided with a 1.9 percent increase in Syria's urban population, from 54.2 percent in 2006 to 56.1 percent in 2011. The consequences of drought and migration were food insecurity for large swaths of the population and increased pressure on urban infrastructural systems, like already scarcely-fed water systems. [21] These factors were further exacerbated by Assad regime water governance decisions that sapped groundwater reserves.[22] The impact of drought on the Syrian conflict was also noted by a Key Informant from the US Geological Survey who said that a long drought was at least a contributing factor to the conflict. This respondent added that rapid population growth in the Middle East as well as limited or dwindling water supplies combined to threaten social unrest, as limited resources can undermine social stability and welfare.

According to KII respondents, there are stark differences between urban and rural populations in terms of service delivery. A respondent from UNESCO indicated that it is more difficult to address rural water issues, including sanitation, as compared to similar issues in urban settings. He said that there are institutional challenges in Morocco that limit the ability of many actors to coordinate rural water sector activities. A representative from the Japanese International Cooperation Agency indicated that a key factor limiting the impact of water sector activities in rural areas is the distance separating populated areas and the fact that it is difficult for the state to provide water to small isolated populations.

Water, Internal Migration, and Livelihoods

The links between the newly urbanized populations and their rural heritage are not always broken through internal migration. In fact, according to an engineer interviewed in Morocco, in North Africa, the link between the rural and urban population is never really cut, because populations retain their mobility. When times are very difficult (there was a drought in 2017), people leave rural areas to work in construction or make money in other ways in urban centers. But when rain falls, people return to work their land. Unfortunately, in the case of young people, they defect from farming as a vocation because they feel as though they lack autonomy and responsibility, in addition to the very real fact that farming may not generate enough revenue. According to this KII respondent, young people can be drawn back into farming by using more innovate methods. In Morocco, onion production, while ecologically demanding, has gained some traction among some rural youth, and there could be value in identifying other sustainable forms of rural employment for youths.

Similarly, a representative from the Beqaa Valley Water Establishment in Lebanon highlighted the fact that rural-urban migration in the Beqaa was due primarily to a lack of water available for irrigation, which limits livelihood opportunities in the agricultural sector. Additionally, this KII respondent indicated that selling agricultural produce in the Beqaa is challenging for farmers because a critical customer for Beqaa agricultural goods, Syria, has closed its borders, so agricultural exports have been truncated. In Morocco, due to drought conditions, according to a UNIDO official, people have been leaving their farms to migrate to cities in search of employment. Said the UNIDO official, if water systems are improved, revenues from agriculture will also increase: "For example the price of vegetables and fruits

[21] Gleick, Peter H. "Water, drought, climate change, and conflict in Syria." *Weather, Climate, and Society* 6, no. 3 (2014): 331-340. Accessed December 21, 2017, http://journals.ametsoc.org/doi/full/10.1175/WCAS-D-13-00059.1.

[22] Ibid.

has risen dramatically during the last two weeks because there has been no rain in Morocco this year … people cannot buy vegetables because they are too expensive."

Therefore, in both Lebanon and Morocco water, migration and livelihoods/poverty are directly related to one another. Addressing water scarcity issues will necessarily positively impact rural and urban livelihoods as well as reduce poverty.

Water and International Migration

The impact of water and water sector programming on international refugee populations is also critical. According to a UNIDO official in Morocco, "Water is the source of everything. Water is the origin of … migration. … If we solve the water issue in the origin [countries] it will help a lot [with refugee flows]. … If we have some programs targeting [international] migrants and helping them to return to their countries and build capacity for water management and food security, it will be great." According to three individuals affiliated with the USAID-funded FABRI program, as well as an engineer, Morocco serves as a stopping point for Saharan and sub-Saharan Africans moving towards Europe as a result of many local conditions, water scarcity in their home countries being a notable issue. Indeed, this migration pattern is a continuation of previous international migration in the 1980s and '90s during another long-lasting drought period.

Although water can drive migration, migrants have an impact on water resources in the areas that they migrate to. Thus, in Lebanon, Syrian refugee populations are not concentrated, but they are dispersed in a number of areas in Lebanon. To get access to water, in some cases, they dig illegal wells or seek to illegally gain access to the local water infrastructure. A UNICEF KII participant noted that the biggest challenge with Syrian refugees being spread across Lebanon is that there is a lack of information about their needs, their access to services, and how these needs vary by area. "Every side has different social dimensions and different social dynamics," said the respondent.

Both a Lebanese government official as well as a representative of the Lebanese Water Establishments indicated that refugee communities have taxed Lebanon's water supply. However, the sector itself was in disarray prior to the arrival of these refugees; two separate KII participants not affiliated with the government pointed out that refugees did not cause a water crisis in Lebanon, but did exacerbate an already poor situation given the limited capabilities of the water sector.

Water and Gender

It is important to point out that water scarcity as well as water sector programming focused on sanitation have a unique impact on women. In rural communities, women often travel to get potable water for their homes. With water scarcity in places like Morocco, women must travel farther for water, taking them away from their responsibilities at home, and potentially exposing them to the threat of gender-based violence when they are travelling for water. Additionally, in Lebanon, women have to schedule their domestic activities around the availability of water, and they may have to spend significant time working with unsafe or unclean water. These challenges in the water sector impact women and their families' health, nutrition, and the ability to complete household work. Moreover, there are few women working in positions of authority in the water sector, which limits their ability to impact water policy. The direct consequence is that women are disempowered by water scarcity.

Water and Violent Extremism

In the MENA context, there are both "push" and "pull" factors that lead individuals to join VEOs.[23] Push factors, which create the opportunity for VEOs to proliferate, include: corruption, state-led violence, human rights violations, poor governance, lack of or inattentive policing, environmental degradation, failing local economies, and a lack of job opportunities. Pull factors, which facilitate the recruitment of individuals into VEOs, include: social, family, and business ties to VEOs and/or their recruits; economic benefits; job opportunities; responsive governance; social service provision; protection from the state or other VEOs; ethnic identity; forced recruitment; and ideology (religious or otherwise).[24]

Although the discussion above has not highlighted a direct connection between the water sector and the proliferation of violent extremism in the MENA region, it has shown how many factors contribute to the proliferation of VEOs and their malicious ideas. Push and pull factors create the space for violent extremist ideas to gain traction. Specifically, the analysis above has highlighted the interaction of water and poverty, a lack of livelihood opportunities, poor governance, education, migration, limited access to social services like potable water and wastewater treatment, and environmental degradation.

USAID Middle East Regional Bureau Programming

Of the Middle East Regional programs covered by this evaluation, H2O Maghreb, explicitly addresses a number of the push and pull factors that might contribute to the proliferation of VEOs and thereby impact American national security. H20 Maghreb is a pilot activity designed to improve the technical and professional skills of youth and seeks to engage them in the water sector. The program will help to establish a training center of excellence with a curriculum that will include the latest developments from research and innovation, such as adaptive virtual reality and automation technology. The key from the perspective of American national security is that H2O Maghreb focuses on enhancing youth employability in the water sector.

H20 Maghreb's focus on youth is aligned with the USAID/Morocco Country Development Cooperation Strategy Development Objective (DO) 1, "Employability of target youth," as well as DO2, "Increased civil participation in governance."[25] By acting on these two DOs, the program may be contributing to suppressing the threat from violent extremism. In other words, based on the qualitative data collected for this evaluation, educated and employed youth may be less likely to feel disenfranchised or socially disengaged, thereby limiting the likelihood that they will embrace alternative forms of governance or violent ideas articulated by MENA VEOs.

Another program that can have a similar impact is the MIT-developed photovoltaic-powered electrodialysis reversal system (PV-EDR) in Gaza. This system seeks to improve water quality and availability using minimal energy inputs. It could help with water for drinking, health, and livelihoods in Gaza and the West Bank, in line with the USAID country plan. Recent analyses of the situation in Gaza highlight that youth (under 29 years old) make up nearly 75 percent of Gaza residents, and their rate of unemployment is roughly 60 percent. Youth in Gaza seek out VEOs for paying work, yet people in Gaza report that "growing support for extremist factions in Gaza does not emanate from political or

[23] Department of State and USAID Joint Strategy on Countering Violent Extremism (2016). Accessed November 9, 2017, http://pdf.usaid.gov/pdf_docs/PBAAE503.pdf.

[24] USAID (2009). *Guide to the Drivers of Violent Extremism.* Accessed November 10, 2017. https://pdf.usaid.gov/pdf_docs/Pnadt978.pdf. Mercy Corps (2016). "Motivations and Empty Promises: Voices of Former Boko Haram Combatants and Nigerian Youth." Accessed November 10, 2017, https://www.mercycorps.org/sites/default/files/Motivations%20and%20Empty%20Promises_Mercy%20Corps_Full%20Report.pdf.

[25] USAID/Morocco. Country Development Cooperation Strategy, 2013-2017. Accessed December 22, 2017, http://pdf.usaid.gov/pdf_docs/pdacy250.pdf.

ideological belief … but from people's need to feed their families."[26] This PV-EDR could help keep youth employed in agricultural activities in Gaza and away from VEOs.[27]

Similarly, the recently piloted Powering Agriculture Hydroponic Green Farming Initiative (HGFI) could have a major impact on US national security in the West Bank and Gaza. It could be adapted for small-scale farming to keep youths away from VEOs. This technology could be applied in Gaza and the West Bank given the existing high level of education among the population. HGFI could help improve the efficiency and sustainability of food production in the context of water scarcity and open up new employment opportunities for a large unemployed work force with scarce agricultural lands.

7.3.2 EVALUATION QUESTION 3: CONCLUSIONS

- Water does have an impact on several processes that might make some members of a country's population vulnerable to the messaging of VEOs.
- Several USAID MER programs are aligned with US national security objectives, like H2O Maghreb, which seeks to employ youths in order to prevent them from joining other, more pernicious activities, like violent militancy. Other USAID MER programs, while not directly tied to the current administration's national security objectives, can be modified to align with these objectives, most notably in the West Bank and Gaza.
- The water sector can impact popular perceptions of a country's capacity for governance, as water is viewed as a key social service.
- Where the state cannot provide equal and open access to potable water as well as treat wastewater, citizens may look for alternative suppliers, which creates an opening for non-state organizations, including VEOs.
- Water scarcity is directly tied to rural-urban migration as well as to international migration; people seeking employment opportunities outside the agricultural sector migrate to urban areas as a result of droughts or other shocks in agriculture.
- The movement of people to cities puts significant pressure on water infrastructure in developing countries. These stresses are exacerbated by international refugee flows, including Syrian refugees in the Middle East and sub-Sahara Africans in North Africa.
- Drought is one of the key drivers of the movement of people within and between countries.
- Gender is an area of focus in the water sector, yet few of the programs evaluated for this study included specific elements for female empowerment.

7.3.3 EVALUATION QUESTION 3: RECOMMENDATIONS

- New and ongoing MER water sector activities should review the design of H2O Maghreb to see where there are lessons learned or opportunities to align with the current administration's foreign policy objectives.

[26] Roy, Sarah. 'If Israel Were Smart." *London Review of Books,* Vol 39, No.12, 15 June 2017. Accessed December 22, 2017, https://www.lrb.co.uk/v39/n12/sara-roy/if-israel-were-smart.

[27] Unfortunately, the likelihood of the parts for these systems to be allowed into Gaza is very small in light of the "dual use" policy applied to all imports into Gaza by Israel.

- Water sector activities must take up issues related to education, professional capacity building, and employing youth. These cross-cutting issues are key to preventing the proliferation of violent extremist ideas.
- Strengthening governance in the form of more sustainable provision of water services by the state, especially in countries like Lebanon, Syria, and the West Bank and Gaza should help maintain confidence in public institutions and prevent the proliferation of alternative forms of governance like VEOs.
- Water systems in urban and peri-urban areas where rural migrants tend to settle must be improved. Improving water networks will limit the impact that internal migration and refugees have on MENA country water systems.

7.3.4 FUNDING SCENARIOS

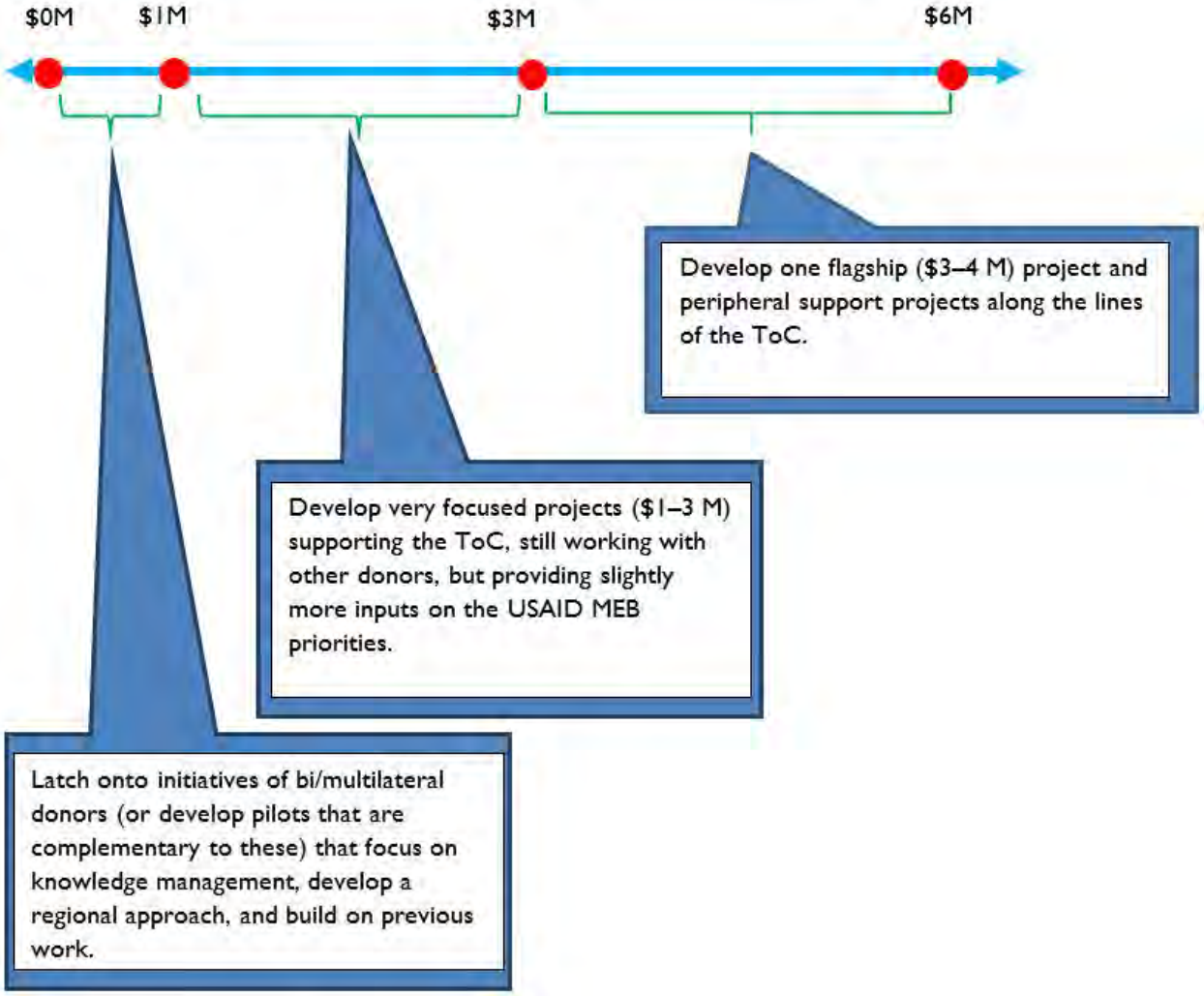
When we listen to feedback from Missions (i.e., when collaboration between MEB and Missions happens) in relation to regional water projects, we find that some Missions, particularly those with existing water sector programming, are less interested in what MEB can provide in terms of regional funding. In an environment of scarce resources, funding from the regional bureau should be targeted very strategically. As one respondent noted, "Missions like Jordan have very vocally said they don't want any more regional programs here. If it comes down to funding, if they say they have $1 million, you could support staff that link Missions, that provide expertise to design bilateral projects."

Preliminarily, the ET has found that several MER-funded programs—including the MAWRED, MIT Drip Irrigation, H2O Maghreb and Power Agricultural Hydroponics Program—are recommended for funding at the $1–3 million funding level. The ET did not find that programs could be funded for under $1 million, and no KII respondents discussed any programs necessitating more than $3 million of funding. The ET recommends these programs at the $1–3 million funding level because they address cross-cutting issues like capacity building in the water sector, investing in small-scale locally sustainable projects (e.g., MIT Drip Irrigation).

In terms of local sustainability, the ET recommends programs might function as public-private partnerships (PPPs) and are locally sustainable, based on context. For example, if donors and IPs could work with local farmers to have every one of the farms invest their own funds (which allows for programs funded at the $1–3 million level), programming would be much more sustainable. Water sector activities should grow on the basis of demand. Programming should begin with mapping the local economic landscape, and then technologies applicable to that environment can be developed that naturally scale and sustain themselves based on the context.

On the basis of the findings, conclusion, and recommendations in the report, the ET proposes to view the issue of funding scenarios as a dynamic issue and not as a static issue. In other words, whatever money is available has a place. This is illustrated as a continuum (see Exhibit 8 below).

Exhibit 8: Funding continuum



The three scenarios slide into each other as the amount of money increases. Recommendations for each are as follows:

- Within the range of $0 to $1 million, the focus should be "latching on to" (co-financing) programs that are underway in the region (possibly by other bi- and multilateral donors) – that are concerned with the same issues that USAID is concerned with in the countries of the region. The added value of the MEB funding would be the regional perspective (hence not only one project but two or three) as well as bringing in previous work done, experience and technologies, and data. Pilots could be conceived that are complementary to the programs in the region that similar issues to the ones that are prioritized by the MEB funding.

- For projects between $1 million and $3 million, the focus should be to develop stand-alone projects that, while still carefully coordinated with other donors, provide more focused inputs on the elements of the future strategies and theories of change as well as the knowledge management component.

- Develop one flagship project and a few peripheral supportive projects built around the same central theme of knowledge management, data sharing, early warning, and mitigation of climate change impacts.

ANNEX 1: EVALUATION SOW

Task Order: AID-OAA-I-14-00069/AID-OAA-TO-17-00023 – MENA Water Evaluation Sector

SECTION C – DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C.1 INTRODUCTION

The purpose of this SOW is to conduct an evaluation of regional water, environment and agriculture sector activities funded by the Middle East Bureau since 2007. The evaluation will provide lessons learned and recommendations for future programming with regards to three potential budget level scenarios.

There are indications that foreign assistance budget levels will shift due to a change in focus of the Trump administration. President Trump has highlighted broad priorities in his America First Foreign Policy issue statement. Given these circumstances, OUs may want to consider different budget scenarios as future development programs are designed. This evaluation is intended to provide information to support such a thought process and internal USAID dialogue. In particular, this evaluation will inform the following purposes.

1. **Lessons Learned**: What are lessons learned, if any, from the design and implementation, to date, that the Middle East Bureau should take into consideration for future programs in these areas? What adjustments, if any, should be made to improve future activities' ability to improve long-term sustainable access to water in the region?

2. **Future funding scenarios**: Recommendations should be given for three funding level scenarios:
   a. Annual program budget of $0-$1 million
   b. Annual program budget of $1-3 million
   c. Annual program budget of $3-6 million

3. **Mission Alignment**: How can the Middle East Bureau best design and implement regional activities to complement bilateral programs and increase development impact?

C.2 SUMMARY

The Middle East Bureau supports regional activities in water and environment to address long-term sustainable access to water in the Middle East and North Africa (MENA) region. A majority of the activities contribute to the USAID Water and Development Strategy (2013-2018) and funds must be in line with, and therefore attributed to, the Water, Sanitation and Hygiene (WASH) earmark as governed in the Water for the World Act of 2014. The activities focus on water supply, improved service delivery, desalination, water productivity, drought prediction and modeling, water resources management, and water conservation. Currently, there are 11 activities under implementation.

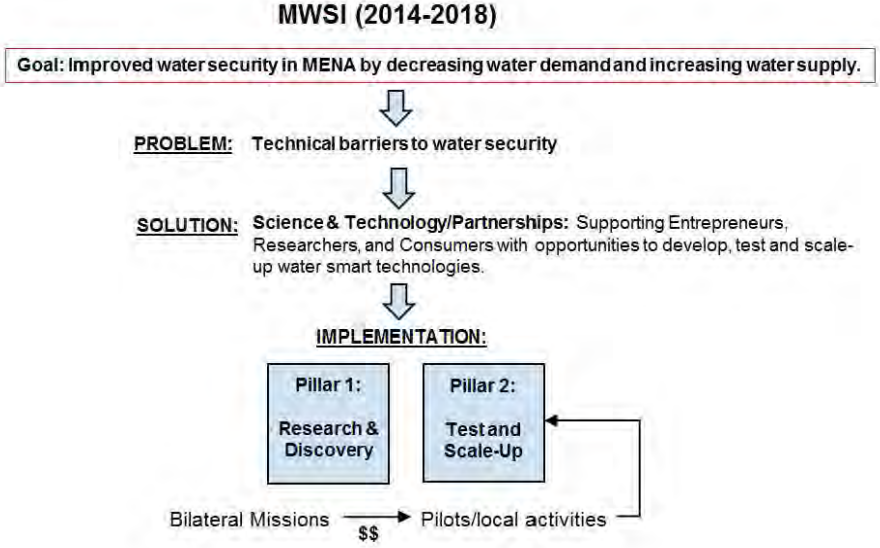
C.3 BACKGROUND

The Middle East Bureau supports regional activities in water and environment to address the Mission Objective "Long-term sustainable access to water in the region improved." Regional activities are funded through the Middle East Regional (MER) budget, and in the past through the Middle East Regional Program (MERP) Office's predecessor, the Office of Middle East Programs (OMEP) that was based out of Cairo. Current MER water and environment activities fall under the Middle East Water Security Initiative (MWSI) Project Appraisal Document (PAD), a four-year project valid from FY 2015 to FY 2018.

A. **Description of the Problem, Development Hypothesis, and Theory of Change**

Figure 1. Conceptualizing Middle East Water Security Initiative

4



Most MWSI activities contribute to the USAID Water and Development Strategy (2013-2018), including both Strategic Objective 1 (Water for Health) and Strategic Objective 2 (Water for Food). Cross-cutting issues, like conformance with environmental compliance regulations, training, and integrating climate resilience into development, are also led by this team and are partially funded through the MER budget.

A portion of MER activities must be attributable to the Water, Sanitation and Hygiene (WASH) earmark as codified in the Water for the World Act of 2014. WASH earmark funding levels are set annually. MER attribution levels have changed from year to year, e.g. $6 million in FY 2014 and $3.3 million in FY 2015. Only a subset of MER water activities count towards the earmark due to stipulations of the Act.

USAID is a key development partner within the water sector with significant political leverage. USAID is a trusted partner to host governments with a history of achieving results. USAID's continued engagement in the water sector in MENA is a strategic priority for the U.S. government; as such, Jordan, Lebanon and the West Bank/Gaza have been identified as three of 16 priority countries/regions under the 2014 Water for the World Act for FY 2016 and FY 2017.

That said there are indications that foreign assistance budget levels will shift due to a change in focus of the Trump administration. President Trump has highlighted broad priorities in his America First Foreign Policy issue statement. Given these circumstances, OUs may want to consider different budget scenarios as future development programs are designed. This evaluation is intended to provide information to support such a thought process and internal USAID dialogue.

B. Activities to be Evaluated

Please see a list of activities and mechanisms to be considered in this evaluation in Tab A.

C. Key Documents

There are a number of available relevant documents and performance information sources that the evaluation team can draw upon. Existing sources of information are listed in Table 2 below.

Table 2. Middle East Water Activity Documents

Documents	Source
1. Award documents of past and current MER mechanisms. Activities to be reviewed for this evaluation are included in Tab A	USAID will provide
2. Workplans and progress reports of past and current MER activities.	Many are available at http://dec.usaid.gov, but USAID will provide any missing reports
3. Activity Monitoring, Evaluation, and Learning plans as well as activity performance management plans	Evaluation team should obtain from implementing partners; USAID can help facilitate
4. Activity gender analyses	Evaluation team should obtain from implementing partners; USAID can help facilitate
5. USG strategy documents and reports	
a. White House issues and policy statements/press releases	Evaluation team should obtain
b. Performance Report and Review (PPR)	USAID will provide
c. USAID Water and Development Strategy, 2013-2018	Evaluation team should obtain from here: https://www.usaid.gov/sites/default/files/documents/1865/USAID_Water_Strategy_3.pdf
d. USAID Climate Change & Development Strategy, 2012	Evaluation team should obtain from here: https://pdf.usaid.gov/pdf_docs/PDACS780.pdf
e. USG Global Food Security Strategy, FY 2017-2021	Evaluation team should obtain from here: https://feedthefuture.gov/sites/default/files/resource/files/FTF_Guide.pdf; Please also see: https://feedthefuture.gov/sites/default/files/resource/files/FTF_Guide.pdf
6. Middle East Water Security Initiative Project Appraisal Document (PAD)	USAID will provide
7. Office of Middle East Programs Water PAD	USAID will provide
8. Mission Country Development Cooperation Strategies (CDCS) for Jordan, Lebanon, Morocco, and Tunisia	Evaluation team should obtain from here: https://www.usaid.gov/results-and-data/planning/country-strategies-cdcs
Safeguarding the World's Water reports (USAID)	Evaluation team should obtain the FY 2014 and 2015 reports from: https://www.usaid.gov/what-we-do/water-and-sanitation/water-and-development-strategy
Previously completed performance evaluations of MER mechanisms	
a. FABRI (pending)	USAID will provide
b. IWSMR	Evaluation team should obtain from: http://pdf.usaid.gov/pdf_docs/pa00km2v.pdf

6

c. WISP and MAWRED	Evaluation team should obtain from: http://pdf.usaid.gov/pdf_docs/pa00k9p9.pdf
d. Sectoral synthesis of 2015 evaluation findings	Evaluation team should obtain from: http://pdf.usaid.gov/pdf_docs/pa00mp17.pdf

C.4 EVALUATION QUESTIONS

1. Did/do USAID OMEP and MER activities in the water, environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent? These strategies and initiatives include:

a) USAID Water and Development Strategy, 2013-2018
b) USAID Climate Change & Development Strategy, 2012
c) USG Global Food Security Strategy, FY 2017-2021

2. Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?
3. Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?

C.5 EVALUATION DESIGN AND METHODOLOGY

The evaluation team, in collaboration with USAID, will finalize the overall evaluation methodology before the start of the field assignment.

Evaluators will use a mix of rigorous quantitative and qualitative data collection and analysis methods to generate answers to the evaluation questions listed above. Given the number of activities that will be evaluated across multiple countries and given that a number of these activities have ended, the evaluation team will dedicate a substantial amount of time to reviewing key activity documents. Key activity documents are listed in Section III (Background), subsection C (Key Documents).

Secondary data from activity documents will be complemented by primary data from implementing partners, stakeholder (beneficiary) groups, as well as site visits. USAID suggests the following sources for primary data:

1. USAID staff from the Middle East Bureau and relevant Pillar Bureaus (CORs/AORs, Activity Managers, Pillar Bureau Technical Staff/Advisors, etc.);
2. USAID field staff from Missions and regional platforms;
3. Top and mid-level managers engaged in shaping regional water management strategies, and young professionals active in managing programs in these sectors (USAID or otherwise);
4. Relevant implementing partner/contractor staff (COP, etc.) and beneficiaries;
5. Training and workshop participants (as applicable);
6. Host country agencies and government ministries (as applicable);
7. Relevant private sector actors (as applicable).

The preliminary evaluation design will be submitted by the contractor in response to the task order and reviewed by USAID. The finalized evaluation design must be submitted to the Contracting Officer's Representative (COR) at least two weeks prior to the evaluation team's arrival in country to conduct fieldwork (see explanation below). The evaluation design must outline in detail what methods the contractor will use to prepare answers for each evaluation question. The evaluation design must include a detailed

evaluation matrix (sample below), draft questionnaires and other data collection instruments or their main features, known limitations to the evaluation design, a work plan, and a dissemination plan. The data analysis plan should clearly describe the evaluation team's approach for analyzing quantitative and qualitative data, including proposed sample sizes and specific data analysis tools and any software proposed to be used, with an explanation of how and why these results will be useful in answering the evaluation questions for this task. Qualitative data should be coded as part of the analysis approach, and the coding used should be included in the appendix of the final report. Gender, geographic, and role (beneficiary, implementer, government official, NGO) disaggregation must be included in the data analysis where applicable. The methodology section in the proposal should address strengths and weakness of the proposed methodology, including sampling, how any weaknesses will be mitigated, as well as how the evaluation team will obtain approval from relevant institutional review boards for any data collection instruments involving human subjects.

Fieldwork is expected to take place in the region. The evaluation team may be accompanied by a staff member from ME/TS, the USAID Middle East Regional Platform (based in Frankfurt), and/or USAID mission staff to observe interviews and fieldwork.

The evaluation team will provide the ME/TS Activity Manager with a list of primary data sources and the schedule of meetings/interviews to take place based on discussion with the COR and/or Activity Manager. This information should be shared with USAID at least one week prior to the evaluation team arriving in country.

The evaluation team will coordinate with ME/TS to ensure that the respective USAID missions and U.S. embassies are informed well in advance of any fieldwork.

Table 1. Sample evaluation design matrix

Questions	Suggested Data Sources (*)	Suggested Data Collection Methods	Data Analysis Methods
1. Did/do USAID OMEP and MER activities in the water, environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?	*[Documents (including, performance monitoring data, previous evaluations, etc.), national statistics, project staff, stakeholders, expert knowledge, beneficiaries…]*	*[Key informant interviews, questionnaires or surveys, focus group discussions, direct observation, desk review…]*	*[To be determined by evaluation team]* *[Requested level of disaggregation—gender, ethnicity, location (district, province), etc.…]*
2. Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?			
3. Looking to the future, to what extent are ongoing water activities			

Questions	Suggested Data Sources (*)	Suggested Data Collection Methods	Data Analysis Methods
aligned or could be aligned with national security and foreign policy objectives of the Trump administration given the varies proposed funding scenarios?			

C.6 EVALUATION TEAM COMPOSITION

The contractor must provide information about the selected evaluation team members including their CVs and explain how they meet the requirements set forth in the evaluation SOW; key personnel include the Team Leader, and the mid-level M&E specialist. Submissions of writing samples, preferably samples or links to past evaluation final reports and related deliverables substantially composed by proposed team members, are highly desirable. At least any one member of the team should be familiar with the three USAID strategies on water, climate change, and feed the future, and have experience working with USAID either conducting previous evaluations, implementing activities, or working directly for USAID. All team members are required to provide to USAID a signed statement attesting to a lack of conflict of interest in relation to the activity being evaluated.

USAID may request an interview with any of the proposed evaluation team member/s via conference call/video call or any other means available.

USAID may delegate one or more staff members to work full-time with the Evaluation Team (ET) or to participate in the field data collection activities. The TOCOR will inform the Contractor about any full-time/part-time USAID delegates no later than five working days after the submission of a draft/updated Evaluation Work Plan (EWP). All costs associated with the participation of full-time/part-time USAID delegates in the evaluation will be covered by USAID.
All team members will be required to provide a signed statement attesting to a lack of conflict of interest or describing any existing conflict of interest.

The evaluation team shall demonstrate familiarity with USAID's evaluation policies and guidance included in the USAID Automated Directive System (ADS) in Chapter 201.

USAID recommends a three to four-person core evaluation team. The evaluation team will consist of:

- *Team Leader / Senior Evaluation Specialist (1):*

The Team Leader will be a senior or mid-level evaluation expert with 7 years of experience in leading and/or conducting evaluations, with experience in social science evaluation methods, especially program performance evaluations, rapid appraisal techniques, case studies and other relevant data collection/analysis techniques. The team leader should also have superior management, interpersonal relations and writing skills, and a solid technical understanding of environmental issues related to international development, preferably in the MENA region. A minimum of a graduate degree is preferred.

S/he will coordinate and direct the overall evaluation effort, and will be responsible for day-to-day management of the team, evaluation design, work plan development, data collection and synthesis, presentations, and preparation and submission of the draft and final evaluation reports to USAID. S/he will

also serve as primary liaison with USAID regarding technical issues.

- *Mid-level M&E Specialist (1):*

S/he will help the team in evaluation design, developing data collection tools, conducting the secondary desk review, planning interviews and assessments, analyzing collected data, and assisting with report writing. S/he will take their direction from the Team Leader and other team members as appropriate.

S/he will have at minimum a Master's degree. This individual will have a minimum of five years of experience designing and managing program evaluations and/or assessments, including demonstrated experience designing interview protocols, surveys, and/or questionnaires.

- *Local Expert team members (2):*

The Contractor will propose two team members (with strong preference for local experts – preferably one from Jordan and one from Morocco) with strong technical (sector) knowledge and work experience. The Contractor's proposal will include each team member's name and key skills relevant to this evaluation, with a current CV or resume included as an annex to the Technical Proposal. Team members must include: one scientist or engineer with technical expertise (minimum five years' experience) in water resources management, natural resources management, or similar field; and at least one team member must be proficient in Arabic. The local expert team members must have at minimum have a Bachelor's degree.

- *Administrative Assistant (1):*

This person will take their direction from the Team Leader or other team members as appropriate, and take the lead in handling the logistics related to travel and data collection in the U.S. and overseas. This individual will have experience managing multiple demands and tasks with multiple deadlines and activities. Fluency in oral and written English is required; knowledge of Arabic or French would be beneficial. Some experience working on evaluations is preferred. The Administrative Assistant will have at minimum a Bachelor's degree.

C7 EVALUATION SCHEDULE

Stage	Activities included	Timeframe
Planning	Review of relevant award info/documents.	3weeks
	Evaluation Plan submitted (Proposal) and approved.	
	Evaluation Team meeting with USAID/W (Middle East Bureau).	
Preparation	Selection of primary data sources and interviewers.	4 weeks
	Select and prepare for site visits.	
	Develop detailed data analysis plan.	
	ME/TS meeting with the contractor to discuss workplan, including list of interviewees and data collection tools.	
Fieldwork	Conduct interviews and site visits in the field (Jordan, Morocco preferred).	3 weeks
Data Analysis	Analysis of data and findings.	2 weeks

10

Reporting	Draft of report delivered.	**4 weeks**
	Oral presentation of findings, conclusions and recommendations.	
	Incorporated feedback and final draft submitted.	
Total Duration		**16 weeks**

[END OF SECTION C]

ANNEX 2: DISCLOSURE OF CONFLICTS OF INTEREST

Disclosure of Conflict of Interest for USAID Evaluation Team Members

MENA Water Sector Evaluation (MWSE) RFTOP under the WADI IDIQ

Name	Ele Jan Saaf
Title	Independent Consultant
Organization	ECODIT LLC
Evaluation Position	Team Leader / Senior Evaluation Specialist
Evaluation Award Number	SOL-OAA-17-000113
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	1. "Middle East and North Africa Regional Drought Management System", ICBA, AID-ME-IO-15-00003 2. "Acceleration of Aquifer Storage and Recovery", USGS , AID-OAA-T-16-00001 3. "Water and Development Alliance", GETF, AID-EPP-A-00-05-00007 4. "Ultra Low Energy Drip Irrigation", MIT, AID-OAA-A-16-00058 5. "Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)", ACWUA, AID-280-F-16-00001 6. "Sahara Forest Project in Jordan", Sahara Forest Project Foundation, AID-280-16-A-00001 7. "Groundwater Governance in the Arab World", IWMI, AID-263-IO-13-00005 8. "A Holistic Water Solution for Underserved & Refugee Host Communities", ASU, AID-280-A-16-00002 9. "Partnerships for Enhanced Engagement in Research (PEER)", National Academy of Sciences (NAS), AID-OAA-A-11-00012 10. "U.S. Bureau of Reclamation IAA", USBR, AID-ASIA-T-13-00002 11. "Water and Development Alliance", UNIDO , 608-DO-608-14-AY240-A11-A 12. "MIT Desalination Technology in Gaza", MIT, AID-294-IO-15-00002- 00 13. "Powering Agriculture Hydroponic Green Farming Initiative", Eco Consult, AID-263-A-13-00004

	14. "Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)", ICBA, AID-263-G-00-09- 0014-00 **15.** "Water Information System Platform (WISP)", NASA, AID-263-P-00-08-00060 **16.** "Further Advancing the Blue Revolution (FABRI)", DAI, AID-OAA-TO-11-00049 **17.** "Improving Water and Sanitation Services in the MENA Region (IWSMR)", Chemonics, AID-263-TO-13-00003
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the*	

implementing organization(s) whose project(s) are being evaluated. 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature: _____

Date: 14082017

Disclosure of Conflict of Interest for USAID Evaluation Team Members

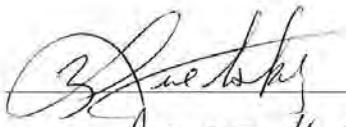
MENA Water Sector Evaluation (MWSE) RFTOP under the WADI IDIQ

Name	ZURI LINETSKY
Title	TECHNICAL SPECIALIST
Organization	SOCIAL IMPACT
Evaluation Position	Mid-level M&E Specialist
Evaluation Award Number	SOL-OAA-17-000113
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	1. "Middle East and North Africa Regional Drought Management System", ICBA, AID-ME-IO-15-00003 2. "Acceleration of Aquifer Storage and Recovery", USGS , AID-OAA-T-16-00001 3. "Water and Development Alliance", GETF, AID-EPP-A-00-05-00007 4. "Ultra Low Energy Drip Irrigation", MIT, AID-OAA-A-16-00058 5. "Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)", ACWUA, AID-280-F-16-00001 6. "Sahara Forest Project in Jordan", Sahara Forest Project Foundation, AID-280-16-A-00001 7. "Groundwater Governance in the Arab World", IWMI, AID-263-IO-13-00005 8. "A Holistic Water Solution for Underserved & Refugee Host Communities", ASU, AID-280-A-16-00002 9. "Partnerships for Enhanced Engagement in Research (PEER)", National Academy of Sciences (NAS), AID-OAA-A-11-00012 10. "U.S. Bureau of Reclamation IAA", USBR, AID-ASIA-T-13-00002 11. "Water and Development Alliance", UNIDO , 608-DO-608-14-AY240-A11-A 12. "MIT Desalination Technology in Gaza", MIT, AID-294-IO-15-00002- 00 13. "Powering Agriculture Hydroponic Green Farming Initiative", Eco Consult, AID-263-A-13-00004

	14. "Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)", ICBA, AID-263-G-00-09- 0014-00 **15.** "Water Information System Platform (WISP)", NASA, AID-263-P-00-08-00060 **16.** "Further Advancing the Blue Revolution (FABRI)", DAI, AID-OAA-TO-11-00049 **17.** "Improving Water and Sanitation Services in the MENA Region (IWSMR)", Chemonics, AID-263-TO-13-00003
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the*	

implementing organization(s) whose project(s) are being evaluated. 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature: 

Date: AUGUST 16, 2017

Name	Mhammed Tayaa
Title	Independent Consultant
Organization	ECODIT LLC
Evaluation Position	Moroccan Expert
Evaluation Award Number	SOL-OAA-17-000113
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	1. "Middle East and North Africa Regional Drought Management System", ICBA, AID-ME-IO-15-00003 2. "Acceleration of Aquifer Storage and Recovery", USGS , AID-OAA-T-16-00001 3. "Water and Development Alliance", GETF, AID-EPP-A-00-05-00007 4. "Ultra Low Energy Drip Irrigation", MIT, AID-OAA-A-16-00058 5. "Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)", ACWUA, AID-280-F-16-00001 6. "Sahara Forest Project in Jordan", Sahara Forest Project Foundation, AID-280-16-A-00001 7. "Groundwater Governance in the Arab World", IWMI, AID-263-IO-13-00005 8. "A Holistic Water Solution for Underserved & Refugee Host Communities", ASU, AID-280-A-16-00002 9. "Partnerships for Enhanced Engagement in Research (PEER)", National Academy of Sciences (NAS), AID-OAA-A-11-00012 10. "U.S. Bureau of Reclamation IAA", USBR, AID-ASIA-T-13-00002 11. "Water and Development Alliance", UNIDO , 608-DO-608-14-AY240-A11-A 12. "MIT Desalination Technology in Gaza", MIT, AID-294-IO-15-00002-00 13. "Powering Agriculture Hydroponic Green Farming Initiative", Eco Consult, AID-263-A-13-00004 14. "Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)", ICBA, AID-263-G-00-09-0014-00 15. "Water Information System Platform (WISP)", NASA, AID-263-P-00-08-00060 16. "Further Advancing the Blue Revolution (FABRI)", DAI, AID-OAA-TO-11-00049 17. "Improving Water and Sanitation Services in the MENA Region (IWSMR)", Chemonics, AID-263-TO-13-00003
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No

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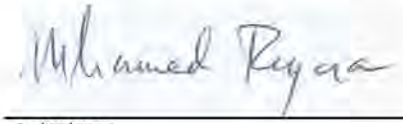
I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.



Signature:

Date: 12/19/2017

Disclosure of Conflict of Interest for USAID Evaluation Team Members

MENA Water Sector Evaluation (MWSE) RFTOP under the WADI IDIQ

Name	Loay Hidmi
Title	Independent Consultant
Organization	ECODIT LLC
Evaluation Position	Jordanian Expert
Evaluation Award Number	SOL-OAA-17-000113
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	**1.** "Middle East and North Africa Regional Drought Management System", ICBA, AID-ME-IO-15-00003 **2.** "Acceleration of Aquifer Storage and Recovery", USGS , AID-OAA-T-16-00001 **3.** "Water and Development Alliance", GETF, AID-EPP-A-00-05-00007 **4.** "Ultra Low Energy Drip Irrigation", MIT, AID-OAA-A-16-00058 **5.** "Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)", ACWUA, AID-280-F-16-00001 **6.** "Sahara Forest Project in Jordan", Sahara Forest Project Foundation, AID-280-16-A-00001 **7.** "Groundwater Governance in the Arab World", IWMI, AID-263-IO-13-00005 **8.** "A Holistic Water Solution for Underserved & Refugee Host Communities", ASU, AID-280-A-16-00002 **9.** "Partnerships for Enhanced Engagement in Research (PEER)", National Academy of Sciences (NAS), AID-OAA-A-11-00012 **10.** "U.S. Bureau of Reclamation IAA", USBR, AID-ASIA-T-13-00002 **11.** "Water and Development Alliance", UNIDO , 608-DO-608-14-AY240-A11-A **12.** "MIT Desalination Technology in Gaza", MIT, AID-294-IO-15-00002- 00 **13.** "Powering Agriculture Hydroponic Green Farming Initiative", Eco Consult, AID-263-A-13-00004

	14. "Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)", ICBA, AID-263-G-00-09- 0014-00 **15.** "Water Information System Platform (WISP)", NASA, AID-263-P-00-08-00060 **16.** "Further Advancing the Blue Revolution (FABRI)", DAI, AID-OAA-TO-11-00049 **17.** "Improving Water and Sanitation Services in the MENA Region (IWSMR)", Chemonics, AID-263-TO-13-00003
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
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implementing organization(s) whose project(s) are being evaluated. 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

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Signature: _____

Date: Aug 12, 2017

Name	Ariane LeClerq
Title	Project Associate
Organization	ECODIT LLC
Evaluation Position	Home Office Project Manager/Administrative Assistant
Evaluation Award Number	SOL-OAA-17-000113
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	1. "Middle East and North Africa Regional Drought Management System", ICBA, AID-ME-IO-15-00003 2. "Acceleration of Aquifer Storage and Recovery", USGS , AID-OAA-T-16-00001 3. "Water and Development Alliance", GETF, AID-EPP-A-00-05-00007 4. "Ultra Low Energy Drip Irrigation", MIT, AID-OAA-A-16-00058 5. "Developing and Expanding Certification to Cover Business Management and Operational Excellence (DECOE)", ACWUA, AID-280-F-16-00001 6. "Sahara Forest Project in Jordan", Sahara Forest Project Foundation, AID-280-16-A-00001 7. "Groundwater Governance in the Arab World", IWMI, AID-263-IO-13-00005 8. "A Holistic Water Solution for Underserved & Refugee Host Communities", ASU, AID-280-A-16-00002 9. "Partnerships for Enhanced Engagement in Research (PEER)", National Academy of Sciences (NAS), AID-OAA-A-11-00012 10. "U.S. Bureau of Reclamation IAA", USBR, AID-ASIA-T-13-00002 11. "Water and Development Alliance", UNIDO , 608-DO-608-14-AY240-A11-A 12. "MIT Desalination Technology in Gaza", MIT, AID-294-IO-15-00002- 00 13. "Powering Agriculture Hydroponic Green Farming Initiative", Eco Consult, AID-263-A-13-00004 14. "Modeling and Monitoring Agriculture & Water Resources Development (MAWRED)", ICBA, AID-263-G-00-09- 0014-00 15. "Water Information System Platform (WISP)", NASA, AID-263-P-00-08-00060 16. "Further Advancing the Blue Revolution (FABRI)", DAI, AID-OAA-TO-11-00049

	17. "Improving Water and Sanitation Services in the MENA Region (IWSMR)", Chemonics, AID-263-TO-13-00003
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. *Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* 2. *Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* 3. *Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* 4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* 5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature: Ariane LeClerq

Date: 12/19/2017

ANNEX 3: DATA COLLECTION INSTRUMENTS

USAID INTERVIEW GUIDE

Key Informant Interview (KII) Guide	
Interview DETAILS:	
Client:	
Project Name:	
Researcher Name:	
Interview Date:	
Start Time:	
End Time:	
Respondent Name:	
Respondent Position:	

INFORMED CONSENT
Hello, I am _____ and I work with Ecodit. We are conducting research for the United States Agency for International Development (USAID) Middle East Bureau. We are evaluating the regional water, environment and agricultural sector activities funded by the Middle East Bureau since 2007. The information that you can provide on your engagement with Middle East Bureau-funded activities would be very helpful to our research. We will not discuss your responses with anyone and your name will not appear in connection to the information you give us. The interview will last approximately 1 hour. Are you willing to participate? (Y/N)

SECTION 1: Did/do USAID OMEP and MER activities in the water environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?
SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: **- Degree of alignment/overlap between activity goals and USAID strategy goals**

	Question	*Answers*
1	What USAID water sector activities are you familiar with and/or involved in (please list)?	
2	How long have the programs you listed been operational, and how long have you been involved with these activities?	
3	Have your activities interfaced with any other USAID water sector activities?	
4	Have your activities interfaced with any other non USAID-funded water interventions?	
5	[Introduce the relevant water, climate change and food security strategic goals] To your knowledge, how have the activities that you have been involved in fit within these overarching USAID water, environment and climate change USAID goals?	
6	Have the water sector activities you have been a part of changed in any way between their inception and now? **[Probe: how and why?]**	
7	What defines a successful water sector intervention?	
8	What elements of the activities you are familiar with contributed to programmatic successes? [**Probe:** how and why?]	
9	Does success of an intervention depend on ministry and water utility support?	
10	In what ways have you worked well with water Ministry/designates and water utility for your programming? [**Probe:** how and why?]	
11	What (if any) are ways of improving working relationships with water ministry and utility officials?	
12	Did any aspect of your water sector project(s) not accomplish their desired output? [Probe: how and why?]	

13	What defines a sustainable water sector activity?	
14	Are some water sector activities more sustainable than others? [**Probe:** How and Why?]	
15	What are some of the best practices you have identified in water sector activity implementation? [**Probe:** implementation plans, cooperation with the government, with the water utility].	
16	Would you allocate additional dollars to existing activities, or is money better allocated to other areas or programs? If elsewhere, please specify where. [**Probe**: at what funding level with additional 1 million vs. 3 million?]	
17	USAID water activities has been implemented here for 10 years. What would you change or maintain?	
	Can water activities be better designed to be complement one another and limit any duplication or accidental overlap? If yes, how?	
18	How have new technologies been incorporated in water sector activities? What are these new technologies? [Probe, are new technologies useful, or expensive, problematic?]	
19	Have there been any institutional or policy barriers to technological adoption in the water sector? [**Probe:** What are these barriers?]	
20	Has technological adoption helped water sector activities meet USAID strategic objectives?	
21	Can any of the activities, or components of activities, you have been a part of be scaled up nationally and regionally? [**Probe**, which and why/how?]	
	SECTION 2: Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: **- Degree of complementarity or duplication between bilateral and regional activities**	
	Question	***Answers***
	Are you aware of any regional water sector programs funded by USAID?	
23	Are the objectives of any regional water sector programs that you are aware of different from bilateral activities?	
24	Is activity effectiveness related to whether a water sector intervention is bilateral or regional?	
25	Do bilateral programs and regional activities ever duplicate one another? [**Probe:** how?]	
26	Do bilateral and regional activities complement one another? [**Probe:** how?]	
27	Could the impact of water sector interventions be different based on whether activities are bilateral or regional? [Probe: how?]	
	SECTION 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: **Degree of alignment between foreign policy/national security objectives and water activity goals.**	
	Question	***Answers***

28	Is there a connection between water sector programming and national security in this country and/or in the US? Please explain.	
29	Does water sector programming have any relationship to violent extremism in the MENA region?	
30	How might water sector activities interact with migration, refugee flows and refugee communities in the MENA region?	

IP AND CSO INTERVIEW GUIDE

Key Informant Interview (KII) Guide	
Interview DETAILS:	
Client:	
Project Name:	
Researcher Name:	
Interview Date:	
Start Time:	
End Time:	
Respondent Name:	
Respondent Position:	

INFORMED CONSENT

Hello, I am _____ and I work with Ecodit. We are conducting research for the United States Agency for International Development (USAID) Middle East Bureau. We are evaluating the regional water, environment and agricultural sector activities funded by the Middle East Bureau since 2007. The information that you can provide on your engagement with Middle East Bureau-funded activities would be very helpful to our research. We will not discuss your responses with anyone and your name will not appear in connection to the information you give us. The interview will last approximately 1 hour. Are you willing to participate? (Y/N)

SECTION 1: Did/do USAID DMEP and MER activities in the water environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?

SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS:
- **Degree of alignment/overlap between activity goals and USAID strategy goals**

	Question	*Answers*
1	What USAID water sector activities are you familiar with and/or involved in (please list)?	
2	How long have the programs you listed been operational, and how long have you been involved with these activities?	
3	Have your activities interfaced with any other USAID water sector activities?	
4	Have your activities interfaced with any other non USAID-funded water interventions?	
5	Have the water sector activities you have been a part of changed over time? [**Probe:** how and why?]	
6	What defines a successful water sector intervention?	
7	What elements of the activities you are familiar with contributed to programmatic successes? [**Probe:** how and why?]	
8	Does success of an intervention depend on ministry and water utility support?	
9	In what ways have you worked well with water Ministry/designates and water utility for your programming? [**Probe:** how and why?]	
10	What (if any) are ways of improving working relationships with water ministry and utility officials?	
11	Did any aspect of your water sector project(s) not accomplish their desired output? [Probe: how and why?]	
12	What defines a sustainable water sector activity?	
13	What are some of the best practices you have identified in water sector activity implementation? [**Probe:** implementation plans, cooperation with the government, with the water utility].	
14	USAID-funded water activities has been implemented in the MENA region for 10 years. What would you want to change, and what would you maintain?	
15	How have new technologies been incorporated in water sector activities? What are these new technologies? [Probe, are new technologies useful, or expensive, problematic?]	

16	Have there been any institutional or policy barriers to technological adoption in the water sector? What are these barriers?	
17	Can any of the activities, or components of activities, you have been a part of be scaled up nationally and regionally? [**Probe**, which and why/how?]	
	SECTION 2: Did/do regional activities complement bilateral programs, as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were/are they duplicative?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: **- Degree of complementarity or duplication between bilateral and regional activities**	
	Question	***Answers***
18	Are there any design issues in national and/or regional water sector activities that limited their effectiveness?	
19	Do national programs and regional activities ever duplicate or compliment one another? If so how?	
20	Any elements of your water activities that you would recommend changing or scaling?	
	SECTION 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: **Degree of alignment between foreign policy/national security objectives and water activity goals.**	
	Question	***Answers***
21	Is there a connection between water sector programming and national security? Please explain.	
22	Does water sector programming have any relationship to violent extremism in this country or in this region?	
23	How might water sector activities impact refugee flows and refugee communities in your country?	

NATIONAL OFFICIALS INTERVIEW GUIDE

Key Informant Interview (KII) Guide	
Interview DETAILS:	
Client:	
Project Name:	
Researcher Name:	
Interview Date:	
Start Time:	
End Time:	
Respondent Name:	
Respondent Position:	

INFORMED CONSENT

Hello, I am _____ and I work with Ecodit. We are conducting research for the United States Agency for International Development (USAID) Middle East Bureau. We are evaluating the regional water, environment and agricultural sector activities funded by the Middle East Bureau since 2007. The information that you can provide on your engagement with Middle East Bureau-funded activities would be very helpful to our research. We will not discuss your responses with anyone and your name will not appear in connection to the information you give us. The interview will last approximately 1 hour. Are you willing to participate? (Y/N)

SECTION 1: Did/do USAID OMEP and MER activities in the water environment and agriculture sector contribute to USAID strategies and initiatives, and to what extent?

SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS:
- **Degree of alignment/overlap between activity goals and USAID strategy goals**

	Question	*Answers*
1	What USAID water sector activities are you familiar with and/or involved in (please list)?	
2	How long have the programs you listed been operational, and how long have you been involved with these activities?	
3	Have the water sector activities you have been a part of changed over time? [**Probe**: how and why?]	
4	Have your activities interfaced with any other USAID water sector activities? If so which?	
5	Have your activities interfaced with any other non USAID-funded water interventions?	
6	What defines a sustainable water sector intervention?	
7	Have some programs been more sustainable than others?	
8	What defines a successful water sector intervention?	
9	What factors of the activities you are familiar with contributed to programmatic successes? [**Probe**: how and why?]	
10	Does success of an intervention depend on ministry and water utility support?	
11	Can any of the programs you have been a part of be scaled up nationally and regionally? [**Probe**, which and why/why?]	
12	What (if any) are ways of improving working relationships between water ministry and utility officials and USAID?	
13	Did any aspect of your water sector project(s) not accomplish their desired output? [Probe: how and why?]	

14	Are you aware of any new technologies relevant to water sector activities? What are these new technologies?	
15	Are there any institutional or policy barriers to technological adoption in the water sector? What are these barriers?	
	SECTION 2: Did/do regional activities complement bilateral program as articulated in the country development cooperation strategies (or similar Mission guiding strategies), or were /are they duplicative?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: - Degree of complementarity or duplication between bilateral and regional activities	
	Question	***Answers***
16	How has access to water been affected by USAID programming?	
17	Any elements of USAID-funded water activities that you would recommend changing?	
18	Do USAID-funded water sector activities ever duplicate one another? **[Probe: how can this be avoided]**	
19	Does the national government feel like it has ownership over water sector activities?	
	SECTION 3: Looking to the future, to what extent are ongoing water activities aligned or could be aligned with national security and foreign policy objectives of the current administration given the various proposed funding scenarios?	
	SPECIFY INDICATORS ADDRESSED, AS PER SOW OR OTHER RELEVANT PROJECT DOCUMENTS: - Degree of alignment between foreign policy/national security objectives and water activity goals.	
	Question	***Answers***
20	Is there a connection between water sector programming and national security? Please explain.	
21	Does water sector programming have any relationship to violent extremism in this country or in this region?	
22	How might water sector activities impact refugee flows and refugee communities in your country?	

ANNEX 4: REFERENCE DOCUMENTS

Acceleration of Aquifer Storage and Recovery. "Concept Paper". March 2016. Accessed November 6, 2017.

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ANNEX 5: EVALUATION TEAM BIOS

Ele Jan Saaf, *Team Leader/Senior Evaluation Specialist*, holds an MA in Development Administration from the University of Leiden. He has nearly 25 years of experience in countries all over the world, including 10 years as team leader on projects related to integrated water resources management (IWRM) and capacity building for water management, environment, and sustainable development. He has conducted project and program design, appraisal and supervision, and has managed all parts of the project cycle.

Zuri Linetsky, *Monitoring and Evaluation Specialist*, holds a PhD in International Affairs from the University of Virginia. He has 10 years of experience designing and managing evaluations, surveys, and assessments for donors worldwide. He has extensive experience developing and implementing quantitative and qualitative methodologies and tools, including interview questionnaires and online surveys, especially in conflict environments.

Loay Hidmi, *Jordan Expert*, holds a PhD in Civil/Environmental Engineering from the University of Colorado. He has 20 years of experience related to water and wastewater utilities and water sector projects. He has been heavily involved in international development projects related to public private partnerships (PPPs), commercialization and capacity building related to water and municipal sector reform.

Mhammed Tayaa, *Morocco Expert*, holds a PhD in Hydrology, Soil and Water Conservation and Watershed Management from the University of Minnesota. He has more than 30 years of experience in applied hydrology, watershed management, and soil and water conservation. He has provided technical assistance in the water sector on international development projects related to sustainable agricultural production and rural development.

Ariane LeClerq, *Home Office Project Manager*, holds an MS in Community Sustainability from Michigan State University. She has over four years of research and professional experience in livelihoods, community-based conservation and human-wildlife interaction. She has also supported qualitative research on conservation, food security, and human health, and carried out biological surveys in Costa Rica, Namibia, and Madagascar.

Doug Clark, *Senior Advisor*, has over 20 years of experience in the USAID Foreign Service, including management of regional water programs in Asia and the Middle East. He has developed water strategies and policy-related programs in the Philippines, Thailand, Egypt and the Middle East. He also oversaw USAID-funded water programs in Egypt, Jordan, Lebanon and the Middle East region for IRG.

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