



# **FURTHER ADVANCING THE BLUE REVOLUTION INITIATIVE (FABRI)**

## **QUARTERLY PROGRESS REPORT NO. 8: JUNE 15, 2013 – SEPTEMBER 14, 2013**

**20 OCTOBER 2013**

This report was produced for review by the United States Agency for International Development. It was prepared by DAI/Washington.

## **COLLABORATING ENTITIES**

### **Prime Contractor**

DAI

### **Current Subcontractors**

California Institute of Technology (Caltech)  
ECO Consult (Jordan)  
Environmental Law Institute (ELI)  
Malcolm Farley Associates (UK)  
Oregon State University  
Texas A&M University  
Training Resources Group, Inc.  
University of California at Davis  
University of Florida  
University of Nebraska  
Utah State University  
Valu Add Management Services

### **Resource Organizations**

Cardno EMG  
CDR Associates  
Environment and Development Group (Egypt)  
Environmental Quality International (Egypt)  
Hydro-Yemen (Yemen)  
Orient Engineering (Jordan)  
Riverside Technology, inc. (RTi)  
SETS - Water and Environment (Lebanon)

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## **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



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# ACRONYMS

ABRI	Advancing the Blue Revolution Initiative
ACWUA	Arab Countries Water Utilities Association
AFR	Africa
AfWA	African Water Association
AfYWP	Africa Young Water Professionals
AGU	Arabian Gulf University
AWW	Africa Water Week
AMCOW	African Ministers' Council on Water
APS	Annual Program Statement
AYWP	Africa Young Water Professionals
CDE	Camerounaise des Eaux
CKS	Communications and Knowledge Sharing
COP	Chief of Party
COR	Contracting Officer's Representative
CSR	Corporate Social Responsibility
DAI	Development Alternatives, Inc
DEC	Development Experience Clearinghouse
ELI	Environmental Law Institute
EPA	Environmental Protection Agency
ESTH	US embassies' Environment, Science, Technology, and Health Officers
ETIC	Euphrates-Tigris Initiative for Cooperation
FABRI	Further Advancing the Blue Revolution Initiative
GIS	Geographical Information System
GMS	Greater Mekong Sub-region
GWOP	Global Water Operators Partnerships Alliance
GWRI	Grand Water Research Institute
GYGA-MENA	Global Yield Gap Atlas for the Middle East and North Africa
IAV	Institute of Agronomy and Veterinary Science Hassan II
ICA	Independent Consultant Agreement
ICARDA	International Centers for Agricultural Research in Dry Areas
ICBA	International Center for Biosaline Agriculture
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDA	International Desalination Association
IMU	Interim Management Unit
INRGREF	National Institute for Research in Rural Engineering, Water and Forestry
IQC	Indefinite Quantity Contract
IWA	International Water Association
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
JPL	Jet Propulsion Lab
JUST	Jordan University of Science and Technology
LMI	Lower Mekong Initiative
MEDRC	Middle East Desalination Research Center
MENA NWC	Middle East and North Africa Network of Water Centers of Excellence
MPE	Mekong Partnership for the Environment
MRC	Mekong River Commission

NASA	National Aeronautics and Space Administration
NCARE	National Center for Agricultural Research and Extension
NGO	Non-Governmental Organization
NRW	Non-Revenue Water
NWRC	National Water Research Center
NWSC	National Water and Sewerage Corporation in Uganda
OES	State Department's Oceans, Environment, and Science Bureau
OMEP	Office of Middle East Programs
ONEP	National Office of Potable Water
ORSAM	Middle Eastern Center for Strategic Studies
OSU	Oregon State University
PEER	Partnerships for Enhanced Engagement in Research
PIP	Performance Improvement Plan
PO	Purchase Order
PR&D	Policy, Research and Development
PWA	Palestinian Water Authority
QEERI	Qatar Environment and Energy Research Institute
QNFSF	Qatar National Food Security Program
RDMA	USAID's Regional Development Mission for Asia
R&D	Research and Development
REO	Regional Environment Office
RFA	Request for Applications
RFP	Request for Proposals
RSS	Royal Scientific Society
RWS	Reference Weather Stations
SDE	Senegalese des Eaux
SEG	Société des Eaux de Guinée
SIM	Smart Infrastructure for the Mekong
SIWI	Stockholm International Water Institute
SQU	Sultan Qaboos University
STC	Scientific and Technical Council
SWSC	Swaziland Water Services Corporation
TAMU	Texas A&M University
TDE	Togolaise des Eaux
TFDD	Transboundary Freshwater Dispute Database
TOR	Terms of Reference
TRG	Training Resources Group, Inc.
UJ	University of Jordan
UNL	University of Nebraska-Lincoln
USAID	United States Agency for International Development
USG	United States Government
USGS	United States Geological Survey
USU	Utah State University
WASH	Water, Sanitation, and Hygiene
WATSAN	Water and Sanitation
WESI	Water and Environmental Studies Center
WLI	Water Livelihood Initiative
WU	Wageningen University, Netherlands
WWW	World Water Week
YWP	Young Water Professionals
YWSP	Young Water Scientist Partnerships Small Grants Program

# EXECUTIVE SUMMARY

FABRI's eighth Quarterly Progress Report provides an implementation update on the six key activity results which support improved management of water in the Middle East and Africa, project management updates, and any major issues faced and how they were resolved.

## Technical Program

### **Result 1: Middle East and North Africa Network of Centers of Excellence Established and Operating.**

- FABRI received four new proposals and two resubmitted proposals for the Policy, Research, and Development (PR&D) Grants Program. FABRI has received a total of sixteen proposals as of September 14, 2013. The PR&D Grants Selection Committee recommended one proposal for award, two proposals for provisional award, and a fourth for resubmission. Cumulatively, the Selection Committee has recommended one proposal for award and seven proposals for provisional award.
- The Yield Gap Analysis research team led by the University of Nebraska with three Centers held a start-up meeting in Wageningen University in Holland in early September.
- The Founders Committee held its third meeting in Stockholm, Sweden from 4-5 September, 2013.
- Following a competitive process, FABRI selected a Washington, DC-based law firm to prepare the documentation for MENA NWC's incorporation and tax-exempt status in the United States.
- FABRI also released a Request for Proposals (RFP) to solicit proposals to design and launch a website for the MENA NWC.

### **Result 2: Integrated Water Resources Management (IWRM) Programming Strengthened.**

- FABRI received two new proposals relating to IWRM, for a cumulative total of four proposals.
- The Selection Committee met and recommended one IWRM-related proposal for provisional award.

### **Result 3: Access to Clean Water and Sanitation Improved in Target Countries.**

- Five water utility audits were conducted in Africa. The utilities audited included Togolaise des Eaux (TDE) in Togo, Benue in Nigeria, Lukanga and NWWSSCL in Zambia, and Société des Eaux de Guinée (SEG) in Guinea.
- AfWA and FABRI held a two-day meeting in Tirana at the offices of Valu Add to work on the completion of the AfWA business plan.

- FABRI completed the AfWA website design Request for Proposals (RFP) for release in the next quarter. FABRI/AfWA received the first AfYWP proposal from a Kenyan YWP, titled "Kariobangi Private Primary Schools Sanitation (Usafi) Project."
- Three additional YWP national chapters were formed in Chad, Mali, and Togo.
- FABRI management met with senior officers of the African Ministers' Council on Water (AMCOW) to discuss their current partnership under a grant and about other ways to work together, including in a three-way relationship with the African Water Association.
- FABRI held several conversations with the International Water Association about the creation of national young water professional chapters and about ways to form a more productive relationship with AfWA.

**Result 4: Research and Development Capacities in Irrigation, Groundwater Management, and Drought Risk Assessment and Mitigation Strengthened.**

- FABRI has received six proposals relating to irrigation, groundwater management, and drought risk assessment and mitigation.
- The Selection Committee met and recommended three proposals relating to irrigation, groundwater management, and drought risk assessment and mitigation for provisional award, for a total of four provisional award recommendations.

**Result 5: Transboundary Water Cooperation Strengthened in Key River Basins.**

- FABRI hired the Senior Mekong Affairs Advisor based in Bangkok, Thailand who began work on August 5, 2013. During the reporting period, the Senior Mekong Affairs Advisor gathered information on the USG agencies working with the Mekong River Commission (MRC), summarized what they are doing, and identified the point of contact for each agency. She also wrote a two-page report on the importance of better coordination of US technical and financial support to the MRC for coherence in policy messages that have been articulated at a very high level in the USG.

**Result 6: Technical and Outreach Capacity of USAID Staff in Water and Sanitation Programming Enhanced.**

- FABRI presented a side session at the September 2013 World Water Week in Stockholm. The session was called "Using Partnerships to Solve Middle East Water Challenges." It was lead by the Middle East and North Africa Network of Water Centers of Excellence (MENA NWC). The session highlighted the activities of a new, exciting water research entity that brings together 18 regional and international centers in the MENA region to solve longstanding water challenges.

**Project Management**

- During this period, FABRI received a budget realignment and a no-cost extension from USAID which extended the project end date to September 29, 2015.

• [REDACTED]

- The FABRI team recruited and hired Ms. Megan Delph who will serve as the Senior Project Coordinator on FABRI, replacing Ms. Julie Carp, starting on October 7, 2013.
- FABRI got USAID COR and CO approval for two additional experts to work for five days each on the project as proposal reviewers for the PR&D Grants program.
- FABRI issued a Purchase Order for \$4,954 to the Environmental Law Institute (ELI) to support the development of a research proposal on the subject of groundwater policy in the PR&D Grants program.

### **Issues and Remedies**

Three issues faced by project management during this quarter include: The approved Performance Monitoring Plan (PMP) for FABRI is out of date and does not reflect the Agency's current F indicators. As a remedy, FABRI will work with the COR and the AFR Activity Manager to revise the indicators and ask for approval for amending the PMP. Prospective grantees have been slow to submit proposals for the three small grants programs. As a remedy, FABRI will aggressively pursue ways to publicize the programs. It will also hold proposal writing workshops with Centers for the MENA NWC grants and at December and February AfWA conferences for the AfYWP grants program. Finally, some PR&D research projects include construction and chemical purchase. FABRI will work closely with the COR to conduct environmental impact assessments.

# 1. INTRODUCTION

Water plays a pivotal role in the political, economic and social lives of nations and people. Many countries, including those in the Middle East and Africa, are facing common water challenges- drought, inefficient agricultural water use, groundwater management, inadequate or poor quality water supply, weak or absent mechanisms for sharing transboundary water, etc. Such challenges can lead to conflict within communities and among countries, as well as have negative health, financial and social impacts on populations.

To help respond to these regional water challenges, FABRI is providing technical support to USAID's Middle East and Africa bureaus, fulfilling all requests at the highest technical standards. In this capacity, FABRI has launched and established a new regional water network called the Middle East and North Africa Network of Water Centers of Excellence (MENA NWC), strengthened integrated water resources management programming, improved the long-term viability of water and sanitation service providers, rationalized water allocations and use, encouraged collaboration among riparians in transboundary river basins, and raised USAID visibility in water and sanitation.

Partnerships form the foundation of all aspects of this initiative. FABRI develops partnerships—between and among the scientific community, governments, universities and research institutions, the private sector, and civil society—to achieve the project's goals and to ensure that the water sector in the Middle East and Africa is capable of sustaining, and building on those achievements after FABRI has closed. We are forging intellectual and financial partnerships among the water sector's major players to create an integrated process that spans the identification and design of new approaches and technologies to their production and adoption. Continued investments and advances in the water sector will improve economic output, agricultural returns, and public health and ease economic burdens and alleviate human suffering.

FABRI's core result is the launch of the Middle East and North Africa Network of Water Centers of Excellence (MENA NWC). This initiative is an outcome of President Obama's call to establish Centers of Excellence in the Muslim World during his June 2009 "New Beginnings" speech in Cairo. Secretary Clinton also mentioned the initiative during her World Water Day speeches in 2010 and 2011.

MENA NWC links technical and research institutions across the region, encouraging them to work together and with outside counterpart institutions on critical water challenges. The Network strives to foster partnerships that build and exchange regional science and technology capacity to improve water resources planning and management; and develop and disseminate policy tools and technical and management interventions that expand water supply, manage demand, and dramatically increase its efficient and productive use.

A network of cooperating institutions are facilitating collaborative activities, including competitive grants programs, capacity building, institutional twinings, exchanges, fellowships, communications, and knowledge management. The Network is the main vehicle for FABRI's goal to strengthen the water sector in the Middle East and North Africa.

Additionally, FABRI is supporting innovative WASH activities in Africa, focusing on providing institutional support to two regional associations to test and share successful approaches in non-revenue water and on setting national policies to enhance sanitation programs throughout Africa.

FABRI's eighth quarterly report outlines the program's achievements and plans to build regional capacity of various actors from the water sector in the Middle East and Africa.

## 2. PROGRESS DURING THE QUARTER

FABRI has six major objectives:

- **Result 1: Establish an operational Middle East and North Africa Network of Centers of Excellence (MENA NWC).** FABRI is supporting the creation of the MENA NWC by acting as the Interim Management Unit until a Secretariat is established. The initiative will establish MENA NWC organization, leadership, and finances, as well as manage collaborative, technical, and capacity-building activities via Policy, Research, and Development (PR&D) Grants. Through the MENA NWC, FABRI aims to integrate research and development capacity in the member Centers with the development and dissemination of applied technologies and practices for innovative approaches, systems, and technologies to address water issues important to the region. An important piece of this work is the development of a communications and knowledge sharing plan to support the sustainability of the Network.
- **Result 2: Strengthen Integrated Water Resources Management Programming.** FABRI is strengthening the legal and regulatory framework for IWRM and implementing methodologies to improve and promote the efficient use of water resources through the MENA NWC IWRM Thematic Partnership.
- **Result 3: Access to Clean Water and Sanitation Improved in Target African and Middle Eastern Countries.** FABRI is strengthening the performance of water and sanitation service providers by working with regional “platforms” and associations. The goal is to provide them with innovative and tangible support to improve financial, economic, and operating efficiency, including development of association Business Plans, Non-Revenue Water initiatives, capacity building, and communications and knowledge sharing programs.
- **Result 4: Strengthen Research and Development Capacities in Irrigation, Groundwater Management, and Drought Risk Assessment and Mitigation.** FABRI is working with one of the MENA NWC Thematic Partnerships to identify the most promising and regionally-relevant technologies and techniques for efficient, productive use of water in agriculture; engaging the leading experts in these technologies to transfer knowledge to MENA NWC institutions; and developing and presenting outreach activities in target countries to encourage government engagement and private sector partnerships around the most successful approaches.
- **Result 5: Strengthen Transboundary Water Cooperation in Key River Basins.** Through Oregon State University, FABRI is conducting an analysis of transboundary cooperation approaches and applying study findings to the Tigris-Euphrates basin. The results will be used to identify, design and implement one or two pilot projects. In addition, FABRI hired a Senior Mekong Affairs Advisor based in Bangkok, Thailand who began work in August 2013.
- **Result 6: Enhance Technical and Outreach Capacity of USAID Staff in Water and Sanitation Programming.** FABRI will strengthen USAID staff capacity in this area by providing materials and insights based on our non-revenue water and sanitation programs in Africa.

The following section describes the progress that FABRI has made on each of these objectives during the quarter.

## **RESULT 1: MIDDLE EAST AND NORTH AFRICA NETWORK OF CENTERS OF EXCELLENCE ESTABLISHED AND OPERATING**

### **Requirement 1.1: Support Establishment of MENA NWC**

This activity is completed.

### **Requirement 1.2: Design a Trust Fund or Endowment to Help Ensure the Sustainability of the Network**

The Founders Committee agreed the creation of a trust fund or endowment for MENA NWC ought to be considering near the end of the current business planning period in 2017. This activity is currently on hold.

### **Requirement 1.3: Support Operations of the MENA NWC Secretariat**

The FABRI COP continued to serve as Acting Director of the Network's Secretariat. He has been in regular and frequent communication with participating Centers. In addition, FABRI is proceeding with one key component of the Network: the five-year business plan. The Strategic Business Plan covers the operational period of MENA NWC from 2014 through 2018. The Business Plan supports the Network during a transitional period as it proceeds through legal registration, staffing, technical program expansion, physical establishment, and fundraising. MENA NWC begins the five years as an entity solely supported by the United States Agency for International Development (USAID) and ends as a self-sustaining, not-for-profit enterprise that is capable of generating revenues to match its technical and management plans. The Founders Committee reviewed and provided feedback on Business Plan at their meetings in June and September 2013 and will finalize it version at their last meeting in Amman in February 2014.

In addition to work on the business plan, through a competitive procurement process FABRI selected a law firm that will legally register the MENA NWC in the United States. The firm will work collaboratively with the Founders Committee to evaluate in which state the Network should register, draft and file Articles of Incorporation in the selected State, develop corporate bylaws, and apply for federal and state tax exemption.

Lastly, FABRI also released a Request for Proposals (RFP) to solicit proposals to design and launch a website for the MENA NWC. Three firms submitted proposals in response.

### **Planned Activities for the First Quarter of Year Three**

- Complete revisions to the 2014-2018 Strategic Business Plan
- Select a U.S. jurisdiction for registration and file Articles of Incorporation
- Complete a draft of the bylaws for the Founders Committee to review in February 2014
- Select a firm to design the MENA NWC website, complete contracting and launch work

### **Requirement 1.4: MENA NWC Founders Committee Established**

During this quarter, the Founders Committee held its third meeting in Stockholm, Sweden from 4-5 September, 2013. The Committee continued discussions on the Network's governance and financial structures, legal registration, and reviewed an updated version of the 5-year Strategic Business Plan. The

Interim Management Unit (IMU) made presentations on the Network's research programs and capacity development and knowledge exchange initiatives. Key agreements of the Founders Committee include:

- **Legalization:** Endorsed the selection of the Washington, DC-based legal firm of Harmon, Curran, Spielberg + Eisenberg LLP to prepare the documents for incorporation, the bylaws, and the application for Federal tax exempt status as a 501 (c)3 for MENA NWC
- **Board of Directors:** Agreed to the composition of the Board of Directors, the terms of members of the Board of the Directors, and the process for identifying candidates for the Board of Directors
- **Business Plan:** Revised the MENA NWC Strategic Business Plan for 2014-2018 and instructed the Interim Management Unit (IMU) to make further changes
- **Membership:** Reconfirmed interest in adding new members to the Network now, including from Egypt, Yemen, Algeria, and Iraq and elsewhere, with interested Centers submitting letters of request to USAID
- **Financial Sustainability:** With changes, approved the draft terms of reference to compete the procurement of a specialized development firm to prepare a strategy, action plan, and marketing materials for the financial sustainability of the Network
- **Knowledge Exchange:** Agreed that the first Congress should be held in 2015 with active donor and private sector participation, and that five Thematic Partnership meetings would be held in 2014
- **Capacity Building:** Agreed that the University of Nebraska's concept paper for proposal writing training warranted further work and agreed that the IMU should visit UNL to refine the design; reconfirmed interest in visiting member Center the Arabian Gulf University in Bahrain, as it is one of the few institutions in the region to have developed an online training program

The Founders Committee meeting coincided with the 2013 World Water Week in Stockholm. The MENA NWC hosted a side-event entitled "Using Research Partnerships to Solve Middle East Water Challenges" where the Founders Committee presented. This event is discussed further in Requirement 6.

### **Planned Activities for the First Quarter of Year Three**

- Collaborate with the Founders Committee to identify candidates for the Board of Directors
- Complete legal paperwork for the incorporation of the Network
- Launch the design of the MENA NWC website

### **Requirement 1.5: Technical, Demonstration Activities of the Network Launched**

*Accepted and Reviewed Proposals and Made Award Recommendations.* FABRI received four new proposals and two resubmitted proposals for the Policy, Research, and Development (PR&D) Grants Program. FABRI has received a total of sixteen proposals as of September 14, 2013.

Proposals relating to the Food-Energy-Water Nexus, Non-Conventional Water, and Water Supply and Sanitation Thematic Partnerships are summarized in the table below. Proposals relating to Integrated Water Resources Management are presented in Result 2, and proposals relating to Irrigation, Groundwater Management, and Drought Risk Assessment and Mitigation are presented in Result 4.

The PR&D Grants Selection Committee is chaired by Sarah Tully (USAID), and includes Jill Shaunfield Smail (Department of State), Peter Reiss (FABRI), and Kenneth Ludwa (FABRI). Committee members reviewed each proposal, prepared a written evaluation and scoring, and made an award/decline decision by consensus. The Committee decision is informed by external expert reviews. Each proposal's

award/decline status is summarized in the table below and the tables in Results 2 and 4. The Selection Committee met to review eight proposals. It recommended one proposal for award, two proposals for provisional award, and one for resubmission. The others were declined. In total, the Selection Committee has recommended one proposal for award and seven proposals for provisional award. FABRI will keep one of the provisional awards on hold, pending the securement of additional grants funds, because the proposal is the second from Sultan Qaboos University as lead Center.

**Research Proposal Development.** FABRI extended the PR&D Grants proposal deadline from August 3, 2013 to November 3, 2013, and continued to track Centers' progress on proposals. Proposals in progress are summarized in the table below and the tables in Results 2 and 4. As of September 14, 2013, five teams continued to prepare proposals.

**PROPOSALS RELATING TO WATER-FOOD-ENERGY NEXUS, WATER SUPPLY AND SANITATION, AND NON-CONVENTIONAL WATER**

<b>Proposal Topic</b>	<b>Participating Centers</b>	<b>External Partners</b>	<b>Status</b>
<b>Submitted Proposals</b>			
<i>Water-Food-Energy Nexus</i>			
Water, Energy, and Food Nexus: a Basis For Strategic Planning for Natural Resources Sustainability-Challenges for Application in the MENA Region	QNFSP INRGREF UJ	Purdue	Provisional award; in negotiation
Energy Efficient and Environmentally Friendly Water Distribution Networks	UJ ONEE QEERI ACWUA		Declined
<i>Non-Conventional Water</i>			
Enhancing Cost Recovery in Wastewater, Greywater and Fecal Sludge Management through Safe Reuse	IWMI SQU JUST An Najah	UC Davis	Declined proposal
Use of Green Nanoparticles as a Biofouling-Resistant Agent in Reverse Osmosis Desalination	JUST ONEE	University of Rhode Island University of Toledo-Ohio Georgia Tech	Award; in negotiation
Solar Pumping and Desalination	UJ An Najah	USU	Resubmission; in progress
Assessment of Environmental and Health Hazards of Using Treated Wastewater for Agriculture	IAV INRGREF UJ	US Salinity Laboratory	Declined
<i>Water Supply and Sanitation</i>			
Expanding Access to Sanitation for Unsewered Communities in Middle East and North Africa Countries	ONEE RSS UJ IAV	R&D Maroc	Provisional award; in negotiation
<b>Proposals in Progress</b>			
<i>Water-Food-Energy Nexus</i>			
Developing a Road Map for Low-Carbon, Low-Cost Water Supply in the MENA Region	AGU IAV QEERI		In progress

Proposal Topic	Participating Centers	External Partners	Status
	RSS UJ		
Investigating and Modeling Optimum Pumping Technologies for Different Water Applications	RSS IAV UJ		In progress

**Negotiated Awards and Presented Project Administration Orientation in Morocco.** FABRI Grants Program Manager Kenneth Ludwa and FABRI Middle East Activity Manager Christel Milazzo visited ONEE and IAV in Morocco September 3-6, 2013 to develop the budget for the project “Expanding Access to Sanitation for Unsewered Communities in Middle East and North Africa Countries.” Christel Milazzo also delivered training to IAV and ONEE on FABRI grants award and administration procedures.

**U.S.-Network Research Partnerships.** FABRI is negotiating subcontracts for four research projects that are led by institutions outside the region, which would apply emerging technologies in the region:

- 1. Combatting the Emerging Impacts of Harmful Algal Blooms on Desalination Plants: Bloom Detection, Forecasting, and Strategies for Impact Reduction.** The proposal is led by MEDRC, partnering with Woods Hole Oceanographic Institution (USA), the National Oceanic and Atmospheric Administration (USA), University of California Santa Cruz (USA), SQU (Oman), and the Regional Organization for the Protection of the Marine Environment (Kuwait). The objective of this project is to develop a forecast and early warning capability for harmful algal blooms (HABs) to support desalination plant operators, and manuals and action plans for HAB response. The project will develop satellite remote sensing indices for early warning of HABs, numerical modeling to predict transport of potential blooms to the area of desalination intakes, development of an approach to combine satellite data with the model, a demonstration of this integrated product, and development of methods and training to transfer the approaches and algorithms to the region. During the quarter ending September 14, 2013, FABRI and MEDRC agreed on the project scope and budget. The anticipated budget is \$672,000. During the next quarter, FABRI will support a team planning meeting to develop a project work plan, and work with MEDRC to execute the subcontract.
- 2. The Global Yield Gap and Water Productivity Atlas for Jordan, Morocco, and Tunisia.**

The University of Nebraska’s Global Yield Gap Atlas for the Middle East and North Africa (GYGA-MENA) project started on September 1, 2013. The following is a summary of project activities as of September 15, 2013.

**Project Start-up and Training Workshop**

The University of Nebraska organized a three-day project kick-off and training workshop at Wageningen University, The Netherlands from September 10 - 12. The objectives of the workshop were to (a) provide an opportunity for key scientists involved in the project, from the lead universities University of Nebraska-Lincoln (UNL), U.S. and Wageningen University in Holland, and participating Centers from Morocco, Tunisia and Jordan, to meet each other for the first time; (b) introduce to the participating scientists the research methodology and protocols that have been developed during the current GYGA project; and (c) discuss project plans, deliverables and timelines. Participants included seven key scientists from the three participating Centers, two scientists from UNL, five from WU, and one from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Kenya. The topics covered in the workshop included:

- An overview of global food security and the current status of the greater GYGA project and research methodology
- An overview of major cropping systems and crop production in each of the participating countries and identifying major crops in each country to be included in the GYGA-MENA project
- Crop simulation modeling for estimation of crop yield potentials and hands-on exercise of major crop models used in the GYGA project
- Climate zoning in yield gap analysis and up-scaling
- Data issues with weather, soil, crop management, and crop yield data
- GYGA data portal and visualization of yield gap analysis
- Potential applications of advanced remote sensing in GYGA project
- Discussion of plans, deliverables and timelines for GYGA-MENA project.

### **Finalizing Subcontracts**

UNL is finalizing agreements with two subawardees (WU and Alterra) and sub-contracts with the three participating centers. UNL administration is in the process of finalizing agreements and sub-contracts with the five institutions. These are expected to be completed by mid-October, 2013.

### **GYGA-MENA Symposium Participation**

Planning is nearly completed for GYGA-MENA scientists to participate in the greater GYGA project symposium at the 2013 American Society of Agronomy-Crop Science Society of America –Soil Science Society of America International Annual Meetings in Tampa, Florida, US, and a visit and workshop at UNL November 3 -10, 2013.

### **3. Radar Probing of Groundwater in Hyper-Arid Environments: Understanding Aquifer**

**Dynamics in High Discharge Areas.** As conceived by the California Institute of Technology in association with the Jet Propulsion Laboratory (JPL) in Pasadena, the study will map the ground deformation associated with water table depth variation over segments of the North African and coastal aquifers in Morocco and Oman where high discharge rates are observed. The study will map the depth of the water table and explore radar capability to monitor the water freshness from signal decay measurements in high discharge zones. The study uses technologies first developed for use on Mars. Network Centers include the Institute of Agronomy and Veterinary Science Hassan II in Morocco and Sultan Qaboos University in Oman. During this quarter, FABRI continued to negotiate with Caltech on the scope and budget. The requested budget is approximately \$700,000. FABRI submitted a complete file to the USAID Contracts Office for approval and is awaiting approval.

### **4. Developing and Applying Non-Revenue Water Reduction Decision Support Criteria and Tools.**

The major objectives of the proposed research project, led by ACWUA, are to sustainably reduce the level of non-revenue water (NRW) – both real and apparent losses – in major cities in the MENA region and hence increase the efficiency of water resource use and reduce unnecessary operational costs. The project will start with an in-depth comparative study of NRW reduction strategies in the Middle East and North Africa, Europe, and North America. Study results will be used to identify a series of managerial, operational, technical and other measures to reduce the level of real and apparent water losses. ACWUA has submitted a revised proposal which is near ready for submission to USAID for approval.

***Young Water Scientist Partnership (YWSP) Small Grants Program.*** FABRI released the Annual Program Statement (APS) for the Young Water Scientist Partnerships (YWSP) Small Grants Program. YWSP stimulates collaboration between the Centers' young water research scientists small grant through project that aspire to make a concrete impact in the water sector. Research projects must address a policy,

operational, technical, or managerial issue that is identified by stakeholders in government, business, NGOs, or civil society. They must also address one or more of MENA NWC's priority research areas: water use efficiency and productivity, groundwater, non-conventional water, water/energy/food nexus, and water supply and sanitation. The small grants program is open to full-time or part-time employees of MENA NWC Centers between the ages of 21 and 35. (Please note, a forthcoming modification will increase the age of eligibility to 40). Proposals must be submitted by two research scientists from two different Centers. A funding pool of US \$350,000 is available for small grants under this program. Research projects funded under this program may range in size from \$10,000 to \$50,000, with most projects anticipated at the lower range. Applicants are encouraged to seek funding/co-financing in cash and in-kind from external sources, such as MENA NWC Centers, utilities, governments, businesses, civil society organizations, and similar entities.

***Water Innovation Fellowships (WIF).*** FABRI released a second small grant APS. The strategic objectives of the MENA NWC Water Innovation Fellowships are to: (a) Provide an exciting opportunity for water research scientists and practitioners to pursue their unrealized professional interests/dreams and enhance their career development; (b) Foster scientific research or outreach partnerships between scientists or practitioners in the Middle East and North Africa and a Network Center; (c) Develop and carry out creative and innovative activities that have a demonstrable impact on the water sector in the Middle East and North Africa; and (d) Stimulate knowledge creation and exchange in the water sector. Water Innovation projects must address a policy, operational, technical, or managerial issue that is identified by stakeholders in government, research or academic entities, business, NGOs or civil society. Projects should have a real-life application and a concrete impact in the water sector. The Water Innovation Fellowship Small Grants Program is open to water research scientists and water practitioners of any age. Applicants must be citizens of a Middle Eastern and North African country that is eligible for USAID funding; currently resident in the Middle East and North Africa; and full-time employees of an institution or entity based in the Middle East and North Africa. Applicants may be full-time employees of Network Centers, research or academic institutions, government, business, NGOs and civil society organizations. The fund is capitalized at \$250,000 with individuals grants capped at \$25,000 but most are expected to be in the \$10,000-\$15,000 range.

### **Planned Activities for the First Quarter of Year Three**

- FABRI will receive the remaining proposals in progress, convene a final Selection Committee, evaluate proposals, advise Centers of award decisions, negotiate grant terms, and award grants.
- FABRI expects to finalize subcontracts with MEDRC, UNL, Caltech, and ACWUA for the unsolicited proposals.
- FABRI will attend kickoff meetings for the UNL and Caltech unsolicited proposals. FABRI will also attend a project planning meeting for the MEDRC unsolicited proposal.
- UNL will provide MENA scientists with a better understanding of the GYGA methodology and protocol through their participation in the symposium at Tampa, Florida and the workshop at UNL in November, 2013. This will promote more interactions among GYGA-MENA scientists and scientists from the other GYGA projects (Sub-Saharan Africa, South Asia, Argentina and Brazil).
- Complete the approval process for all unsolicited research projects
- Actively publicize the two small grants programs for proposal

### **Requirement 1.6: Network Strengthening Through Private Sector Participation**

During this quarter, FABRI continued several activities to support the Centers in identifying partnership opportunities with the private sector. In addition, FABRI developed a draft questionnaire for the upcoming Morocco Business mapping activity.

FABRI identified several local and international companies and held meetings with them in Jordan to introduce the MENA NWC, and solicit interest from the businesses in participating in the research program. The companies that were contacted included Mecie, Toray Water, Degremont, Munir Sukhtian Group, Kawar Energy, Siemens, GE Power and Water, Irsheidat Company for Trading and Contracting, DOW, Index Water Systems, Shamsi Alsateah, and DHI Group. FABRI shared a list of the MENA NWC research proposals with the businesses and discussed areas of research interest with them during face to face meetings. FABRI provided a summary of some of the research proposals that were of interest to the firms in order to provide additional information and details.

FABRI also held a meeting with the EDAMA Association in Amman. EDAMA is a Jordanian business association that seeks to apply innovative solutions in energy and water, and its members are local businesses in water and energy. FABRI drafted a letter of invitation to EDAMA members and sent it to EDAMA to invite their members to participate in the MENA NWC.

A few of the companies expressed and confirmed their interest in participating in some of the research proposals. The companies included Kawar Energy, Shamsi Alsateah, DHI Group, and GE Power and Water. However, the companies asked for a specific and clear description of what their participation would entail. The businesses were keen on understanding the value proposition for their participation, and for setting a clear framework for their contribution in terms of specific inputs, value to their business, and the possibility for reimbursements of some of the direct costs related to their participation in meetings, including travel costs. A majority of the businesses hesitated to sign official letters of commitment before they were introduced to the research teams and activities, so that specific areas for their participation and contribution could be clearly defined. One company, Shamsi Alsateah, signed an official letter of interest and highlighted specific areas of contribution that they would like to make to three different research proposals.

### **Planned Activities for the First Quarter of Year Three**

- Facilitate meetings between the Centers and some of the private sector companies that expressed interest in MENA NWC research program.
- Continue to provide support to the Centers by facilitating dialogue and communications with private businesses.

## **RESULT 2: INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMMING STRENGTHENED**

FABRI will implement Result 2, Integrated Water Resources Management (IWRM) Strengthening, through MENA NWC research projects. As described in the results for Requirement 1.5, FABRI received proposals and tracked research teams' proposal progress during this quarter. FABRI received two new proposals relating to IWRM, for a cumulative total of four (see table below).

September 14, 2013, the Selection Committee met and recommended one IWRM-related proposal for provisional award.

## PROPOSALS RELATING TO INTEGRATED WATER RESOURCES MANAGEMENT

Proposal Topic	Participating Centers	External Partners	Status
<b>Submitted Proposals</b>			
Conjunctive Use of Treated Wastewater and Conventional Water Resources to Sustain Agricultural Production and Mitigate Environmental Pollution: Diagnosis and Optimization	SQU INRGREF UJ	University of Florida	Selection Committee recommended provisional award; in negotiation
Mainstreaming of Watershed and Crop Modeling in the Decision Making Process to Improve Land and Water Productivity in Morocco and Tunisia	ICARDA IAV INRGREF	TAMU Eawag	Selection Committee declined proposal
Adapting the latest METRIC and GIS Technologies to Improve Water Resources Management at Large Scale: Impact of Climate Variability and Policy Implications in Jordan, Morocco and Tunisia	IAV INRGREF NCARE	CNRST, Morocco	Selection Committee declined proposal
Assessment of Environmental and Health Hazards of Using Treated Wastewater for Agriculture	IAV INRGREF		Selection Committee declined proposal

### Planned Activities for First Quarter of Year Three:

- FABRI will complete the grant award, and support and attend the kickoff meeting for the project “Conjunctive Use of Treated Wastewater and Conventional Water Resources to Sustain Agricultural Production and Mitigate Environmental Pollution: Diagnosis and Optimization.”

## RESULT 3: ACCESS TO CLEAN WATER AND SANITATION IMPROVED IN TARGET COUNTRIES

### Requirement 3.1: Water and Sanitation Service Provider Performance Strengthened

**Non-Revenue Water Program.** The AfWA Non-Revenue Water Task Force conducted five water utility audits for Togolaise des Eaux (TDE) in Togo, Benue in Nigeria, Lukanga and NWWSSCL in Zambia, and Société des Eaux de Guinée (SEG) in Guinea. As of the end of this quarter, a total of 13 NRW audits have been completed. The Bauchi Nigeria audit will be completed in the following quarter and the remaining seven audits will be scheduled during the upcoming Task Force Members meetings in Manzini, Swaziland.

SEG's audit report attracted the interest of JICA's Water Resources Management Division, as they are also undertaking a NRW program in Guinea and would like to collaborate with FABRI/AfWA and base their technical assistance program on the report's findings. This could become a good model for the next phase of the NRW program, Performance Improvement Plan (PIP) implementation in partnership with other donors and private sector partners.

***AfWA Business Plan.*** AfWA and FABRI held a two-day meeting in Tirana at the Valu Add office to work on the completion of the business plan. The completed business plan will be presented to the Executive Board by the AfWA Secretary General at the next Scientific and Technical Council meeting in November, for final approval. The five-year business plan will set the course for AfWA's financial sustainability.

***Communications and Knowledge Exchange.*** During this period, FABRI completed the AfWA website design Request for Proposals (RFP) for release in the following quarter. As AfWA is a membership-based organization, the main goal of the website will be to provide technical resources to its members. It will also allow members to join and pay their dues online. Simplifying the membership and payment process should help increase membership. In addition to the website highlighting AfWA members' WASH accomplishments, it will also highlight AfWA's technical programs in WASH and incorporate training and educational materials.

***Africa Young Water Professionals Small Grants Program (AfYWP).*** AfWA received the first AfYWP proposal from a Kenyan YWP, titled "Kariobangi Private Primary Schools Sanitation (Usafi) Project." This four-month project hopes to bridge the gap between WASH programs and private schools, which are often not included. By working with fourth through sixth graders in seven private schools, the project hopes to promote sanitation awareness through teacher trainings and an art competition.

Also, three additional YWP national chapters were formed: Chad, Mali, and Togo. Previously formed national chapters included Kenya, Uganda, Rwanda, Cameroon, Senegal, Tanzania, and South Africa. The next group expected to be formed by December 2013 includes: Benin, Burkina Faso, Burundi, Cote d'Ivoire, DRC, Ghana, and Namibia, Mozambique, and Zimbabwe.

As a result of the small grants informational flyer distribution, FABRI received over 20 email inquiries on new chapter formations during the last month of the quarter. Additionally, as a response to USAID's concern over the duplication of efforts between the International Water Association (IWA) YWP and AfWA AfYWP programs, communication and coordination is underway between the two organizations to ensure a smooth working relationship as well as chapter formations.

### **African Ministers' Council on Water Grant**

AMCOW replaced one of the two staff supported with FABRI funds. The new staff member is formerly Director of Water Resources in Rwanda. During World Water Week, the FABRI COP met with the Secretary General of AMCOW, Bai-Mass Taal and with the two staff supported by FABRI to discuss how FABRI can better assist AMCOW and form an even closer working relationship. As a result, an AMCOW staff member will serve on the Selection Committee for the AfYWP small grants program. They also discuss a close three way relationship with AfWA.

### **Planned Activities for the First Quarter of Year Three**

- Complete the Bauchi NRW audit in Nigeria and plan for the remaining seven audits in Burkina Faso, Chad, Congo Brazzaville, Cote d'Ivoire, Gabon, Ghana, Malawi, and South Africa, which has recently decided to rejoin the program.
- Complete utility audit reports, synthesis, and Performance Improvement Plan (PIP) report outlines for all audits conducted during the previous two quarters.
- Plan the second AfWA NRW Task Force meeting from 9-12 November 2013 in Swaziland. The agenda topics include: audit reviews/feedback, PIPs, planning for various meetings at the AfWA Congress (Managing Directors, donors, YWP, and CKE), partnerships with MENA (participation on the audits) and ACWUA.

- Submit the first AfWYP grant proposal to the Selection Committee for review.
- Plan for a donors meeting, a managing directors meeting, and a knowledge and communications exchange meeting during the next AFWA Congress.

#### **RESULT 4: RESEARCH AND DEVELOPMENT CAPACITIES IN IRRIGATION, GROUNDWATER MANAGEMENT, AND DROUGHT RISK ASSESSMENT AND MITIGATION STRENGTHENED**

##### **Requirement 4.1: Conduct Identification and Analysis of U.S., Regional, and International Water Programs Aimed at Promoting Efficient, Productive Use of Water in Agriculture in the MENA Region**

FABRI will implement Result 4 through MENA NWC research projects. As described in the results for Requirement 1.5, FABRI received proposals and tracked research teams’ proposal progress. As of September 14, 2013, FABRI has received six proposals relating to irrigation, groundwater management, and drought risk assessment and mitigation (see table below).

In the quarter ending September 14, 2013, the Selection Committee met and recommended three proposals relating to irrigation, groundwater management, and drought risk assessment and mitigation for provisional award, for a total of four provisional award recommendations. However, FABRI will hold the provisional award for the proposal “Managed Aquifer Recharge Using Treated Wastewater,” pending the securement of additional grants funds, because the proposal is the second from SQU as lead Center.

#### **PROPOSALS RELATING TO IRRIGATION, GROUNDWATER MANAGEMENT, AND DROUGHT RISK ASSESSMENT AND MITIGATION**

<b>Proposal Topic</b>	<b>Participating Centers</b>	<b>External Partners</b>	<b>Status</b>
<b>Submitted Proposals</b>			
Guidelines for Artificial Groundwater Recharge Using Flood Farming	UJ ICBA	UNL	FABRI declined proposal
Efficient Treatment and Provision of High-Quality Reclaimed Effluents Suitable for Irrigation	Technion NCARE	Al Quds University, Ministry of Agriculture Extension Service (Israel)	Selection Committee recommended provisional award; in negotiation
Managed Aquifer Recharge Using Treated Wastewater	SQU UJ RSS	UNL JPL	Selection Committee recommended provisional award; holding award pending securement of additional grants funds
Application of Near-Real Time Soil Monitoring for Irrigated Agricultural Systems in MENA	ICBA INRGREF SQU		Selection Committee recommended

Proposal Topic	Participating Centers	External Partners	Status
	NCARE		provisional award; in negotiation
Developing Partnerships and Innovative Technologies to Improve Water Use Efficiency at River Basin Scale in Jordan, Morocco and Tunisia	INRGREF NCARE IAV	UC Davis	Selection Committee recommended provisional award; in negotiation
Sustainability of Groundwater Use in Tunisia and Jordan	ICARDA INRGREF NCARE	UC Davis, Environmental Law Institute	Selection Committee invited resubmission; in progress
<b>Proposals in Progress</b>			
Water Footprint Benchmarking Insight for Water Management Policy in MENA	UJ		In progress

### **Planned Activities for First Quarter of Year Three**

- FABRI will receive the remaining proposals in progress, convene a final Selection Committee, evaluate proposals, advise Centers of award decisions, negotiate grant terms, and award grants.
- FABRI will complete grant awards and support and attend the kickoff meetings for three projects.

## **RESULT 5: TRANSBOUNDARY WATER COOPERATION STRENGTHENED IN KEY RIVER BASINS**

### **Requirement 5.1: Conduct Analysis of U.S. and Regional Transboundary Water Cooperation Programs, with a Focus on the Euphrates, Tigris, and Nile Basins**

Oregon State University's Program in Water Conflict Management and Cooperation led by Prof. Aaron Wolf submitted a third draft of an assessment of regional transboundary water cooperation programs. The Program houses the Transboundary Freshwater Dispute Database (TFDD), the largest collection of information on transboundary conflict and cooperation in the world.

#### **Planned Activities for First Quarter of Year Three:**

- Finalize the final report from Oregon State University for submission to USAID and for widespread dissemination.

### **Requirement 5.5: Launch Pilot Project in Key River Basin**

USAID asked FABRI to provide a full-time expert to assist it with Mekong River Commission (MRC) support. Klomjit Chandrapanya was chosen to serve as Senior Mekong Affairs Advisor. The role of the Advisor is to prepare a comprehensive long-term, external engagement strategy for the USAID Regional Development Mission for Asia (RDMA) to promote fair and effective governance of water, food, and energy in the Greater Mekong Subregion (GMS) as it relates to development of hydropower on the

Mekong River She is also responsible for strategy execution and coordination, including developing a five-year Plan of Action to implement the RDMA's Mekong External Engagement Strategy that specifies key activities, required tasks, responsible actors, and due dates, and for communications and outreach. Klomjit Chandrapanya began working for FABRI during this quarter and her start date was 5 August 2013.

The Mekong River Commission is the only regional intergovernmental body in the lower Mekong basin that acts as a forum for member countries to discuss transboundary water resources management. The US government has a strong interest in strengthening the MRC. Former Secretary Clinton pledged support of up to USD one million for its study to close the knowledge gap on sustainable development in the basin and USAID RDMA has provided USD two million to its Fisheries program. Meanwhile, various US Government agencies have provided or are providing technical support to the organization. However, there is no coordination among these USG agencies and no one entity that has comprehensive information on overall US support to the MRC.

During the reporting period, the Senior Mekong Affairs Advisor has gathered information on what the USG agencies are, summarized what they are doing, and identified the point of contact for each agency into an annex and wrote a two-page report on the importance of better coordination of US technical and financial support to the MRC for coherence in policy messages that have been articulated at a very high level in the USG. With the report, the State Department convened a teleconference among all the various USG agencies to underscore that it is best that efforts be better communicated and coordinated through the State Department and not conducted as independent and ad hoc activities.

The Senior Mekong Affairs Advisor helped USAID/RDMA strengthen partnerships with key stakeholders working on MRC, particularly the 12 MRC donors and advised US embassies' Environment, Science, Technology, and Health (ESTH) Officers in Cambodia, Laos, Vietnam, and the Regional ESTH officer as well as the State Department's Oceans, Environment, and Science (OES) Bureau on MRC and Mekong-related matters. The key issues tackled during this period were on how to improve donor relations with the MRC's member countries, especially during joint meetings; and the planned Don Sahong hydropower project.

#### **Planned Activities for First Quarter of Year Three:**

- Continue to support Klomjit Chandrapanya in her role as Senior Mekong Affairs Advisor
- Create an RDMA partnership with the private sector through joint activities with the Greater Mekong Sub-region (GMS) Business Forum.
- Support the RDMA's Regional Environment Office (REO) projects that are key LMI (Lower Mekong Initiative) deliverables. They are the Smart Infrastructure for the Mekong (SIM) project, the Mekong Partnership for the Environment (MPE) project, and the SERVIR project. The Senior Mekong Affairs Advisor's main tasks involve socialization of the projects by coordinating with ESTH and USAID bilateral missions as well as key national partners, particularly government officials.
- Support RDMA's Executive Office by developing plans and activities related to the Friends of LMI.

## **RESULT 6: TECHNICAL AND OUTREACH CAPACITY OF USAID STAFF IN WATER AND SANITATION PROGRAMMING ENHANCED**

### **Requirement 6.2: Increase USAID's Visibility and Outreach on Water Issues**

FABRI presented a side session at the September 2013 World Water Week in Stockholm. The session was called "Using Partnerships to Solve Middle East Water Challenges." It was lead by the Middle East and North Africa Network of Water Centers of Excellence (MENA NWC). The session highlighted the activities of a new, exciting water research entity that brings together 18 regional and international centers in the MENA region to solve longstanding water challenges.

### **Planned Activities for First Quarter of Year Three**

- Prepare for the February AfWA Congress in Abidjan

### 3. PROJECT MANAGEMENT

During this period, FABRI received a budget realignment and a no-cost extension from USAID which extended the project end date to September 29, 2015. The new period of performance for the FABRI task order is September 15, 2011 through September 29, 2015. [REDACTED]

During this period, FABRI hired the Senior Mekong Affairs Advisor, Ms. Klomjit Chandrapanya, who is based in Bangkok, Thailand. Ms. Chandrapanya's first day of work with FABRI was on August 5, 2013. FABRI also got USAID COR and CO approval for two DAI home office employees, Ms. Barbara Seligman and Mr. Keith Forbes, to work for five days each on the project as proposal reviewers for the PR&D Grants program. Ms. Seligman serves as the Water Sector Health Expert and Mr. Forbes serves as the Water Sector Energy Expert. During this period, the FABRI Project Coordinator, Ms. Julie Carp, left the project to pursue other professional interests. The FABRI team recruited and interviewed several candidates for Ms. Carp's replacement and ultimately got USAID COR and CO approval for the new FABRI Senior Project Coordinator, Ms. Megan Delph. Her first day on the project will be on October 7, 2013. FABRI also issued a subcontract to the University of Nebraska-Lincoln for [REDACTED] to cover the first year of a research project entitled "The Global Yield Gap and Water Productivity Atlas for Jordan, Morocco, and Tunisia." FABRI plans to request USAID approval in the coming months to extend the project and increase the ceiling for the second year. FABRI also issued a Purchase Order for [REDACTED] to the Environmental Law Institute (ELI) to support the development of a research proposal on the subject of groundwater policy in the PR&D Grants program.

In the coming period, FABRI plans to issue a subcontract to the California Institute of Technology (Caltech) for [REDACTED] for a research project entitled "Radar Probing of Groundwater in Hyper-Arid Environments: Understanding Aquifer Dynamics in High Discharge Areas." FABRI requested CO consent to issue the subcontract on July 30, 2013 and the FABRI team is still waiting to receive the correct approval documents. FABRI is also finalizing the negotiation of the contract details with Caltech. FABRI is also currently negotiating new subcontracts with the Middle East Desalination Research Center (MEDRC) and the Arab Countries Water Utilities Association (ACWUA) and FABRI hopes to issue these subcontracts during the next period. FABRI is also negotiating a subcontract with Purdue University who will serve as a U.S. university partner for one of the research grants that will be issued under the PR&D Grants program. FABRI plans to issue a Fixed Price Purchase Order to Malcolm Farley Associates to cover Mr. Farley's time as a Non-Revenue Water Expert on FABRI's Africa Program to assist with planning for the audit synthesis report, Performance Improvement Plan outlines, and the design of sessions for the Task Force Meeting planned for November 2013. FABRI plans to issue a subcontract to a DC-based law firm, Harmon, Curran, Spielberg, and Eisenberg, LLP to handle the legal registration of the MENA NWC but this subcontract will not be paid with project funds. FABRI also plans to issue a subcontract to a DC-based web design firm to design a website for the MENA NWC. FABRI also hopes to begin issuing grants under the MENA NWC PR&D Grants program during the next period.

## 4. ISSUES AND PROPOSED REMEDIES

**Issue 1:** The approved Performance Monitoring Plan (PMP) for FABRI is out of date and does not reflect the Agency's current F indicators.

**Remedy:** FABRI will work with the COR and the AFR Activity Manager to revise the indicators and ask for approval for amending the PMP.

**Issue 2:** Prospective grantees have been slow to submit proposals for the three small grants programs.

**Remedy:** FABRI will aggressively pursue ways to publicize the programs. It will also hold proposal writing workshops with Centers for the MENA NWC grants and at December and February AfWA conferences for the AfYWP grants program.

**Issue 3:** Some PR&D research projects include construction and chemical purchase.

**Remedy:** FABRI will work closely with the COR to conduct environmental impact assessments.

## 5. STANDARDS AND DELIVERABLES SUBMITTED

Requirement	Standard or Deliverable	Date of Submission to USAID
1.1	<ul style="list-style-type: none"> <li>Acceptance letter from Sultan Qaboos University and other Centers</li> </ul>	During first period
1.1	<ul style="list-style-type: none"> <li>Workshop to launch implementation of MENA NWC</li> </ul>	12/5-8/11
1.4	<ul style="list-style-type: none"> <li>List of candidates for Founders Committee prepared</li> </ul>	2/21/12
1.4	<ul style="list-style-type: none"> <li>CVs compiled for each candidate and shared with nominating committee</li> </ul>	2/21/12
2.1	<ul style="list-style-type: none"> <li>Plan for strengthening legal and regulatory framework for IWRM in target countries</li> </ul>	3/14/12
2.2	<ul style="list-style-type: none"> <li>Plan for evaluating and testing methodologies to promote efficient use of water resources</li> </ul>	3/14/12
3.1	<ul style="list-style-type: none"> <li>Draft plan for strengthening capacity and performance of water and sanitation providers in AFR and MENA target countries</li> </ul>	8/15/12
3.2	<ul style="list-style-type: none"> <li>Draft plan for improving operating environment for water and sanitation providers in AFR and MENA target countries</li> </ul>	In process
3.3	<ul style="list-style-type: none"> <li>Draft plan for improving financial sustainability of water and sanitation sector in AFR and MENA target countries submitted within nine (9) months after award</li> </ul>	In process
4.1	<ul style="list-style-type: none"> <li>Plan for conducting the identification and analysis provided within thirty 30 days after the award</li> </ul>	10/14/11
5.1	<ul style="list-style-type: none"> <li>Plan for conducting the analysis provided within 30 days after award</li> </ul>	10/19/11
5.1	<ul style="list-style-type: none"> <li>Assessment of transboundary water cooperation programs</li> </ul>	Delayed due to political turmoil
5.4	<ul style="list-style-type: none"> <li>Pilot project design for transboundary water activity</li> </ul>	Delayed due to political turmoil
Section F.2(b) Deliverables	<ul style="list-style-type: none"> <li>90 day work plan completed within 30 days of Task Order award</li> </ul>	10/14/11
	<ul style="list-style-type: none"> <li>First annual work plan completed and delivered within 60 days of task order award</li> </ul>	11/11/11
	<ul style="list-style-type: none"> <li>Performance Monitoring Plan</li> </ul>	3/15/12
	<ul style="list-style-type: none"> <li>FABRI Year One Annual Progress Report</li> </ul>	11/1/12
	<ul style="list-style-type: none"> <li>FABRI Year Two Work Plan</li> </ul>	11/1/12
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. One</li> </ul>	1/18/12
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Two</li> </ul>	4/10/12
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Three</li> </ul>	7/15/12
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Four</li> </ul>	10/19/12
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Five</li> </ul>	1/10/13
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Six</li> </ul>	4/8/13
	<ul style="list-style-type: none"> <li>Quarterly Progress Report No. Seven</li> </ul>	7/10/13

**ANNEX 1**  
**PROJECT DELIVERABLES SUBMITTED TO THE DEVELOPMENT**  
**EXPERIENCE CLEARINGHOUSE (DEC)**

<b>Deliverable</b>	<b>Date Submitted</b>
Quarterly Progress Report No. One	12/11/12
Quarterly Progress Report No. Two	12/11/12
Quarterly Progress Report No. Three	12/11/12
Quarterly Progress Report No. Four	12/11/12
Quarterly Progress Report No. Five	3/12/13
Final Event Report - Nairobi Non-Revenue Water Conference	12/11/12
Final Event Report – FABRI/PEER Proposal Writing Workshop	12/11/12

## ANNEX 2 PERFORMANCE INDICATORS

Intermediate Result (IR)	Sub IR	Indicator	ME or AFR	Standard Indicator Number	2013 Target	Final Target	Actual (Cumulative) as of September 14, 2013
1. Regional Science and Technology Capacity in Water Management Increased through Establishment of MENA NWC	1.1 MENA NWC Governance Structure Established	1.1.1 MENA NWC legally registered	ME	NA	yes	yes	In process
		1.1.2 Number of essential governance structures established and operative (Founders Committee, Steering Committee, Board of Directors, Secretariat)	ME	NA	3	4	2: Founders Committee, Interim Management Unit
	1.2 MENA NWC Financially Sustainable	1.2.1 Business plan developed and approved	ME	NA	yes	yes	Business Plan developed and submitted to Founders Committee
		1.2.2 Financial support pledged from donors, private sector, and other sources	ME	NA	\$10M	\$25M	\$72,083 from Government of Oman
		1.2.3 Number of types of pledged donors (bilateral, multilateral, foundations, corporate, government, individual) demonstrates diversity of funding sources	ME	NA	3	4	2: Government, Foundation
	1.3 MENA NWC Technical Program Addressing Critical Regional Water Issues	1.3.1 Number of technologies or management practices under research as a result of USG assistance	ME	4.5.2-39a	10	10	12: part of provisionally awarded or likely successful proposals
		1.3.2 Number of technologies or management practices under field testing as a result of USG assistance	ME	4.5.2-39b	8	10	0

Intermediate Result (IR)	Sub IR	Indicator	ME or AFR	Standard Indicator Number	2013 Target	Final Target	Actual (Cumulative) as of September 14, 2013
		1.3.3 Number of technologies or management practices made available for transfer as a result of USG assistance	ME	4.5.2-39c	0	4	0
		1.3.4 Number of government agencies, private sector firms, and/or civil society organizations partnering with Network Centers on research and development projects	ME	NA	20	20	25 engaged in submitted proposals
		1.3.5 Number of young and women researchers engaged in MENA NWC supported research activities	ME	NA	30	40	30 on proposed research teams
		1.3.6 Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations that applied new technologies or management practices as a result of USG assistance	ME	4.5.2-42	0	12	0
		1.3.7 Number of visits to the MENA NWC website	ME	NA	10,000	25,000	USAID approved website procurement
		1.3.8 Number of fans on the MENA NWC Facebook Page	ME	NA	1,000	5,000	0

Intermediate Result (IR)	Sub IR	Indicator	ME or AFR	Standard Indicator Number	2013 Target	Final Target	Actual (Cumulative) as of September 14, 2013
	1.4 MENA NWC Strengthened through Private Sector Participation	1.4.1 Number of private sector partners participating in MENA NWC	ME	NA	12	15	3
2. Integrated Water Resource Management Programming Strengthened	2.1 IWRM Legal and Regulatory Frameworks Strengthened	2.1.1 Number of government agencies, utilities, and service providers involved in IWRM research activities	ME	NA	5	8	3
	2.2 IWRM Methodologies Implemented	2.2.1 Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied new technologies or management practices as a result of USG assistance	ME	4.5.2-42	2	6	0
3. Access to Clean Water and Sanitation Expanded in Target Countries	3.1 Water and Sanitation Service Provider Performance Strengthened	3.1.1 Number of water operator partnerships facilitated	AFR	NA	6	9	In process through NRW program
		3.1.2 Number of private sector sanitation service providers that have improved management practices as a result of USG assistance	AFR	4.6.2-9	6	9	NRW program underway with audit as Stage I
		3.1.3 Number of service providers implementing water loss programs with USG assistance	AFR	3.1.8.1-2	25	50	26

Intermediate Result (IR)	Sub IR	Indicator	ME or AFR	Standard Indicator Number	2013 Target	Final Target	Actual (Cumulative) as of September 14, 2013
		3.1.4 Number of private sector sanitation interventions started with USG assistance	AFR	NA	8	15	0
		3.1.5 Number of visits to African water associations' newly designed websites	AFR	NA	10,000	25,000	Redesign in process
		3.1.6 Number of fans of the Facebook pages of the African water associations	AFR	NA	1,000	5,000	0
	3.2 Water and Sanitation Service Operating Environment Improved	3.2.1 Number of governments developing national sanitation strategies	AFR	4.6.1-17	15	15	0
	3.3 Water and Sanitation Sector Financial Sustainability Improved	3.3.1 Number of governments developing plans to obtain outside financing for utility investments	AFR	NA	6	9	Stage 3 of NRW program
		3.3.2 Number of innovative solutions or mechanisms for mobilizing financing for non-revenue water and sanitation programs	AFR	NA	3	5	0
4. Research and Development Capacities in Irrigation, Groundwater Management, and Drought Risk Assessment and Mitigation Strengthened	4.1 Best Practices for Efficient, Productive Use of Water in Agriculture Identified.	4.1.1 Number of technologies or management practices under research as a result of USG assistance	ME	4.5.2-39a	10	10	12: part of provisionally awarded or likely successful proposals
		4.1.2 Number of technologies or management practices under field testing as a result of USG assistance	ME	4.5.2-39b	8	10	0

Intermediate Result (IR)	Sub IR	Indicator	ME or AFR	Standard Indicator Number	2013 Target	Final Target	Actual (Cumulative) as of September 14, 2013
		4.1.3 Number of technologies or management practices made available for transfer as a result of USG assistance	ME	4.5.2-39c	0	4	0
5. Transboundary Water Cooperation Strengthened in Key River Basins	5.1 Analysis of Transboundary Cooperation Identifies Model Programs and Interventions	5.1.1 Number of transboundary water resources sustainability assessments undertaken	ME	4.5.2-41e	2	2	1 by OSU
	5.2 Transboundary Pilot Project Launched	5.2.1 Number of exchanges (government-to-government, non-government-to-non-government; non-government-to-government)	ME	NA	2	4	0
6. Technical and Outreach Capacity of USAID Staff in WASH Programming Enhanced	6.1 WASH Technical and Outreach Capacity of USAID Staff Increased	6.1.1 Number of WASH training events for USAID staff	ME/AFR	NA	2	3	0
		6.1.2 Number of USAID staff trained in WASH	ME/AFR	NA	60	90	0
		6.1.3 Number of WASH guidance materials updated or developed	ME/AFR	NA	4	6	0
	6.2 USAID WASH Visibility and Outreach Increased	6.2.1 Number of conferences and outreach events facilitated or supported	ME/AFR	NA	4	6	2: AfWW 2012 WWW2013

