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IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

QUARTERLY PROGRESS REPORT
(OCTOBER – DECEMBER 2008)

January 2009

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(October – December 2008)

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IDARA Quarterly Progress Report- 6th quarterly report

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ABBREVIATIONS AND ACRONYMS

AWC:	Aqaba Water Company
BMP:	Best Management Practice
BSI:	British Standards Institute
CBO:	Community Based Organization
CEN:	European Committee for Standardization
CEO:	Chief Executive Officer
CIS:	Customer Information System
COM:	Cabinet of Ministers
CSBE:	Center for the Study of the Built Environment
CTO:	Cognizant Technical Officer
DIN:	German Institute for Standardization
DZ:	Distribution Zone
ETVET:	Employment and Technical and Vocational Education and Training
GAM:	Greater Amman Municipality
GBMS:	Groundwater Basin Monitoring System
GDA:	Global Development Alliance
GIS:	Geographic Information System
GOJ:	Government of Jordan
HUDD:	Housing and Urban Development Corporation
IAPMO:	The International Association of Plumbing and Mechanical Officials
IC:	Institutional and Commercial
ICT:	Information, Communication and Technology
ISO:	International Organization for Standardization
IWA:	International water Association
JISM:	Jordan Institute for Standards and Metrology
JUST:	Jordan University for Science and Technology
JVA:	Jordan Valley Authority
LTTA:	Long-Term Technical Assistance
MOA:	Ministry of Agriculture
MOL:	Ministry of Labor
MOMA:	Ministry of Municipal Affairs
MOU:	Memorandum of Understanding
MPWH:	Ministry of Public Works and Housing
MWI:	Ministry of Water and Irrigation
NGO:	Non-governmental Organization
NGWA:	Northern Governorate Water Authority
PO:	Purchase Order
PWCS:	Productive Women Cooperative Society (CBO Marka)
RSS:	Royal Scientific Society
SABEQ:	Sustainable Achievement of Business Expansion and Quality
SDB:	Small Disadvantaged Business
SOW:	Scope of Work
STTA:	Short-Term Technical Assistance
TA:	Technical Assistance
TBT:	Technical Barriers to Trade
TF:	Task Force
TOR:	Terms of Reference

TVET: Technical and Vocational Training and Education
UAE: United Arab Emirates
USAID: United States Agency for International Development
VTC: Vocational Training Corporation
WAJ: Water Authority of Jordan
WDM: Water Demand Management
WDMU: Water Demand Management Unit
WEPIA: Water Efficiency and Public Information for Action
WIS: Water Information System
WSD: Water Saving Device
WTO: World Trade Organization
WUDMIP: National Water Use and Demand Management Information Program
WUIP: Water Use Information Program

1. SUMMARY AND ASSESSMENT OF PROJECT ACTIVITIES AND ACCOMPLISHMENTS

Subtask 1.2.1: Assess the organizational structure of the WDMU within the institution as a whole and propose operating procedures for linkages between the unit and other divisions in the Ministry and its two authorities

IDARA finalized the revision of the Combined Report on the WDMU was submitted to USAID and WDMU, and assisted WDMU in reorganizing WDMU structure to take into consideration the background and qualification of the two new staff members. Job descriptions and a five year training plan were developed for each of the WDMU staff. A matrix aligning IDARA tasks with WDMU staff job titles was also prepared. Each of the WDMU staff has an IDARA team leader counterpart to enhance coordination of project activities and building capacity of the unit in all the project facets.

IDARA conducted successfully a one day training workshop, on "Change Management" for Directors and supervisors at Aqaba Water Company in November.

The scope of work for Mary Ann Dickinson, water efficiency advisor, was developed and approved by USAID to train the Water Demand Management Unit in the operationalization of the strategic plan, strengthen synergies with the utilities and build linkages with external institutions and the public based on the experience of the Alliance for Water Efficiency in North America. This activity will be conducted in January 2009.

Subtask 1.2.3: Identify external linkages between WDMU and other organizations, propose mechanisms to build these linkages, and develop a workplan to be jointly implemented

IDARA is planning a presentation to be given by Mary Ann Dickinson for senior decision makers, to be held in January 2009. The presentation will provide an overview on water demand management with illustrative international examples and focus on lessons learned from the Alliance for Water Efficiency in North America, and offer recommendations to benefit WDM in Jordan. Mary Ann Dickinson will address senior officials in Amman from the Ministry of Water and Irrigation, utilities, and other related Ministries; and in Aqaba from the Aqaba Water Company, Aqaba Development Company, and ASEZA.

IDARA drafted a scope of work for a water policy expert was drafted to support the WDMU in working with Ministries to develop action plans to achieve policy objectives addressed under the urban component of the water demand management policy for Jordan.

Subtask 1.2.4: Ensure that demand and allocations data developed by units within the Ministry are linked to the National Water Master Plan and appropriate economic analysis is performed

During this quarter the contract with the ICT Consultant was signed to carry out an assessment for the GIS-based comprehensive WDM system (task 1.2.5) including the possible methods for regular demand data exchange between utilities, and the WDMU, WIS, and NWMP. Outputs of this study include recommendations on the optimal method for regular demand data exchange between utilities, the WDMU, WIS, and NWMP, and proposal for the collection and management of all WDM related data, and a roadmap for implementing the required changes at the utilities.

Subtask 1.2.5: Design and build appropriate databases under WDMU as integral components of the Water Information System (WIS) deployed at the MWI

As indicated under task 1.2.4, a contract with the ICT Consultant was signed to carry out an assessment for the GIS-based comprehensive WDM system.

Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program

During this quarter an assessment was done for the data collection methods, data entry and warehousing systems for urban water uses, including water purchased by tankers, currently deployed within the billing systems at the water utilities including WAJ administrations. The study was completed and report submitted in December 1st, 2008 to WDMU, utilities, and relevant stakeholders.

Results of the assessment findings and recommendations were presented during this month to both NGWA and Miyahuna. Presentations to AWC, WAJ, NWMP, and WIS are scheduled for January 2009.

Task 1.4: Perform end-use analyses

This quarter witnessed intense activities related to this task. IDARA invited thirteen (13) leading firms in the field of water and/or energy to an orientation meeting to announce the launch of the end use analysis program and offer both the public and private sector the opportunity to participate in the hands-on training organized by IDARA as part of the end use analysis program. Then, audits field work combined with formal and on the job training were conducted for both the residential, institutional, and commercial sectors.

I. Residential End Use Analysis

The Residential End Use Analysis Expert, Bill DeOreo, started his activity by a formal training on the residential metering methodology, data collection, and interpretation using the Trace Wizard software. This training was offered in Amman to nineteen (19) participants from WDMU, WAJ, Miyahuna, RSS NERC, University of Jordan, and nine (9) private companies working in the water and/or energy sectors. Another training session was held in Aqaba for sixteen (16) trainees from AWC, and a classroom session was offered to engineering students at JUST.

Bill also provided hands on training during the installation of water meters and data loggers. A total of seventeen (17) meters and data loggers were installed on the rooftops of seventeen (17) sites. The sample included five Villas, five Individual houses and seven apartments. The meters and data loggers were kept for 14 days at each site, then data were downloaded and for analysis. In addition to the water use data, IDARA collected information for each site about the type of residence, number of residents, annual family income, and the numbers and types of fixtures and appliances present. The final draft of the Residential End Use Report is under review.

II. Institutional and Commercial End Use Analysis

Under the supervision of an independent consultant; Bill Hoffman, ten hospitals were audited covering all governmental hospitals and the five largest private hospitals in terms of water consumption in Amman service area, in addition to one governmental hospital in Irbid, whilst thirty five (35) institutions from the Institutional and Commercial sector (IC) were audited as follows under the supervision of three international experts from Water Management Inc. (WMI).

- Governmental Hospitals (4 Amman, and 1 Irbid))

- Private Hospitals (5)
- 4/5 stars hotels (6)
- 2/3 stars hotels (6)
- Apartment Hotels (5)
- Offices (6)
- Mosques (6)
- Private Universities (3)
- Gov. schools (2)
- Private schools (1)

Hands on training was conducted for staff representing WDMU, WAJ, Miyahuna, AWC NGWA, RSS, NERC, JUST, in addition to ten private companies working in the water and/or energy sectors. The training was led by the water auditing experts, and involved:

- 30 trainees in the hospital audits
- 24 trainees in the Institutional and Commercial audits

Moreover, four (4) audits were independently carried out by eleven (11) trainees from WDMU, WAJ, and the private companies. These audits were carried out under the supervision of the WMI experts.

One workshop was held with participation of 21 trainees to present the results of the hospital audits. IDARA also took advantage of the presence of the residential metering/audits and IC audits experts to organize a successful one day WDM training on audits/end use analysis and water demand forecasting. This training was attended by thirty three (33) trainees from all public and private institutions that were involved in end use analysis program.

Subtask 1.5.2: Assist the utilities in establishing WDM functions

IDARA continued intensifying its technical support to Miyahuna, AWC, and NGWA through targeted activities in collaboration of WDMU including improvement of water use information, training in residential and IC audits, training of customer services on the introduction of water saving devices, development of efficient water use instructions and discussions of ways for their implementation.

The Director of WDMU and IDARA COP have discussed with the Director Generals of Miyahuna and AWC the development of conservation plans to establish WDM functions at these utilities. The COP has identified a US consultant during his participation at the WaterSmart conference in Nevada to support the development of water conservation action plans for the utilities, during March-June 2009, starting with AWC and Miyahuna.

Subtask 1.5.3: Assist the private sector in each utility area to establish WDM functions and services

IDARA is undertaking discussions with IP3/Segura on implementation of a District Zone Pilot Program on post meter water audits and leakage detection, whose bid was issued by Miyahuna, and was budgeted by IP3/Segura to be \$10,000.

IDARA trained nine (9) private companies on commercial and institutional audits and residential water use metering (Task 1.4). IDARA has also facilitated a meeting between WMI, IDARA US subcontractor, and a private Jordanian company to discuss future

collaboration on providing performance contract services on water saving to large water consumers in Jordan.

Subtask 1.6.1: Develop BMP guides on conservation of nonagricultural water

A draft of the Hospital BMP Guideline was drafted, presented and discussed with the BMP Task Force on November 10, 2008, then revised according to their comments. The final draft of the Hospital BMP Guide will be submitted in March 2009.

Subtask 1.6.2 & 2.2.2: High Rise BMP, Code and GAM Recommendations

Following lessons learned and recommendations of the first workshop held on July 29, 2008, IDARA High Rise consultant team drafted water efficiency recommendations for GAM Area C, recommendations for High Rise water efficiency code, and High Rise High Density (HRHD) buildings BMP Guide, and presented them to stakeholders at the second workshop that was organized on October 14, 2008. Approximately 60 participants attended the workshop including Secretary General of MWI, the Director of USAID mission, the Director General of Miyahuna, and the Head of the Technical Division at GAM. Based on this workshop discussions and comments of participants, the consultant team prepared the final draft of the following documents:

Water Efficiency Recommendations for High Rise and High Density Development Including GAM Area C: Copies of the final draft were submitted to WDMU, Miyahuna, and GAM on December 16, 2008 for comments. These comments will be received and discussed with MWI, Miyahuna and GAM in January 2009. A final copy of the recommendations will be submitted to H.E the Minister of MWI to pass them to the Cabinet of Ministers to be issued as instructions, as per his advice during the meeting with WDMU, USAID, and IDARA on November 16, 2008.

Recommended Code Provisions to Achieve Efficient Water Use for Buildings in High-Rise and High-Density Developments in Jordan: Final draft was submitted on December 22, 2008 to MWU who sent it to Ministry of Public Works and Housing and RSS for comments. Comments will be received and discussed with these institutions during the early part of next quarter.

Best Management Practices Guide for Efficient Water Use in High-Rise and High-Density Developments in Jordan: Final Draft was submitted on December 22, 2008.to WDMU for comments. Comments will be received and discussed during the early part of next quarter.

Task 1.7: Provide training and capacity building to promote WDM

This quarter witnessed a series of learning by doing, formal training, and planning activities to build capacity of the MWI/WDMU, utilities, WAJ, relevant government entities, and private companies to promote WDM. These activities include:

- A five year training plan was developed for each of the WDMU staff according to job descriptions and skills needed to perform the required tasks.
- A computer training center was selected to deliver training for the WDMU staff in MS Office, and staff started the first course on MS Word.

- Enrollment of WDMU in the placement test for the English Language training at the American Language Center, and one staff started his first course.
- Planning for a half day training for decisions makers in Amman and Aqaba to provide an overview on water demand management with illustrative international examples and focus on lessons learned from the Alliance for Water Efficiency in North America, and offer recommendations to benefit WDM in Jordan. This training/presentation will be held in January 2009.
- Formal and learning by doing training on the residential metering methodology, installation of meters and data loggers, and data collection and interpretation using the Trace Wizard software was offered to 19 trainees in Amman, 16 trainees in AWC, and an engineering class at JUST.
- Learning by doing training was offered to 30 trainees on Hospital audits, and 24 trainees on Institutional and Commercial audits.
- Formal one day training was delivered to 33 trainees on audits/end use analysis and water demand forecasting.
- A one day training workshop on “Change Management” was conducted for Directors and supervisors at Aqaba Water Company.
- A meeting was held with a team from JUST University to discuss cooperation on the delivery of a water demand management training course to staff of the Ministry of Water and Irrigation, the utilities, WAJ, relevant public institutions, and private companies.

Task 1.8: Introduce and promote drought response principles in the water community

Scope of work for Maryann Dickinson was finalized during this quarter. SOW includes development and identification of drought response principles and guidelines.

Ms. Halla Razaq, Director of Colorado River Programs in San Diego, California, gave a presentation in early November 2008 to Senior Decision Makers and Water Planners from MWI/WDMU, WAJ, JVA, and Miyahuna about Southern California experience on drought response and water transfer from the agriculture sector to the urban sector.

Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency

A task force was formed from representatives from the King Abdullah II Center for Excellence, WAJ, WDMU, JUST University, and the private sector to support IDARA on the integration of water efficiency into the KACE award. The task force agreed on the sub-criteria under the KACE award for both the private and public sectors to integrate water efficiency questions into these sub-criteria, and drafted questions addressing water efficiency under the selected sub-criteria.

Subtask 2.2.1: Develop a National Standardized Plumbing Code

IDARA signed a grant agreement with the RSS in October 2008 to draft a new Plumbing Code for Jordan, by which IDARA will provide technical support and co-share the cost of developing the code with JNBC. Implementation is underway. RSS has submitted a table of contents and an action plan to MPWH. MPWH has established a code committee to review the drafted code in December 2008. The draft code is expected to be completed by October 2009.

Subtask 2.2.2: High Rise Code Recommendations

See, Subtask 1.6.2 above.

Task 2.3: Implement a Plumbing Materials Certification Program

DAI is awaiting USAID approval of the nationality waiver for Veritec. IDARA provided funding for the RSS to construct a toilet testing facility in anticipation of the visit of the Veritec consultant for this task.

The updated flow rate regulators technical standard was sent to relevant stakeholders for comments and voting. The last date for voting was on December 15. In early 2009, it is anticipated that the JISM technical plumbing products technical committee will convene to review the comments and send a final version for approval by JISM board.

During the month of November, the plumbing products technical committee finalized the draft version of the toilets standards. The draft standard will be sent by JISM to stakeholders for comments and voting in early 2009.

Task 2.4: Establish a “Master Plumbers” Vocational Training Program at the VTC

Upgrade of VTC’s Plumbing Lab

Under the supervision of IDARA, the VTC’s tender for the renovation of the plumbing lab was awarded in October 2008, and tenders for the purchase of furniture and equipment were released in November 2008. But due to incompliant offers, the VTC switched the process to request for proposals (RFP) in late December 2008.

The upgrade of the plumbing lab is expected to be completed by March 2009.

Master Plumber Program

IDARA conducted several meetings with the Ministry of Labor (MOL) and the E-TVET Council to develop a certified “master plumbers” program. The E-TVET Council agreed to consider “master plumbers” program as a pilot program that the council and MOL can use to establish an advanced certification for all trades. Moreover, a committee has been established by the ETVET Council in October 2008 to draft an agreement/MOU between the Council and IDARA and to develop the certification framework for “master plumbers” program. The development of a certified program is expected to be completed in the fourth quarter of 2009.

IDARA made significant effort in adjusting the timeline of this task and bringing it back to track.

Task 2.5: Prepare a work plan to implement a labeling program

Following USAID review of the workplan report that was submitted in August 2008, it was recommended to take the opinion of customers on plumbing products and appliance labeling. To this effect, a SOW was prepared, and approval was received from USAID, while no comments have been received yet from MWI. A purchase order is being prepared.

Task 2.7: Develop mechanisms to finance the implementation of WDM projects

In an effort to pave the way for a long-term public-private partnership between the private sector and water utilities, IDARA conducted a water audit for potential high-water-using partners such as PepsiCo and Orange. Findings of the audits along with recommendation for water saving will be submitted to these institutions.

Further discussions and follow up have been carried out with potential partners and the Housing and Urban Development Corporation (HUDC) to incorporate water saving measures in their projects. A meeting between the Minister of Public Works and Housing and the contractors will be arranged in the coming quarter to promote water saving measures.

Grant Pool

IDARA has finalized a proposed list of grants that are linked to IDARA's grants objectives. Priority will be given to grants that have the highest impact in saving water and instituting WDM measures and functions. Part of the grants will be used to cost-share water saving initiatives with the private sector under GDA and/or Public Private Partnership.

Subtask 3.1.2: Train personnel from at least 70 of the 99 municipalities on water-wise landscape principles

Two training sessions for municipalities have been successfully completed this quarter. The first was held in Jerash (October 26 – 29) for five municipalities within the governorates of Jerash and Ajlun, and the second held in Mafraq (November 23 – 26) for twelve municipalities in the Mafraq governorate.

Contact with municipalities to nominate technical staff to participate in upcoming water wise landscape training is being out in coordination with the Ministry of Municipal Affairs to ensure timely responses and better coordination with the municipalities. The registration process is on-going and the next session is scheduled to take place at the start of February in Aqaba. Planning the logistics for the training course and field trip is ongoing.

Municipalities have been identified to commence IDARA's technical assistance of six water wise parks. Discussions are ongoing with MOMA regarding the municipalities requiring technical assistance. Also, discussions are ongoing with the Aqaba Special Economic Zone (ASEZA) as well. ASEZA has commissioned a local design office to design 22 parks within the ASEZ, and has requested technical assistance to ensure that the designs submitted are consistent with water-wise landscaping principles.

Subtask 3.1.3: Introduce water-wise landscaping principles in the curriculum or agricultural faculties in at least two universities

A preliminary survey of landscape courses at universities has been conducted. It included both the faculties of architecture and agriculture at five Jordanian universities. Contacts are being established with universities to form a committee of professors.

Subtask 3.1.4: Expand work with nurseries

Site visits, assessment, and selection have been carried out of potential CBO nurseries presented by JOHUD. An Assessment report for the potential in-house drought-tolerant tree nursery with GAM is being carried out by the nursery consultant.

A business plan for the Productive Women's Cooperative Society Nursery in Marka is being conducted in coordination with the nursery consultant.

Task 3.2: Host a competition for best design of low-income water efficient houses in the highland and the Jordan Valley areas

Site visit of the Housing and Urban Development Corporation (HUDC)'s low-income housing projects. Follow up with HUDC is being conducted to define a site for the competition and obtain information on design prototypes given to citizens to pursue improving the adopted prototypes for water and energy efficiency.

IDARA is conducting research on low-income housing and energy efficiency to formulate the competition brief. IDARA is also seeking funding for the competition prizes and expenses.

IDARA is also exploring the possibility of arranging with architectural departments at Jordanian universities to present the competition as a design project for third year architectural design studios. This would ensure the participation of students as well as professionals in the competition.

Task 3.3: Provide plumbing services to poor rural areas.

As part of building the capacity of the awarded CBOs, Mercy Corps conducted two training workshops titled "Business Management Training, Part I". The first one was conducted in November 24-25 for seven participants in Zarqa and the other one was conducted in December 1-2 for six participants in Mafraq.

All the seven awarded CBOs are in the implementation phase. The grant agreement with Mercy Corps will be end in March 2009.

Task 3.4: Implement Best Management Practices in pilot areas

During this quarter, the implementation of the pilot retrofit program for around fifty residential units in Abu Nuseir housing complex commenced. The program included auditing the plumbing fittings and fixtures in each residential unit. This was done by measuring the flow rates of the bathroom and kitchen faucets using a marked container and a stop watch, and measurement for toilet flush volume was made using a T5 flush meter. Following the audits three water saving devices were installed on the bathroom and kitchen faucets in addition to a showerhead. The respective flow rates were measured once again and registered in the audit form. Almost all owners and tenants expressed their interest in the program and were cooperative with the IDARA/WDMU/Miyahuna team. Analysis of the data is underway, and results will be presented during next quarter.

Moreover, IDARA is working on a concept paper for pilot implementation strategies for some of the Best Management Practices (BMPs) developed under Activity 1.

2. SUMMARY OF PROBLEMS AND ISSUES, AND MEANS OF ADDRESSING/CORRECTING THEM

Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program

The adoption of standard classification system for urban water use types is considered vital to the successful implementation of a water use information program. This depends largely on the commitment of the utilities to adopt and implement the necessary changes in their data collection, data entry and warehousing systems and conduct the surveys needed to update their customers' information to accommodate WDM data needs. IDARA is therefore closely working with the utilities to buy them into the implementation of the necessary changes.

Task 1.4: Perform end-use analyses

1. Residential End Use Analysis

Site Issues: Sample selection entailed several difficulties in order to obtain the 15 sites for the study over 30 sites were inspected. The approach being implemented in this methodology limits the number of sites eligible for this study. This is due to plumbing complications such as in the case of PVC pipe outlets, which required cutting the pipes and adding extra piping. Also in the case of sites that use Solar Heaters, the installation required installing two meters and two data loggers at both the cold water and the hot water outlets. In both cases, sites were excluded from the study.

Subtask 1.6.1: Develop BMP guides on conservation of nonagricultural water

The production of the water & energy brochure was delayed due to the late response of utilities.

Task 1.9: Design, administer, and institutionalize a yearly event to recognize individuals, institutions, and industries that help advance water efficiency

The integration of water efficiency sub-criteria into KACE award was delayed due to the late response of KACE which is attributed to the end of the current award cycle.

Task 2.3: Implement a Plumbing Materials Certification Program

A nationality waiver was required for the proposed Canadian consulting firm, Veritec. Therefore, and since the waiver was not initially granted by USAID, a RFQ was posted by DAI on the US website for solicitation of qualified US candidates. However, no qualified firms applied until the closure of the post on November 30. DAI has in turn resubmitted the nationality waiver for Veritec.

Task 2.4: Establish a "Master Plumbers" Vocational Training Program at the VTC

Upgrade of VTC's Plumbing Lab

This activity is witnessing some delays in the upgrade of VTC's plumbing lab in Amman. The reason is that VTC was delayed in releasing the furniture and equipment tenders. These

tenders were supposed to be released in August 2008 but were issued in November 2008. Moreover, the upgrade is expected to witness additional delays as VTC tenders for equipment, furniture and educational tools were not completed (less than 3 offers were received). The next step is to switch to request for proposals process from approved suppliers. This might delay the upgrade of the plumbing lab beyond March 2009.

Task 3.2: Host a competition for best design of low-income water efficient houses in the highland and the Jordan Valley areas

The competition announcement is dependent on the securing of funding. If funding is not secured in time, the announcement will take place later than scheduled. IDARA is exploring funding opportunities to cover the competition prizes and associated expenses. Meetings will be set up with developers such as Tameer, as well as with the Municipality of Greater Amman (GAM), and SABEQ to seek sponsorship for the competition.

3. SUMMARY OF STATUS OF TASKS OR RESULTS ACCOMPLISHED BY STTA

Task 1.3: Strengthen the MWI Planning Directorate by establishing a national water use information program

The ICT consultant submitted the draft report for the assessment of the data collection methods, data entry and warehousing systems for urban water uses in Jordan (including water purchased by tankers). The assessment included:

- a) Recommendations on best methodology and procedures to integrate the required urban use data into the water utilities systems
- b) An action plan to implement recommended methodologies

Results of the draft assessment findings and recommendations were presented to both NGWA and Miyahuna.

Task 1.4: Perform End-use Analysis

1. Residential End Use Analysis

- IDARA's consultant, Bill Deroreo conducted a training in Amman on Residential End Use Analysis for about 35 participants from WDMU, WAJ, utilities and different private companies.
- In addition the consultant conducted a presentation on Residential End Use Analysis (Approach and Methodology) for undergraduate students at JUST University, and another presentation on end use analysis, during the end use and demand forecasting workshop that was held on the 20th of November in cooperation with the IC auditors.
- The consultant is preparing a draft report for the analysis of the pilot sites.

2. IC End Use Analysis:

A total 45 audits were implemented during this quarter under the supervision of international auditing/end use analysis experts; Bill Hoffman - an independent consultant for hospitals, and the WMI experts: Russ Horner, Zach Milam, and Abdul D'Odo for the IC customers. Audits included the following categories:

- Governmental Hospitals (5)
- Private Hospitals (5)
- 4/5 stars hotels (6)
- 2/3 stars hotels (6)
- Apartment Hotels (5)
- Offices (6)
- Mosques (6)
- Private Universities (3)
- Government schools (2)
- Private schools (1)

Hands-on training was conducted under the supervision of the said experts for trainees from the public and private sectors. These are

- Water Demand Management Unit (WDMU)
- Water Authority of Jordan (WAJ)
- Northern Governorates Administration (NGWA)
- Miyahuna
- Aqaba Water Company (AWC)
- Royal Scientific Society (RSS)
- National Energy Research Center (NERC)
- JUST University
- Consolidated Consultants (CC)
- Center for Engineering Consultancy (CEC)
- ME POWER
- Orient for Engineering Consultancy and Design
- ECO Consult
- Energy Management Services (EMS)
- Green Tech for Sustainable Environment
- Inter-Disciplinary Research Consultant (IDRC)
- Total H2O
- Engicon

The training was led by the water auditing experts, and involved 30 trainees in the hospital audits and 24 trainees in the Institutional and Commercial Audits.

Two wrap up workshops were organized targeting the trainees who were involved in the hospital and IC audits (21 and 33 trainees attended, respectively). In addition, four supervised audits were independently carried out by nominees from WDMU and WAJ, in addition to volunteers from the private sector (total of 11 trainees).

4. VALUE OF WORK BY SDB AND LOCAL SUB-CONTRACTED FIRMS FOR THIS QUARTER

SDB	Value	Managed By
Caliber Capacity Building Consulting Firm	\$ 1,000	Narmine S. Muna/ General Manager
Eng. Luay Froukh	\$ 6,936	Eng. Luay Froukh
Fast Networks IT / Networking	\$ 5,500	Eng. Ali Sober / General Manager
George Salameh for Electrical Works	\$ 3,100	George Salameh / General Manager
Electronic Service Center / Stationary & Office Supplies	\$ 5,500	Tahseen Al- Kharouf / General Manager
BAHA Consultant Engineering	\$5,649.71	Khaldoun Tabba'a/ Head of Supervision &Project Management Dept.
Advanced Computer Services – Easy Info	\$7,556.50	Hala Zawati/ General Manager
Oversees for sustainable Development (OSD)	\$9,998.21	Safa Al-Naser / General Manager
Local Subcontractor's	Value	Managed By
ECO Consulting Firm	\$ 226,000	Raed Al-Daoud / General Manager
CSBE Consulting Firm	\$ 92,479,81	Stephen Mcilwaine / Director

5. FINANCIAL STATUS ON THE CONTRACT AND UPDATE ON THE PROCUREMENT PLAN

Contractor: Development Alternatives, Inc.
 Contract Title: IDARA - Instituting Water Demand Management in Jordan
 Contract No: 278-C-00-06-00329-00
 DAI Project No:1000407
 Period: October-December 2008
 Through December, 2008
 Quarterly Financial Report (October-December, 2008)

Line Item		A Year 1	B Cumulative Billed March, 08	C Remaining Budget after Yr 1	D Year 2	E Cumulative Billed through December, 08	F Projections January - March 2009	G=D-E-F Remaining Budget Yr 2	H=C+G Remaining Budget Yr 1 & 2
Total Labor-Salaries and Wages		\$251,168	\$253,061	-\$1,893	\$493,091	\$251,095	\$152,000	\$89,996	\$88,103
Total Fringe Benefits		\$77,456	\$80,286	-\$2,830	\$61,162	\$41,898	\$15,000	\$4,264	\$1,435
Total Overhead		\$166,327	\$174,007	-\$7,680	\$215,320	\$150,124	\$56,000	\$9,196	\$1,516
Total Travel, Transportation and Per Diem		\$50,220	\$54,256	-\$4,036	\$141,110	\$71,588	\$45,000	\$24,522	\$20,486
Total Allowances		\$77,247	\$66,717	\$10,530	\$130,420	\$94,178	\$13,800	\$22,442	\$32,972
Total Other Direct Costs		\$262,070	\$142,832	\$119,238	\$247,877	\$268,547	\$85,000	-\$105,670	\$13,568
Total Program Activities		\$7,500	\$81,321	-\$73,821	\$256,500	\$20,355	\$45,000	\$191,145	\$117,324
Total Sub Contracts		\$694,644	\$501,714	\$192,930	\$898,939	\$592,569	\$500,000	-\$193,630	-\$700
SUBTOTAL PROGRAM COSTS		\$1,586,632	\$1,354,194	\$232,438	\$2,444,419	\$1,490,353	\$911,800	\$42,266	\$274,704
General and Administrative Costs	9.10%	\$144,384	\$123,116	\$21,268	\$222,442	\$135,738	\$85,000	\$1,704	\$22,972
TOTAL DAI PROGRAM COSTS		\$1,731,016	\$1,477,310	\$253,706	\$2,666,861	\$1,626,092	\$996,800	\$43,969	\$297,675
Fixed Fee	6.50%	\$112,516	\$91,593	\$20,923	\$173,346	\$110,128	\$70,000	-\$6,782	\$14,141
TOTAL DAI PROGRAM COSTS PLUS FIXED FEE		\$1,843,532	\$1,568,903	\$274,629	\$2,840,207	\$1,736,219	\$1,066,800	\$37,188	\$311,816
Small Grants									
Small Grants Program		\$0	\$0	\$0	\$225,000	\$79,983	\$50,000	\$95,017	\$95,017
Small Grants Fee	2.00%	\$0.00	\$0.00	\$0.00	\$4,500	\$1,599.66	\$3,000	-\$100	-\$100
Total Grants		\$0	\$0	\$0	\$229,500	\$81,583	\$53,000	\$94,917	\$94,917
Grand Total		\$1,843,532	\$1,568,903	\$274,629	\$3,069,707	\$1,817,802	\$1,119,800	\$132,105	\$406,733

Obligation

Obligation Per the Contract	\$4,300,000
Actual expended through March 31,2008	\$1,568,903
Actual expenditures through December 31,2008	\$1,817,802
Projected expenditures through March 30,2009	\$1,119,800
Total Remaining Obligation	-\$206,505
Amount of obligation spend	104.80%

Procurement

Unit		Description	Unit Cost	Total
Office Equipment	Main Office			
	1	Copier	\$ 4,011	\$ 4,011
	1	Fax Machine	\$ 376	\$ 376
	1	Safe	\$ -	\$ -
	1	Telephone System	\$ 609	\$ 609
		Telephone unit	\$ -	\$ 723
	1	Binding Machine	\$ 410	\$ 410
	2	Flip Chart Stand	\$ 100	\$ 200
	11	Cell Phone	\$ -	\$ -
	9	A/C / heat units	\$ -	\$ 4,887
	0	Small A/C units		\$ -
	0	Generator 40KW	\$ -	\$ -
	1	Water Cooler	\$ 139	\$ 139
	1	Refrigerator	\$ 410	\$ 410
	1	Microwave	\$ 99	\$ 99
		Office Equipment Subtotal		\$ 11,865
Office Furnishings				
	11	Desks	\$ -	\$ 3,037
	22	Desk Chairs	\$ -	\$ 1,144
	0	Guest Chairs	\$ -	\$ -
	2	Filing Cabinets	\$ -	\$ 226
	6	Small Filing Cabinets	\$ -	\$ 805
	7	Bookshelves	\$ -	\$ 1,236
	4	Meeting Room Lg Table	\$ -	\$ 746
	1	Meeting Room Sm Table	\$ -	\$ 191
	14	Meeting Room Chairs	\$ -	\$ 494
	1	Guest table smal	\$ -	\$ 35
		Floor PVC Tile	\$ -	\$ 2,022
		Blind curtains	\$ -	\$ 665
	1	samll round table	\$ -	\$ 170
		Office Furnishings Subtotal		\$ 10,771
Vehicle	2	Cars	\$ 21,000	\$ 42,000
Vehicle freight				\$ -
		Vehicle Subtotal		\$ 42,000
		Office Gear Total		\$ 64,635

6. WORK PLAN FOR THE FOLLOWING QUARTER

Task	Activity	Start	Finish	Comments
1.2.1	Conduct Change Management Workshop for all water utilities.	February 2009	March 2009	
1.2.1	Provide hands-on training for WDMU staff	January 2009	Cont'd	
1.2.3	Conduct meetings with ministries to start building linkages with these ministries & the WDMU	January 2009	July 2009	
1.2.4	Propose a model for data exchange and linkages between the WIS and stakeholders.	January 2009	March 2009	Considered as part of the deliverables in the needs assessment under task 1.2.5
1.2.5	Refine the data needed for the various parts of the WDM database based on the results of the end use analysis and IC audits.	January 2009	March 2009	
1.2.5	Carry out needs assessment for the GIS based WDM database.	January 2009	March 2009	
1.2.5	Develop SOW for integrating the GIS technology into the database	February 2009	March 2009	
1.3	Present findings of Deliverable 3 under this task (Assessment of water use data collection and warehousing systems) to WAJ and AWC.	January 2009	January 2009	
1.3	Follow up with the utilities on the implementation of the action plan proposed in Deliverable 3 of this task.	January 2009	December 2009	
1.4	Prepare work plan to conduct the end use analysis for representative samples	January 2009	March 2009	
1.4	Data Collection for NGWA and AWC service areas, for both end use analysis and demand forecasting.	January 2009	Cont'd	
1.5.2	Develop leak detection program	March 2009	April 2009	
1.5.2	Develop water conservation plans for AWC and Miyahuna	March 2009	June 2009	

Task	Activity	Start	Finish	Comments
1.6.1	Develop Residential BMP brochure	January 2009	January 2009	
1.6.1	Produce Public Information BMP Implementation Guide	January 2009	March 2009	
1.6.1	Produce Hospital BMP Implementation Guide	January 2009	March 2009	
1.6.1	Produce Park BMP Implementation Guide	January 2009	March 2009	
1.6.2	Conduct follow-up meetings on high-rise recommendations	January 2009	March 2009	
1.7	Conduct WDM training for WDM staff at MWI & the Utilities	January 2009	January 2009	
1.7	Continue with computer training courses	January 2009	March 2009	
1.7	Start English Language courses for new WDMU staff	January 2009	Cont'd	
1.8	Identify drought response principles and guidelines	January 2009	February 2009	
1.9	Finalize all requirements for the integration of water efficiency into KACE Award.	January 2009	March 2009	
2.1	Provide support for RWC in development of National Water Strategy	January 2009	March 2009	
2.1	Form task force and organize series of workshops to develop action plans for strategies and interventions	January 2009	March 2009	
2.2.1	Draft a new plumbing code	July 2007	Year 3	Ongoing .RSS started to draft the code in October 2008
2.2.1	Review the drafted plumbing code by the plumbing code review committee	November 2008	Year 3	Committee was established in December 2008 and will start its meetings in February 2009
2.3	Develop action plan on schedule for adoption of plumbing technical standards	January 2009	March 2009	
2.3	Prepare a report on testing protocols for water using products	February 2009	March 2009	
2.4	Upgrade VTCs plumbing lab (by the VTC contractor)	November 2007	March 2009	Ongoing with some delays (see

Task	Activity	Start	Finish	Comments
				section2)
2.4	Establish a certification framework under the E-TVET council	October 2008	October 2009	
2.5	Conduct customer survey for the labeling workplan	January 2009	April 2009	
3.1.2	Conduct training sessions and field trips	April 2008	April 2009	
3.1.2	Provide technical assistance to municipal staff in designing designated parks	October 2008	August 2009	
3.1.3	Form committee of professors and IDARA	January 2009	March 2009	
3.1.4	Prepare business plan in conjunction with the WEPIA nursery and determine type and scale of assistance	June 2008	March 2009	
3.14	Explore the potential for drought tolerant plants product line with GAM and/or CBO	September 2008	January 2009	
3.1.4	Conduct assessments of potential nurseries	September 2008	November 2008	
3.1.4	Provide technical assistances to WEPIA nurseries if need is determined	December 2008	November 2009	
3.1.4	Provide technical assistance to new nurseries	January 2009	Years 3&4	
3.2	Launch competition	October 2008	February 2009	
3.3	CBOs to start implementing their grants.	August 2008	March 2009	ongoing
3.3	Follow up on implementation	August 2008	March 2009	ongoing
3.4	Submit concept paper for pilot implementation strategy	December 2008	January 2009	
3.4	Start implementation of selected BMP's with a utility	August 2008	Year 4	Ongoing

7. WORK IN PROGRESS VERSUS THE SCHEDULE

Task	Activity	Scheduled Completion	Anticipated Completion	Comments
1.3	Assessment of existing data collection methods and warehousing systems for urban water uses including tankers water	October 2008	December 2008	Draft Report submitted for review by USAID and MWI on Dec. 1 st , 2008
1.4	Conduct end-use analyses for commercial consumer users including on-job training	December 2008	December 2008	IC and Hospitals Draft Reports will be submitted during Feb. 09
1.4	Conduct pilot end-use analyses for residential users using metering including training	December 2008	December 2008	Draft Report will be submitted during January 09
1.5.3	Hold a workshop on potential business opportunities in water efficiency products and services	October 2008	November 2008	Completed
1.6.2	Prepare high-rise BMP guide and draft GAM criteria	December 2008	January 2009	Final draft was submitted in Dec. Final version will be submitted in Jan 09
1.7	Learning by doing (Residential, Commercial & hospitals)	October 2008	November 2008	
2.2.1	Work with JNBC to establish a committee to review the new drafted code	November 2008	December 2008	completed
2.2.2	Prepare high-rise BMP guide and draft GAM criteria	December 2008	January 2009	Final draft was submitted in Dec. Final version will be submitted in Jan 09
2.3	Work with JISM to draft revised technical standards for flow rate regulators and toilets in Jordan	December 2008	December 2008	
2.4	Upgrade VTCs plumbing lab (by the VTC contractor)	November 2007	March 2009	Renovation works started in October 2008. Furniture and equipment is still in the tendering stage.
2.4	Establish the task force committee within the E-TVET	September 2008	October 2008	completed

Task	Activity	Scheduled Completion	Anticipated Completion	Comments
	Council			
3.1.2	Conduct training sessions and field trips	April 2009	February 2009	
3.1.2	Identify municipalities for developing six park designs	October 2008	October 2008	
3.1.2	Provide technical assistance to municipal staff in designing designated parks	August 2009	August 2009	
3.1.3	Review courses offered at agriculture and engineering faculties	December 2008	December 2008	
3.1.3	Form committee of professors and IDARA	March 2009	March 2009	
3.1.4	Prepare business plan in conjunction with WEPIA nursery and determine type and scale of assistance	December 2008	January 2009	
3.1.4	Explore potential for drought tolerant plant product lines with GAM and/or CBOs	January 2009	January 2009	
3.1.4	Conduct assessments of potential nurseries	November 2008	January 2009	
3.2	Launch competition	February 2009	February 2009	
3.3	CBOs to start implementing their grants	March 2009	March 2009	Implementation started in October 2008.
3.4	Implement pilot retrofit program in Abu Nusier	October 2008	November 2008	Completed