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ADVANCING THE BLUE REVOLUTION INITIATIVE

**TRAINING REPORT
FUTURE WATER LEADERS MODULE 1
AUGUST 2-8, 2008, AMMAN, JORDAN**

SEPTEMBER 2008

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DISCLAIMER

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PREFACE

The Future Water Leaders Program represents one of several activities that compose the Advancing the Blue Revolution Initiative (ABRI). This program, described more fully within, is a capacity building and mentoring program which complements ABRI's broader initiatives in transboundary water resources management, water resources planning, water supply and sanitation, and the creation of co-investment partners and alliances. The program includes four formal modules, the first of which was held in Amman in August 2008. Subsequent modules are scheduled for December 2008 and in 2009.

Peter Reiss
Chief of Party
Cairo, Egypt
September 25, 2008

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BACKGROUND

The Future Water Leaders Program (FWL) represents an important element of ABRI's broader set of activities. The fundamental details of the program described here correspond to the text in the ABRI Year 2 Work Plan.

GEOGRAPHIC FOCUS

Countries in the region covered by USAID/OMEP, broken down into the following categories:

Countries where USAID has significant activities in the water sector: Egypt, Iraq, Jordan, Lebanon, Palestine.

Countries with USAID Missions, but no significant activities in the water sector: Morocco, Yemen.

Countries with no USAID presence: Algeria, Libya, Oman, Tunisia.

Countries with high income: Bahrain, Kuwait, Qatar, Saudi Arabia, United Arab Emirates.

At the time of the Year One Work Plan, we had considered that this program would also be open to participants from Africa. Per the discussion below, the focus now is only on the Middle East.

ABRI CORE PERSONNEL

Manar Fayyad, Activity Manager. Dr. Fayyad is a professor of chemistry based at the University of Jordan in Amman.

Dan Rothberg, ABRI Deputy Chief of Party, based at DAI's offices in Bethesda, Maryland.

Samir Shawky, Training Manager. Mr. Shawky is based at EQI's office in Cairo.

OBJECTIVES

- Create a cadre of people who have a vision and are advocates for the Blue Revolution, who have the knowledge to be good resource and organizational managers, and who have the leadership ability to make good decisions.
- Enhance the skills and professional networks of individuals who are on a path toward assuming leadership positions in the water supply and sanitation sector.
- "Institutionalize" the FWL Program so that it is a regionally recognized and credible program.
- Connect the FWL Program to some other sponsor or "owner" to ensure the program's sustainability beyond the life of the ABRI task order. The sponsor could be a regional platform (e.g., the Arab Countries Water Utility Organization, ACWUA), a large private company (e.g., Coca Cola), an international organization from outside the Middle East (e.g., the Stockholm International Water Institute (SIWI), the Institute for International Education (IIE), or a well-known university from within the Middle East (e.g., King Abdallah University of Science and Technology).

DESCRIPTION/APPROACH

The Future Water Leaders Program will provide training to approximately 25 mid-career professionals from the water supply and sanitation sector. Participants will meet during five formal one-week training sessions and maintain a network of peer and mentor-led support over the period of July 2008 – January 2010. There will be five modules, the first of which will be held in Amman, Jordan in August. Subsequent

locations and precise timing may vary due to political conditions. Nonetheless, they are currently planned per the table below.

Candidates must come from the field of water supply and sanitation, but may have any type of individual expertise (e.g., engineering, finance, outreach) and may come from a variety of organizations (e.g., national-level agencies, local agencies, utilities, private sector, NGOs, universities). We have purposefully limited participation to the one sector in order to better create a network among a group of technical peers, solicit interest from outside investors who are attracted to water supply and sanitation, and to facilitate the design of individual modules for a common set of participants. If the program is successful, there can be future cadres of participants from other sectors, such as irrigated agriculture.

TABLE 1: FUTURE WATER LEADERS MODULES

Module Title	Date	Location
Expanding the Network to Reach the Poor	August 2-8, 2008	Amman, Jordan
Regulatory Reform	November/December 2008	Cairo, Egypt
Asset Management	March 2009	Tunis, Tunisia
Rural Sanitation	July 2009	Sana'a, Yemen
Participation at an International Conference	January 2010	Marakkesh, Morocco

IMPLEMENTATION OPPORTUNITIES AND CHALLENGES

The two primary challenges to the program are finding the right participants and sustainability. We have determined that the "right" candidates are not necessarily the "best" or the "perfect" candidates. In making participant selection, we are striving for diversity of gender, national background, and types of expertise and organizations represented. At the same time, we recognize that the first group may not meet all diversity criteria. However, if the first cadre of participants is successful, then there will be future groups that allow us to reach a wider group of applicants.

We do not wish for the Future Water Leaders program to be a one-time event that ends with ABRI. The inherent and lasting value of the "brand" – being a Blue Revolution Fellow who is recognized and promoted as a possible leader in his or her home country – relies on the continuation of the program. This challenge gives further importance to the topic of partnerships, below.

POTENTIAL PARTNERSHIPS

Partnerships, sponsorship, or investment could take several forms. We will investigate all of these in the coming year. A regional body such as ACWUA or the Arab Water Council may wish to adopt FWL as its own. A large private company, such as Citibank, could become the permanent or largest sponsor. An international body from outside the Middle East, such as SIWI or an established US training entity, like IIE (which manages the Fulbright program) could take ownership. A well-known university might associate with the program and offer a certificate or academic credit to participants (e.g., the King Abdullah University of Science and Technology). Finally, a private company with a vested interest in the water sector (e.g., Oracle, with its financial systems software), might sponsor parts of the program.

JUSTIFICATION

Identifying and support the next generation of leaders in the Middle East is consonant with the broader mandate of ABRI to transform the culture and governance of water and complements similar activities supported by the USAID Office of Middle Eastern Programs (i.e., the Peace Scholarships program, reaching undergraduates from the region) and the Bureau for the Middle East (i.e., the Training Future Leaders program, reaching people throughout the Asia and the Near East).

SELECTION PROCESS AND PARTICIPANTS

SELECTION PROCESS

The ABRI team released the formal program announcement and call for applications on April 1, 2008, sending hard and electronic copies to over 200 colleagues, government agencies, NGOs, universities, and donors throughout the Middle East. Applications were due by May 1. Upon the final tally, the summary of application data was as follows.

TABLE 2: APPLICANT DATA

Summary			Proposing Country *		
Total	105		Jordan	29	(10)
Male	83		Egypt	22	(1)
Female	22		Iraq	16	(2)
Organization Type *			West Bank/Gaza	15	(7)
			Yemen	8	
University	27	(8)	Morocco	5	
Utility	24	(1)	Algeria	3	(1)
National Government	22	(5)	Lebanon	3	(1)
NGO	14	(3)	Tunisia	2	
City/Municipality	8	(1)	UAE **	2	
Private Sector	8	(3)	Libya	0	
Donor	2	(1)	Oman	0	

* Female applicants in parentheses

** UAE applicants are of Egyptian and Jordanian nationality

Manar Fayyad, Dan Rothberg, Samir Shawky, and ABRI Chief of Party reviewed all applicants, and reviewed individual applications with OMEP technical liaison Eric Viala. We then interviewed all high-ranking applicants by telephone, and/or vetted applicants through our trusted counterparts and colleagues in respective host countries.

We submitted a formal list of 26 recommended applicants and 10 waitlisted candidates to CTO John Wilson, copying Eric Viala, on May 19, in order for USAID to conduct further internal vetting of candidates. Eric Viala provided concurrence to proceed with the recommended applicants on June 3.

ABRI contacted all final approved candidates immediately. One candidate, a woman from Lebanon, declined our offer of acceptance as she had determined that the political situation in her country demanded she emigrate to Canada. As such, we selected a woman [from the West Bank/Gaza] from the pre-approved waitlist of ten candidates.

PARTICIPANTS

The summary participant data and final list of participants are shown in the tables below.

TABLE 3: PARTICIPANT DATA

Summary			Proposing Country *		
Total	26		Jordan	4	(1)
Male	19		Egypt	4	
Female	7		Iraq	3	(1)
Organization Type *			West Bank/Gaza	5	(4)
			Yemen	3	
University	3	(1)	Morocco	3	
Utility	10		Algeria	1	(1)
National Government	7	(2)	Lebanon	1	
NGO	2	(1)	Tunisia	1	
City/Municipality	1	(1)	UAE **	1	
Private Sector	2	(1)	Libya	0	
Donor	1	(1)	Oman	0	

* Female applicants in parentheses

** UAE applicant is of Jordanian nationality

TABLE 4: PARTICIPANTS

No.	Country	Last Name	First Name	Age	Gender	Location	Organization	Position	Background
1	Algeria	Ghafouri	Nabila	28	Female	Annaba	University Badji Mokhtar	Economics researcher	Economics
2	Egypt	Abd El-Ghany	Mohamed Ahmed	26	Male	Cairo	Egypt Water and Wastewater Regulatory Agency	IT engineer	Civil engineering
3	Egypt	Abdel Samie	Khaled	38	Male	Cairo	Construction Authority for Potable Water and Wastewater	Project manager	Civil engineering
4	Egypt	Assal	Mohamed	43	Male	Damietta	Damietta Water Corporation (HCWW)	Chief, Technical Info. Dept.	Mechanical engineering
5	Egypt	El-Abd	Ashraf	39	Male	Cairo	Holding Company for Water and Wastewater	Director of Technical Office	Data management
6	Iraq	Hamad	Ammar Thamir	37	Male	Mosul	University of Mosul	Lecturer, researcher	Civil engineering
7	Iraq	Mahmood	Nashwan Shawkat	33	Male	Dohuk	University of Dohuk	Lecturer, researcher	Civil engineering
8	Iraq	Al-Jumali	Huda Jasim	28	Female	Baghdad	Mayorality of Baghdad	Site engineer	Engineering
9	Jordan	Al-Hanaqta	Yasser	31	Male	Aqaba	Aqaba Water Company	Wastewater manager	Engineering
10	Jordan	Al-Zoubi	Rania	33	Female	Amman	Mercy Corps	Monitoring and evaluation	Public administration
11	Jordan	Assayed	Al Moiyed	30	Male	Al Jubaiha	Royal Scientific Society	Environmental engineer	Environmental management
12	Jordan	Awad	Nizar	28	Male	Amman	Jordan Water Company / Miyahuna	Planning engineer - business planning unit	Civil engineering
13	Lebanon	Tatian	Ari Baghdassar	40	Male	Beirut	Lebanese Parliament	Committee researcher	Political science
14	Morocco	Abdelmajid	Ben Oumrhar	39	Male	Rabat	Ministry of Interior	Division Head, Water and Wastewater Directorate	Civil engineer and law
15	Morocco	Biad	Mostafa	42	Male	Rabat	Office National de L'eau Potable (ONEP)	Head of Sanitation and Planning Division	MBA

No.	Country	Last Name	First Name	Age	Gender	Location	Organization	Position	Background
16	Morocco	Khalid	Makroum	33	Male	Rabat	Compagnie D'Amenagement Agricole et de Developpement Industriel	Project manager	Civil engineer
17	Tunisia	Tlili	Iskander	32	Male	Monastir	Ministry of Infrastructure and Environment	Manager	Hydraulic engineering and basin flow modeling
18	UAE	El Ramahi	Mohammad Abdelqader	37	Male	Abu Dhabi	Abu Dhabi Water and Electricity Authority	Network Services Director	Mechanical engineering
19	WB/Gaza	Al-Amer	Ola Hussein	36	Female	Ramallah	Ministry of Public Works and Housing	Office of minister	Civil engineering
20	WB/Gaza	Al Balawi	Samar	35	Female	Gaza City	Saqqa and Khoudary Co.	Project manager	Civil engineering
21	WB/Gaza	Issa	Kamal	43	Male	Ramallah	Palestinian Water Authority	Pricing	Civil engineering
22	WB/Gaza	Khalaf	Adla	32	Female	Ramallah	Palestinian Ministry of Planning	Head of Permanent Status Issues and Negotiations Support Directorate	Civil engineering
23	WB/Gaza	Khalayleh	Rula Mohammad Ahmad	30	Female	Ramallah	UNRWA/Environmental Health Division	Environmental engineer	Civil engineering
24	Yemen	Al Maqtari	Adnan	39	Male	Sana'a	National Water Resources Authority	Hydrogeologist	Water resource management
25	Yemen	Jadel	Ali	34	Male	Sana'a	Sana'a Water and Sanitation Corporation	Engineer	Civil engineering
26	Yemen	Farhan	Mohammed Moqbel	29	Male	Al-Mukalla	Hadhramout Water Supply Corporation	Engineer	Architecture

REPORT ON MODULE 1

LOCATION

Le Meridien Hotel, Amman, Jordan

We selected this hotel based on competitive quotes, individual experience implementing successful events in the past at this venue, overall availability and condition of facilities, and security.

We selected Amman as the location for the first module because of the relative ease of entry into Jordan by the Iraqi participants, our strong institutional links in the city leading to richer opportunities for guest speakers and field trips, and the organizational advantages offered by our local subcontractor, ECO Consults.

INSTRUCTORS AND FACILITATORS

The training was led by a complementary team of experts from the environmental and social sciences, with additional support from ABRI's Cairo office, DAI/Bethesda, and DAI's Jordanian subcontractor, ECO Consult of Amman. All technical labor was approved individually by the CTO. Resumes for the six technical personnel are included in Annex A.

Manar Fayyad, PhD, a citizen and resident of Jordan, holds advanced degrees in organic chemistry and is an expert in water quality and water resources management. She has organized and led multinational training programs in collaboration with the Swedish International Development Agency and bi-national training programs between the University of Jordan and Cologne University in Germany. She is the manager of the Future Water Leaders Program and serves as the overall mentor to the participants between modules. In Amman, she was responsible for sessions that frame the problem of expanding the network to reach the poor.

Samir Shawky, a citizen and resident of Egypt, is an expert facilitator with over 35 years of experience leading training events. He is the lead Middle Eastern facilitator for all ABRI events and is based in the ABRI headquarters in Cairo. In Amman, he was responsible for managing the overall flow of the workshop; facilitated group feedback sessions, the field trip, and panel discussion; and will led all non-formal sessions.

Elizabeth Kleemeier, PhD, an American citizen, is a political scientist with broad experience assessing the social factors affecting differential access to water supply and sanitation services, particularly in sub-Saharan Africa. In Amman, she was the lead technical instructor, focusing specifically on social dimensions, community interests, and the differing abilities of the poor to pay for services.

Munjed Al-Sharif, PhD, a citizen and resident of Jordan, is civil and environmental engineer based at the Jordan University of Science and Technology, is an expert in wastewater management. In Amman, he was responsible for training elements related to the implementation and management of decentralized wastewater systems.

Dima Jamali, PhD, a citizen of Lebanon currently residing in the United Kingdom, holds an advanced degree in social policy and administration and serves as an assistant professor in the School of Business at the American University of Beirut. Her area of expertise, which she led while in Amman, is change management, the organizational theory by which agencies alter their structures to meet new demands. In the particular context of water supply and sanitation, she has consulted for utilities as they reorient themselves toward customer service and self-financing.

Dan Rothberg, an American citizen and DAI/Bethesda home office employee, is the Deputy Chief of Party of ABRI. In Amman, he led introductory and closing sessions and had overall responsibility for operation of the workshop.

PARTICIPANT ATTENDANCE

In total, 22 of 26 invited participants were able to attend. Two were unable to attend due to other commitments. Mohammed El Ramahi of the U.A.E. was completing requirements related to an advanced academic degree and Ben Oumrhar Abdelmajid of Morocco had work-related duties. Both participants informed us in advance and they fully intend to attend subsequent modules.

The three Iraqi participants all had unexpected difficulties in obtaining visas to enter Jordan. Two of the participants were ultimately able to travel, but one was not: Ammar Thamir Hamad.

Lesson: Visa application process for Iraqis must begin as early as possible, and where appropriate, enlist USAID support.

The participant from Gaza, Samar Al Balawi, was unable to obtain a visa to travel via Israel or Egypt and did not attend.

Lesson: Visa application process for Iraqis must begin as early as possible, and where appropriate, enlist USAID support.

For all four participants, every effort has been made to ensure their receipt of workshop materials and to include them in subsequent online discussion groups.

AGENDA

The agenda shown here is a final draft developed by the instructor team. Dr. Fayyad and Dr. Al-Sharif are confirming details, extending invitations, and ensuring participation of guest speakers and panelists, which will lead to a final agenda. Nonetheless, the draft here accurately reflects final topics, flow, and event locations.

Saturday, 2 August 2008

18:00 Arrival
19:00 Registration
20:00 Opening dinner (informal, Le Meridien Hotel)

Sunday, 3 August 2008

9:00 Introductions to the instructors and participants; logistics; expectations
10:00 Introduction to the Future Water Leaders Program and ABRI and the context of water supply and sanitation in the Middle East: Dan Rothberg and Ra'ed Daoud
12:00 Formal opening of the FWL Program – keynote speaker: Dr. Hazim Al-Naser, Member of Parliament, former Minister of Water and Irrigation
14:00 Topic 1: Expanding the network to reach the poor – social dimensions; Elizabeth Kleemeier
15:30 Topic 2: Change management as a construct for expanding the network; Dima Jamali

Monday, 4 August 2008

9:00 Topic 3: options and technical and institutional constraints for the use of decentralized systems in the management of water supply and wastewater; Munjed Al Sharif
11:00 Topic 4: financial mechanisms and the role of pricing, tariffs, metering, and billing in expanding the network (session led by Munther Khleifat, former Secretary General of the Ministry of Water and Irrigation, and Ra'ed Daoud)

- 14:00 Four concurrent groups addressing detailed case study related to each of the four topics
 19:00 Dinner at Madaba traditional restaurant (Haret Jdoodna)

Tuesday, 5 August 2008

- 9:00 Speaker: Dr. Munther Haddadin, former Minister of Water and Irrigation
 10:00 Field trip to Jarash (Qairawan spring area)
 16:00 Reflections on field trip, team building exercise, and opportunities for individual mentoring and interaction

Wednesday, 6 August 2008

- 9:00 Preparation of group, questions, and participant presentations to panelists
 10:30 Panel discussion: Kamal Al-Zoubi (Director, Miyahuna), Ross Hagan (representative from USAID/Jordan); and Natasha Marashlian (project manager, Cooperative Housing Foundation, Lebanon)
 13:00 Four concurrent groups addressing detailed case study related to each of the four topics
 16:00 Presentation of options for future case studies and investigation beyond Module 1
 19:00 Group dinner at Reem Albawadi restaurant

Thursday, 7 August 2008

- 9:00 Presentations of four group case studies
 13:00 Summary of case studies and overall connection to module them on expanding the network to reach the poor
 14:00 Group discussion and self-selection of future study items
 15:00 Introduction to Module 2 (regulatory reform); evaluations; and awarding of certificates

Friday, 8 August 2008

- 7:00 Departure

SUMMARY OF EVENTS

The workshop followed the agenda listed above. Each lecture or session entailed Powerpoint presentations, handouts, and/or reading materials. A list of all materials is presented here. All of these are available electronically on the ABRI website, www.bluevolutioninitiative.net.

Presented by Elizabeth Kleemeier re Social Dimensions of Expanding the Network

- Powerpoint presentation. Pro-Poor Perspectives: An Overview.
- The World Bank Participation Sourcebook. February 1996. ISBN 0-82113-3558-8.
- The EMPOWERS Approach to Water Governance: Guidelines, Methods, and Tools. Moriaty, P., et. al. Published by the Inter-Islamic Network on Water Resources Development and Management (IWNWRDAM). August 2007.
- The EMPOWERS Approach to Water Governance: Background and Key Concepts. Moriaty, P., et. al. IWNWRDAM August 2007.
- Doing Things Differently: Stories about Local Water Governance in Egypt, Jordan, and Palestine. Abu-Elseoud, M. et. al. IWNWRDAM August 2007.
- The Inside Story: Process Documentation Experiences from EMPOWERS. Schouten, T., et. al. IWNWRDAM August 2007.
- UNDP-World Bank Water and Sanitation Program. Issues Paper. Credit Connections: Meeting the Infrastructure Needs of the Informal Sector through Microfinance in Urban India.
- Water and Sanitation Program. Summary Report. Financing Small Water Supply and Sanitation Service Providers: Exploring the Microfinance Option in Sub-Saharan Africa. Mehta, M. December 2003.
- World Development Report 2004: Making Services Work for Poor People. The World Bank and Oxford University Press. 2003. *English*.

- World Development Report 2004: Making Services Work for Poor People. The World Bank and Oxford University Press. 2003. *Arabic*.
- Water Supply & Sanitation Working Notes. Note No. 9, May 2006. Characteristics of Well Performing Public Water Utilities. Baietti, Al, et. al.
- Water and Sanitation Program. Field Note. Alternative Technologies for Water and Sanitation Supply in Small Towns. April, 2005.
- Water and Sanitation Program. The Experience of Condominial Water and Sewerage Systems in Brazil: Case Studies from Brasilia, Salvador and Parauapebas. Melo, J. August 2005.
- Water and Sanitation Program and Consumers International. Moving from protest to proposal: building the capacity of consumer organisations to engage in urban water supply and sanitation sector reform in Africa. June 2004.
- Water and Sanitation Program. Better water and sanitation for the urban poor: good practice from Sub-Saharan Africa. July 2003.
- Water and Sanitation Program. East Africa Regional Conference: Accelerating Water Supply and Sanitation for the Urban Poor. 29th–30th May 2006. Nairobi, Kenya. Conference Report.
- Water and Sanitation Program. Water Supply & Sanitation Working Notes. Note No. 11, August 2006. Taking account of the poor in water sector regulation. Trémolet, S. et. al.
- The World Bank Group Private Sector and Infrastructure Network. Note No. 211. June 2000. Designing Direct Subsidies for the Poor: A Water and Sanitation Case Study.
- Water and Sanitation Program. Case Studies: Taking Water and Sanitation Services to the Urban Poor. Foster, V., et. al. January 2007.
- The World Bank. Designing Direct Subsidies for Water and Sanitation Services. Panama: A Case Study. Policy Research Working Paper 2344. Foster, V. May 2000.
- Water Supply & Sanitation Working Notes. Note No. 4, January 2005. Pro-poor subsidies for water connections in West Africa. Debomy, S. The World Bank.
- Water and Sanitation Program. The Buenos Aires Concession. The Private Sector Serving the Poor. January 2000.
- Water and Sanitation Program. New Designs for Water and Sanitation Transactions: Making Private Sector Participation Work for the Poor. Evans, B. May 2002.
- IRC International Water and Sanitation Centre. Gender and Water. Thematic Overview Paper. Khosla, P., et. al. December 2004.
- IDRC. Water Demand Management Research Series by the Regional Water Demand Initiative in the Middle East and North Africa. Water Demand Management, Poverty & Equity. Tyler, S. December 2007.
- The World Bank Global Partnership on Output-Based Aid. OBA Working Paper Series. Paper No. 8, June 2006. Regulation of water and sanitation services: getting better service to poor people. Trémolet, S., et. al.
- Building Partnerships for Development in Water and Sanitation. The Partnership Paperchase: Structuring Partnership Agreements in Water and Sanitation in Low-Income Communities. Evans, B., et. al. November 2004.

Presented by Ra'ed Daoud re Financial Considerations

- Powerpoint presentation. Jordan's Case.
- U.S. EPA. Rate Options to Address Affordability Concerns for Consideration by District of Columbia Water and Sewer Authority. Prepared by U.S. Environmental Protection Agency, Region III, Philadelphia, PA. December 2002
- U.S. EPA. Information for states on developing affordability criteria for drinking water. EPA 816-R-98-002. February 1998.
- U.S. EPA. Building Support for Increasing User Fees. EPA 430/09-89-006. July 1989.
- Conservation Pricing of Water and Wastewater, Stallworth, Holly. April 2000. Unpublished dissertation.
- U.S. EPA. Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing. September 1999. A Joint Publication of the U.S. Environmental Protection Agency and the National Association of Regulatory Utility Commissioners.

- U.S. EPA. Evaluating Municipal Wastewater User Charge Systems. What You Need to Know. EPA-832-R-93-010. September 1993.
- U.S. EPA. Setting Small Drinking Water System Rates for a Sustainable Future: One of the Simple Tools for Effective Performance (STEP) Guide Series. Office of Water (4606M) EPA 816-R-05-006. January 2006
- U.S. EPA. Case Studies of Sustainable Water and Wastewater Pricing. Office of Water (4606M) EPA 816-R-05-007. December 2005.
- Environment Canada. Guidelines for Municipal Water Pricing. McNeil, R., et. al. Social Science Series No. 25. 1992.
- Environment Canada. Economic Instruments for Water Management: The Case for Industrial Water Pricing. Tate, D., et. al. Social Science Series No. 26. 1992.
- The Political Economy of Increasing Block Tariffs in Developing Countries. John J. Boland (The Johns Hopkins University) and Dale Whittington (University of North Carolina at Chapel Hill).
- Water tariff design in developing countries: disadvantages of increasing block tariffs (IBTs) and advantages of uniform price with rebate (UPR) designs. John J. Boland (The Johns Hopkins University) and Dale Whittington (University of North Carolina at Chapel Hill).
- Pricing Municipal Services: The Economics of User Fees. Dewees, D. Canadian Tax Journal / Revue Fiscale Canadienne (2002) vol. 50, no 2.
- Pricing principles for local water authorities. Independent Pricing and Regulatory Tribunal of New South Wales, Australia. report to the premier on pricing principles for local water authorities under section 12 (1)(b) of the independent pricing and regulatory tribunal act, 1992.
- Reason Foundation. Policy Study #155. Water Utility Regulation Rates and Cost Recovery. Mann, P. March 1993.
- The Political Economy of Water Pricing Reforms. Dinar, A., New York: Oxford University press, 2000.
- United Nations Commission for Sustainable Development. International Conference on Freshwater. Bonn, Germany, 3-5 December 2001. Multi-Stakeholder Dialogue. Discussion paper contributed by the International Chamber Of Commerce (ICC) World Business Council For Sustainable Development (WBCSD).
- Queensland Government Natural Resources and Mines. The Value of Water Scoping Paper. January 2003.
- Independent Competition and Regulatory Commission, Australia. Water Abstraction Charge. October 2003.
- GeoEconomics Associates Incorporated, 2002. Water utility pricing theory and practices.
- Water and Sanitation Program. Water Tariffs and Subsidies in South Asia. December 2002.

Presented by Munjed Al Sharif re Decentralized Wastewater Systems

- Powerpoint presentation. Decentralized Wastewater Management.
- Powerpoint presentation. Decentralized systems at the Jordan University of Science and Technology.

Presented by Dima Jamali re Change Management

- Powerpoint presentation. Change Management.
- Water and Sanitation Program. Better water and sanitation for the urban poor: Good Practice from sub-Saharan Africa. Water Utility Partnership for Capacity Building (WUP) Africa. Karluki, M., et. al. July 2003.
- Financing Shelter, Water and Sanitation. Center For Sustainable Urban Development. July 1-6, 2007. Understanding the Urban Poor's Vulnerabilities in Sanitation and Water Supply. Evans, B.
- The World Bank, Kenya. Pro-Poor Strategies for Urban Water Supply and Sanitation Services Delivery in Africa. Cross, P., et. al.
- Water and Sanitation Program. Connecting the Slums: A Utility's Pro-Poor Approach in Bangalore. February 2006.

Presented by Eric Viala of USAID/OMEP

- Powerpoint presentation. A Regional Water Governance Benchmarking System for MENA.
- The World Bank. Making the Most of Scarcity Accountability for Better Water: Management Results in the Middle East and North Africa. MENA Development Report. 2007.

Presented by Manar Fayyad in Advance of Field Trip to Qairawan Spring

- Powerpoint presentation. Qairawan Spring/Jerash Field Trip.
- CDM International Report. Examples of successful experiences in providing safe drinking water. Protecting Source Water: Jordan. 2005.
- GIS based Hydrogeological Vulnerability Mapping of Groundwater Resources in Jerash Area – Jordan. Geofísica Internacional 47 (2), 85-97 (2008) 85. Hammouri, N., et. al.

In addition to discussions built around the above readings, the participants were split into four groups, each of which addressed a problem related to pro-poor issues, financing, decentralized management, and change management. The groups' Powerpoint presentations are available on the ABRI website.

Online Discussion Groups

The design of the program specifically includes continuing online discussion during the months between formal modules. As such, at the close of Module 1, Samir Shawky facilitated a session whereby participants proposed topics which would interest them for discussion through December 2008. The participants then volunteered to join a group of interest. The result is five groups, each with a designated internal or external moderator. The groups will make brief presentations at Module 2 in December. The groups are:

1. Decision support systems in water management.
2. GIS with a focus on planning.
3. GIS with a focus on remote sensing.
4. Change management.
5. Water and energy nexus.

PARTICIPANT EVALUATION

Samir Shawky conducted participant evaluations at the close of each day and at the close of the overall workshop. Summary results are as follows:

- 18 of 22 participants reported that the workshop goals were clear.
- 18 reported that the main topics were presented clearly.
- 15 stated that the workshop achieved its goals completely and 7 stated that the workshop partially completed its goals.
- The primary reasons given by the seven stating "partial completion of goals" were time constraints, too short a duration, and too ambitious an agenda.
- Participants identified the following areas as having maximum benefit to their careers/work: change management, financing, and decentralization.
- Participants reported the following additional benefits: learning new problem-solving techniques; networking with other participants; acquiring a vision for being a leader.
- Participants suggested that future modules have greater logistical support; an agenda that allows for more group discussion; reading provided in advance of module.

ABRI maintains the raw data from these evaluations in an electronic report that is available upon request.

ASSESSMENT

Five months elapsed from the very first initial planning to arrival of the participants at the first module. Initial planning for the Future Water Leaders program began in earnest on March 1, 2008. An application was ready for release by April 1. Applications were received on May 1, and final selection of candidates was made and approved by the first week of June. The first module began the first week of August. Many of the inefficiencies in workshop planning or minor mistakes that were made could have been avoided with more time. Considering that there will be future modules, the ABRI team is already learning from its experience.

Considering both the evaluation of the participants and the recommendations from the instructors and facilitators, we will also implement the following lessons.

1. *Limit the amount of material presented in the overall module and in each session.* We erred in having too many speakers, each attempting to cover too broad an area.
2. *Allow for more interrogatory between speakers and participants.* The participants themselves have much to offer and need more opportunity to speak about their experiences.
3. *Each presentation should be tied to one reading that closely corresponds to the topic, and the reading should be provided in advance.*
4. *Prepare a single, bound module reader with all material, rather than individual photocopies.*
5. *The learning objectives for each session should be clearly stated, and evaluated.*
6. *Provide explicit guidelines to guest speakers, keynote speakers, and panel discussants so that they provide critical information.*
7. *Ensure better coordination among the speakers so that the topics they present are complementary.*
8. *More time needs to be allowed for networking among the participants and for tailored mentoring.*

FUTURE ACTIVITIES

This was the first of five structured events in the Future Water Leaders program. The next module is scheduled to start on/about December 3 in Cairo, addressing the topic of regulatory reform. The goal of the module is not make the participants into experts on that topic. Rather, considering the backgrounds of many of the participants, this will likely be a first introduction to the topic. We will address such questions as:

- Considering the primary goal of utilities – delivering drinking water and treating wastewater – what is the purpose of regulation? In other words, why regulate at all?
- What are the *de facto* forms of regulation in your country?
- What options exist for regulation (e.g., within utilities, within other government agencies, within autonomous government units)?
- What are the marginal costs of introducing regulation or regulatory bodies?
- What are the roles of regulators, providers (e.g., utilities), and consumers?

Beyond training in this technical topic, ABRI will use the second module to begin leadership training. Broadly, we will address the interplay of leadership and risk and the role of women and leadership. We will explicitly discuss leadership traits and plan to enhance those among the participants. We will also chart individualized paths for high-performing participants to maximize their potential.

Lastly, as the Future Water Leaders program moves from its early launching stage, ABRI has a better sense of the participants and the program's capacity. Thus, we are now in a better position to promote co-investment in the program. In the coming months, we will formally approach potential partners, such as the United Nations University and World Bank Institute, potential sponsors (e.g., corporations willing to provide direct cash or in-kind support), and potential institutional homes for the program after the close of ABRI (e.g., the Arab Countries Water Utilities Association.)

ANNEX A. RESUMES OF LEAD INSTRUCTORS

MANAR FAYYAD

Key Qualification:

Manar Fayyad is a Professor of Analytical and Inorganic Chemistry at the University of Jordan since 1978 to present. Her specialization is in Inorganic / Analytical Chemistry and Water Quality.

Her research interests lie in the areas of water quality, environmental pollution, and monitoring studies in the field of water, soil, wastewater treatment and reuse.

She was a member of the Higher Education Accreditation Council/ Ministry of Higher Education.

She is a member of the higher committee for Water Quality in Jordan/Ministry of Water and Irrigation.

She was a member for the water policy team who worked for the water quality conservation project funded by USAID.

Dr. Fayyad was a member in the “National Selection Committee” for Global Environmental Facility Projects (small grants program/UNDP) in Jordan for seven years.

She was the Technical assessor for the accreditation of LEMA water quality labs.

She is the Jordanian coordinator of the IWRM master program conducted in collaboration with Cologne University in Germany, this program is funded by the Ministry of International Cooperation in Germany.

She was the Jordanian coordinator of the USAID funded program Skills Enhancement and Support to Decision-Makers in Jordan’s Water Sector, funded by USAID and was carried out in collaboration with Washington State University, Purdue University, Hashemite University and Jordan University for Science and Technology.

She is the Jordanian coordinator of the bicultural master program on “Integrated water resources management”, executed in collaboration with Cologne University in Germany and funded by DAAD.

Also she is coordinating for the second year the training program on “Transboundary water management in the MENA Region” funded by the Swedish International Water Institut in Sweden.

Dr. Fayyad is involved in preparation and execution of Water and Environment related projects funded by international agencies including UNDP, US-AID, CIDA, SIDA, and EU.

Education :

Ph.D. Chemistry: University of Bonn-Germany 1978

M.Sc. Chemistry: University of Jordan 1974

B.Sc. Chemistry: University of Jordan 1972

Professional Experience:

1978 till present : Professor of Analytical and Inorganic Chemistry,
Chemistry Department, University of Jordan.

1999 till 2007: Director of Water and Environment Research and Study Center,
University of Jordan.

1998-1999: Staff member at the Chemistry Department/ Applied Science
University (Sabbatical year).

1993-1994: Staff member at the Chemistry Department at the Applied Science
University (Sabbatical year)

1992-1999: Deputy director of Water and Environment Research and Study
Center/ Lab Director

Projects and Studies :

She participated in coordination and execution of the following projects:

1. EU funded project within Aviccene initiative on "Water Resources Management in Urban and Semi-Urban Areas of the Mediterranean Region" in collaboration with the Center for Research and Documentation-Rome, Water and Environment Research and Study Center(WERSC)-University of Jordan, Netherlands, and Morocco.
2. BIOSYSWAT project on "A System Approach to Wastewater Biotreatment for the Protection of Mediterranean Coastal Areas (BIOWATSYS)" funded by EU/DG XII B through INCO-DC initiative with participating institutes from Jordan (WERSC), Italy, Greece, Morocco, and Egypt. The project aims at using and testing low cost technologies for wastewater treatment through constructed wetland.
3. Using duckweed in wastewater treatment in collaboration with the Water Authority of Jordan . The project was funded from the Canadian International Development Agency (CIDA) from 1/7/96 for two years to study the possibility of using duckweed in further purification of treated wastewater.
4. The study of the effect of the treated wastewater plant on water resources in Kufrinja basin, and Tafeilah basin, funded by the General Association for Environment Protection from 1/9/96 for 14 months. The purpose is to evaluate the springs of Kufrinja basins on qualitative and quantitative basis, to study the effect of treated wastewater plants on the quality of the basin water.
5. Collaboration with Washington State University, funded from USAID/University Development Linkages Program (UDLP) for 5 years from 1/10/92 and the project was extended for another year. The project aims at improving the management of the natural resources in Jordan and Washington State through cooperation in applied research, technology transfer, and graduate education funded by USAID.
6. Long-term Studies on Water Conservation and Management in Arid and SemiArid Regions (Al-Azraq Oasis Project) (1994-1997). This is a joint project involving the Ministry of Water and Irrigation, Ministry of Rural Affairs and Environment, Royal Society for the Conservation of Nature, and WERSC. The project has five components. WERSC was responsible for the component of the project that is related to enhancing groundwater artificial recharge by building desert dams and Gabions. Groundwater modeling and guidelines for water harvesting were developed. The project was funded by the United Nations Development Programme (UNDP) (Global Environmental Facility).
7. Purification and Reuse of Domestic Wastewater Using Low Cost Eco-Bio Technological Methods (1995-1998). Project goals were the optimization of design and construction of low cost Upflow Anaerobic Sludge Blanket reactors for anaerobic treatment of domestic wastewater in Jordan. Participants in the project were: Wageningen Agricultural University/The Netherlands, University of Valladolid/Spain, National Research Center/Egypt , Hebron University/WestBank,and WERSC/Jordan . The project was funded by the EC.
8. Removing Helminths from Wastewater by Using Solar Radiation, funded by EC through Aviccene Initiative for three years starting 1/1/95 and in collaboration with the Water Authority and the involvement of British Wallingford Institution, Portugal Ministry of Construction, and Tunisian Center for Water and Forestry. The project aimed at testing methods for disposal of infectious germs and parasites from wastewater using solar energy.

She coordinated and worked on the following projects:

1. The Sail-Op project on' Capacity Building on Wastewater Valorization for Agricultural Production in the Middle East Area by using low cost technologies funded by the Dutch government. The project started in 1997 and was planned to finish in 2001and was extended till 2004.
2. Development of Cost Effective Reclamation for Domestic Wastewater and the Appropriate Agricultural Use of Treated Effluent Under Semi-arid Climate Conditions. The project was funded by EU INCO-MED initiative and was carried out in cooperation with Wageningen University/Holland ,the National Research Center /Egypt, Beir Zeit University/Palestine, and Crete University. The project started in 1999 for three years.

3. Skills Enhancement and Support to Decision-Makers in Jordan's Water Sector, funded by USAID and is carried out in collaboration with Washington State University, Purdue University, Hashemite University and Jordan University for Science and Technology. The project involves preparation and delivery of training material in different water areas. Fifty different courses were delivered. Beside the training component, the project also involves evaluation of Zara/Maen waters in the Jordan valley for potential use for drinking purposes. The project started in March 2000, and is still going on.
4. Water Resources Management under Drought Conditions: Criteria and Tools for Conjunctive Use of Conventional and Marginal Waters in Mediterranean Regions. Funded by the EU, started 1997 and continued for three years. This Project was carried out in collaboration with Catania University/Italy, Ground Water Research Center /Egypt. Ministry of Agriculture/Cyprus.
5. Fate of disinfectants and their by-products in the Drinking Water Distribution Systems. The project is funded by the Higher Council of Science and Technology/Jordan. The duration of the project was two years.
6. Evaluation of Contamination with Organochlorine Pesticides in the Jordan Valley. Funded by the General Corporation for Environmental Protection. The duration of the project is one year.
7. Mediterranean Development of innovative Technologies for Integrated Water Management, Meditate, funded by the EU started May, 2004 and will continue for three years. The project is carried out in collaboration of the WERSC with Montpellier University/France, Cranfield university/England, St. Joseph University/Lebanon.
8. Development of a Master program in integrated water resource management with Cologne University funded by Ministry of International Development in Germany.

Scientific Publications :

1. M.Fayyad, M. Tutunji, R. Krishna, and Z. Taha, "Simple rapid method for the determination of dissolved oxygen by potentiometric stripping analysis", *Analyst*, vol. 111, 471 (1986).
2. M.Fayyad, "Indirect trace determination of nitrilotriacetic acid in water by potentiometric stripping analysis", *Analytical Chemistry* vol. 59, 209, 1987.
3. M.Fayyad, M. Tutunji, R. Krishna, and Z. Taha, "Dissolved oxygen: Method comparison with potentiometric stripping analysis", *Analytical Letter*, 20(4), 529, (1987).
4. M.Fayyad, M. Tutunji, and Z. Taha, "Indirect trace determination of ethylenediaminetetracetic acid (EDTA) in water by potentiometric stripping analysis", *Analytical Letters*, 21(8), 1425, (1988).
5. M.Fayyad, M. Alawi, and T. El-Ahmed, "High performance liquid chromatographic determination of phenoxyalkonic acid herbicides using iron (II) 1,10-phenanthroline as a mobile phase additive; *Journal of Chromatography*, 481, 439, (1989).
6. M.Fayyad, M. Alawi, and T. El-Ahmed, "HPLC determination of the phenolic metabolites of phenoxy alkonic acid herbicides", *Chromatographia*, Vol. 28, No. 9/10, 465, 1989.
7. M.Fayyad, M. Alawi, and I. Issa, "Differential pulse polarographic determination of organochlorine pesticides; *Analytical Letters*, 22(8), 1939, 1989.
8. M.Fayyad, "Determination of the dissociation potentials of metal complexes using flow injection potentiometric stripping analysis", *Electroanalysis*, 2, 631, 1990.
9. M. Alawi, M. Fayyad, M. , and Issa I. , "A preliminary study of some organochlorine pesticides in the environment of the Jordan Valley, *Dirasat*, series B, Vol. 17, No.2, 83, 1990.
10. Fayyad, M., M., Tutunji, and L. Abdelnour, "Determination of phenols in water using the 4-Aminoantipyrine method", *Dirasat*, vol.X, No. 2, 107, 1983.

SAMIR SHAWKY

KEY QUALIFICATIONS

Mr. Shawky has more than 35 years of experience working on development programs funded by international donor agencies. His role on these projects, many of which have been implemented nationwide, has focused on enhancing the capabilities of governmental agencies and non-governmental organizations (NGOs) to design, manage and implement community development projects. He has been particularly involved, over the past years, in building the capacity of NGOs in different governorates in Egypt to provide loans to small and microenterprises. He provides training in all aspects of social marketing. His experience ranges from the initial needs assessment to the design, implementation and evaluation of management training, staff training, and training-of-trainers programs. Mr. Shawki has served as a Training Specialist on the USAID-funded Small and Micro Enterprise Development project; and participated in the design of management skills training for the Credit Guarantee Corporation (CGC) management staff, and for the directors of lending units, and field staff, of development organizations participating in CGC's Small Enterprise Development program. As such, he has developed deep professional connections with associations throughout Egypt which the Advancing the Blue Revolution Initiative (ABRI) can leverage for various activities. These include the Sharkeya Businessmen Association for Community Dev. (SBACD), Assiut Businessmen Association (ASBA), Alexandria Business Association (ABA), Small Enterprise Development Association of Port Said (SEDAP), Egyptian Small Enterprise Development Foundation (ESED), Dakahelya Businessmen Association for Community Development (DBACD), Sohag Community Development Association (SCDA), Aswan Businessmen Association (ASBA), Fayoum Small Projects Development Association (SPDA), Egyptian Foundation for Lending Empowering Advancing & Developing Projects (LEAD Foundation), Banque du Caire, and Credit Guarantee Corporation (CGC), Banque du Caire and Social Fund for Development (SFD).

EDUCATION

- 1995 Environment Institute M.A. in Environmental Education
Ain Shams University, Egypt
- 1993 Environment Institute Diploma in Environmental Education
Ain Shams University, Egypt
- 1980 International Labor Organization (ILO) Diploma in Cooperative Management
Torino, Italy
- 1976 Sofia Academy for Agricultural Science Diploma in Cooperative Management
Sofia, Bulgaria
- 1967 Assiut University, B.Sc. in Agriculture, Assiut, Egypt

EXPERIENCE RECORD

1989 - Present Environmental Quality International (EQI)
Position: Training and Community Development Specialist Cairo, Egypt

Mr. Shawky has played a leading role in the following selected projects. He provides strategic planning training for NGOs, agricultural cooperatives, community development associations, and agricultural marketing associations.

Financial Investment & Sector Cooperation (FISC), The Social Fund for Development (SFD) Trainer. Participating in the FISC/SFD training plan for NGOs/SFD microcredit programs staff on strategic planning; creating the business plan of the foundation; follow-up on both financial and non-financial project aspects; governance; monitoring and planning skills development and loan portfolio management; monitoring Field Officer loan portfolio management and Training of Trainers (TOT).

Small and Emerging Business Development Organizations (SEBDO), USAID
Specialist/Trainer. Participated in the design and implementation of project training activities in 12 governorates businessmen foundations activities, the Poverty Lending Program (board members, field coordinators, foundations staff, supervisors, branch managers), and Banque du Caire (the implementation of the individual loans program and training to field staff). (2000 - 2005)

National Council for Childhood and Motherhood, Egypt
Team Leader responsible for creating and operating micro lending unit for literacy class of women in West Cairo Environmental improving project (2005)

Provided strategic planning training for NGOs including Agricultural Cooperatives, Community Development Associations and Agricultural Marketing Associations:

German Cooperative and Raiffeisen Confederation (DGRV) – GTZ (German Cooperation)
Under Agricultural Cooperatives reform provided training on planning and effective governance for the Board members and facilitated the five-year strategic plan including business plan and capacity development plan for 5 Agricultural Cooperatives in Dakahleya Governorate. (2005)

El Shams Project for Agricultural Products Exports, USAID/CARE
Participated in the preparation of 5 year strategic plan for Farmers Export Association in Giza, El Minia, Assiut, Sohag and Qena governorates to increase on-and off-farm jobs and rural income in Upper Egypt by building the capacity of small and medium sized farmers to improve production, processing and marketing horticultural products. (2005)

Small and Micro Enterprise (SME) Development Project, USAID
Training Specialist. Designed, implemented, and evaluated prototype training activities for NGOs engaged in the provision of loans to small and micro enterprises in six governorates of Egypt. Trained field staff, in order to enhance their social marketing skills. Training included familiarizing extension officers with the objectives and goals of the project, enhancing their ability to identify, evaluate, and select potential clients, and enhancing their communication and client motivations skills. Also trained middle management in management skills, including principles of management, planning, follow-up, organization, and control; human resource management; human resource development; performance appraisal; creative thinking; and communication and leadership skills. Conducted training of trainers to enhance the ability of project officers to conduct needs assessments, formulate training objectives, design training curricula, and conduct training evaluation, and to enhance their training techniques. Provided training to field staff (coordinators) in communication skills, gender sensitivity, motivation building, organization of meetings and management discussions, and in appropriate methods and techniques to deal with women in general, and women in urban areas in particular.

Grameen Program in Alexandria, UNICEF
Trainer. Trained NGO management and extension officers in the operation of a credit extension program targeting disadvantaged women in Alexandria. Training provided was similar to that conducted under the above project. (1993)

Community Participation Study, UNICEF
Community Development and Training Specialist. Participated in a study to identify and document successful projects containing a community participation component. The study aimed at understanding the process of community participation and the extent to which it contributed to project success, and subsequently, to assess training needs in this field. (1993)

Local Development II Project: Private Voluntary Organization (PVO) Component, USAID
Member of Training and Institutional Development Team. Provided training to PVOs, local councils, and MoSA staff to build their capacity to design and implement community development activities. Participated in the development of three nationwide training programs on community needs assessment, formulation of project proposals, fund raising and project management. Conducted local seminars for

PVOs and their regional federations in all governorates on project planning, project implementation and project monitoring and evaluation. (1991). Supervised and participated in the assessment of community needs, the formulation of recommendations to address those needs, and the development of related project activities, and supervised the implementation of project activities. (1989 - 1993)

1988 - 1989
Position: Consultant

Local Development II: Provincial Cities Project, USAID
Training and Human Resource Advisor for Chemonics International. Planned, implemented and evaluated the project's training activities. These included technical training of water, sewage, construction and road engineers in the governorate, and training in project planning, design, implementation and operation. (1989)

Village Self-Reliance Project
Technical Assistant Training Unit Manager for CARE International, Egypt. Assisted in fielding staff for the project, which was implemented through community development associations (CDAs) in the governorates of Upper Egypt. Provided training to NGO board members in the project cycle, management skills, and in Law 32. Provided training to field staff in the assessment of community needs, in the project cycle, and in communication skills. Supervised and participated in the assessment of community needs, the formulation of recommendations to address those needs, and the development of related project activities, and supervised the implementation of project activities. (1988 - 1989)

1983 - 1988 Cooperative Housing Foundation (CHF)
Position: Director of the New Communities Organization International, Inc., Egypt

Helwan Low-Income Housing Project
Supervised the management and implementation of community development activities. Established community organizations, trained board members and staff of the organizations in community management, and organized overseas technical training.

National Agro-Mechanization Project, USAID
Training Director. Responsible for planning, implementing, and evaluating training activities for this project nationwide. (1982 - 1983)

1976 - 1982 Cooperative Development Center (CDC)
Position: Training Specialist SIDA, Egypt

Responsible for providing training to board members of cooperative organizations, as well as to cooperative members, organization staff, and government staff.

1968 - 1976 General Agricultural Cooperative
Position: Cooperative Development Specialist Organization, Egypt

Supervised development activities in the Egyptian cooperative sector.

1967 - 1968 Animal Insurance Organization,
Position: Extension Officer Egypt

LANGUAGES Speaking Reading Writing

Arabic	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

ELIZABETH KLEEMEIER

Professional Qualifications

Social scientist specialized in social aspects of policies, programs, and projects, and in participation through local organizations, decentralization, local management, and partnerships.

Twenty years' experience as team leader, project manager, researcher, and consultant in water supply and infrastructure, environment and natural resource management, energy, agriculture, and rural development. Particular expertise in rural, small town, and peri-urban water supplies.

Have performed project design, project appraisal and due diligence, project and program evaluation, lessons learned studies, stakeholder analysis and consultations, beneficiary assessments, gender and social impact assessments, resettlement and other social safeguards planning, training, sector strategy development, sector reform reviews, and public expenditure reviews.

Strong quantitative, qualitative, and participatory research skills.

Have worked in Bangladesh, Benin, Burkina Faso, China, Ghana, India, Kenya, Lesotho, Malawi, Maldives, Mozambique, Nigeria, Tanzania, Uganda, Vietnam, and Zambia for the World Bank, Water and Sanitation Program, Millennium Challenge Corporation, USAID, Danida, and SIDA. Have lived and worked in Africa for twelve years.

Education and Training

Ph.D., M.A., Political Science—University of California, Berkeley

M.A., Economics—University of California, Berkeley

B.A., Political Science—The Colorado College

Certificat de Langue et Civilisation Françaises, Degré Supérieur, Université de Paris IV

Languages

English native speaker

French

Swahili

Examples of Recent Consultancies

Lesotho: Impact Evaluation, Urban and Rural Water Projects

Client: Millennium Challenge Corporation (Paul Pleva). Contractor: NORC (Jeff Telgarsky). 2008-2012.

Water Supply expert on team to prepare and carry out a quantitative impact evaluation of rural and urban water supply and sanitation activities. Review expected causal links between activities and objectives for theoretical, measurement, and practical problems. Advise client and contractor on actions and decisions that must be taken to ensure timely implementation of evaluation. Assist with sample selection, design of questionnaires and other measurement instruments, and design of small studies to provide complementary information.

Burkina Faso: Gender and Social Impact Assessment, Irrigation Projects

Client: Millennium Challenge Corporation (Awa Bamba). Contractor: Roche Consulting Engineers (Christian Bérubé). 2007.

Gender and Social Impact Specialist on due diligence team appraising three irrigation projects proposed for Millennium Challenge Corporation funding. Reviewed secondary literature on gender, poverty, and agriculture in Burkina Faso. Held stakeholder consultations with women, youth, and men in project areas. Assessed feasibility studies. Identified mistaken understanding in feasibility studies of women's agricultural roles, rights, and responsibilities in Burkina Faso. Identified women's access and rights to the land they cultivate as key issue for MCC. Recommended measures that MCC should incorporate in government-to-government agreement and project design in order to protect women's interests, maximize productivity on irrigated plots, and increase poverty reduction impact of projects.

Ghana: Biennial Review, Danida Water Sector Support Program

Client: Danida (John Nielsen). Contractor: Resources Development Consultants (Jens Bjerre). 2006.

Quantified and rated progress on Danida-assisted rural water supply, sanitation, and hygiene project. Basis on which Danish Ministry of Foreign Affairs judged overall performance of water sector support to Ghana. Identified impediments that stymieing progress on project: misdirected district capacity-building, inefficiencies in public procurement procedures, and poor monitoring and progress reporting. Flagged incipient maintenance problems that will become more evident over next two years. Proposed solutions

which subsequently adopted: more focused capacity-building, government intervention on procurement problems, and spreadsheet format for progress reporting. Voiced strong support for future integration of Danish assistance to decentralization with that to water, sanitation, and hygiene as a more effective strategy for improving local service provision.

Nigeria: Social Impact Assessment, National Energy Development Project
Client: World Bank (S. Vijay Iyer). Contractor: Novatech (David Sood). 2005.
Wrote Resettlement Policy Framework and template for Resettlement Action Plans as required by World Bank safeguard policies on involuntary resettlement (BP/OP 4.12). Wrote Environmental and Social Impact Management Framework, based on the findings of the environmental scientist and self.
Preceding documents available online (E-1154, April 25, 2005) at the World Bank website.

Project Management

Tanzania: Danida Water and Sanitation Project
Client: Danida (Jens Grue Sjorslev). Contractor: Denconsult (John Carlsen). 1993-95.
Developed new strategy and detailed proposal for community-based operation and maintenance of water supplies. Strategy accepted by Danida. Implemented new strategy: developed an integrated set of technical, community development, training, and monitoring activities based on providing on-going technical and organizational support to community water committees in three regions. A Danida evaluation of the project in 1997 judged this set of activities to be highly successful and exemplary. Specific activities included: teaming local government water technicians and community development workers to support water committees; developing training manuals, training of trainers (TOT) courses, and training courses to introduce staff to new roles and responsibilities; carrying out TOT and monitoring subsequent training programs. Fostered team work and esprit de corps across three regions and among expatriate and national consultants and government staff. Uncovered and handled corruption and massive inefficiency in catchment reforestation activities. Supervised staff and budgets for above activities.

Kenya: SIDA Water Financial Management Project
Client: SIDA (Ingvar Andersson). Contractor: Hifab International (Gordon Tamm). 1988-1990.
Initiated field activities to test feasibility of turning over six government rural piped schemes to community management boards. Undertook study of consumer willingness and ability to pay for water in scheme areas. Recruited national consultant to undertake community mobilization. Supervised staff and budget for above activities.

Tanzania: SIDA Health, Water, and Sanitation Program
Client: SIDA (Ingvar Andersson). Contractor: Hifab International (Gordon Tamm). 1986-88.
Developed project strategy toward community participation in construction, operation, and maintenance. Recruited Tanzanian consultants to assist districts with project implementation. Fostered team work and esprit de corps across three regions and among expatriate and national consultants and government staff. Supervised staff and budgets for above activities.

Major Research Studies

Malawi: Impact of participation on sustainability of community water supplies.
Funded by Danish Council for Foreign Research. 1997-98. Resulting publications: "The Role of Government in Maintaining Rural Water Supplies: Caveats from Malawi's Gravity Schemes." Public Administration and Development. Vol. 21. No. 3. 2001. "The Impact of Participation on Sustainability: An Analysis of the Malawi Rural Piped Scheme Program." World Development. Vol. 28. No. 5. 2000.

Kenya and France: French development assistance to the Kenyan water sector
Supported by Centre d'Etudes Africaines, EHESS. 1990-91. Resulting publications:
"L'aide française au Kenya : à qui profite-t-elle ?" Cahiers d'Etudes Africaines. 121-122. XXXI-1-2. 1991. "La France et l'Argent Noire au Kenya." Politique Africaine. No. 40. 1990.

Tanzania: Impact of policy reform on donor-assisted water supply programs
Funded by Fulbright Africa Research Program. 1986. Resulting publications:

"Policy Reform and Rural Development Assistance in Tanzania." Public Administration and Development. Vol. 9. 1989.

Tanzania: Impact of domestic policies on poverty-oriented development assistance
Funded by faculty grant, University of Dar es Salaam. 1979-82. Resulting dissertation and publications:
"Integrated Rural Development in Tanzania." Public Administration and Development. Vol. 8. 1986.
"Integrated Rural Development in Tanzania: The Role of Foreign Assistance, 1972-1982." Ph.D.
dissertation. Political Science Department. University of California, Berkeley. 1984. "Domestic Policies
versus Poverty-Oriented Foreign Assistance in Tanzania." The Journal of Development Studies. Vol. 20.
No. 2. 1984. "Regional Planning in Tanzania." The African Review. Vol. 10. No. 1. 1983.

Other Research

Project Researcher, Centre for Development Research, Copenhagen, 1995-98. Resulting publications (in
addition to those on Malawi listed above): "Collaboration between CDR and Danida on Aid Impact
Research: A Case Method Approach to Discussing the Issues." CDR Working Paper 96.4. Copenhagen:
Centre for Development Research. 1996. "From Supply-driven to Demand-driven Provision of Rural
Drinking Water: A Tanzanian Case Study of the Arguments for a Transition." CDR Working Paper 95.8.
Copenhagen: Centre for Development Research. 1995.

Other Employment

Maine USA: Assistant Professor, Colby College, Government Department
Taught African politics, comparative politics, and methodology; resource person for SPSS. 1983-85.

Tanzania: Lecturer, University of Dar es Salaam, Political Science Department
Taught research methods to undergraduate and graduate social science students. 1979-82.

MUNJED AL-SHARIF

EDUCATION

Doctor of Philosophy in Water Resources and Environmental Engineering, Kansas State University, Manhattan, KS, USA, 1993.

Dissertation "Development of a Basin Scale Model for a hydraulically Connected Surface Water - Ground Water System".

Master of Science in Geotechnical Engineering, Jordan University of Science and Technology, Irbid, Jordan, 1989. Research: "Control of Swelling of Some Selected Irbid Soils".

Bachelor of Science in Civil Engineering "General", Yarmouk University, Irbid, Jordan, 1984.

EXPERIENCE

Sept. 04 – Present Director, Queen Rania Al Abdullah Center for Environmental Sciences and Technology (QRACEST), JUST

May 08 – Present Director, Water and Environment Directorate, Higher council for Science and Technology (HCST_ of Jordan

Sept. 04 – Present Head, JUST Medical waste Incinerators management team.

Sept. 04 – Present Head, JUST Environmental management team.

Sept. 93 - Present Assistant Professor of Civil Engineering at J.U.S.T.

Sept. 98 – Aug.00 Assistant Dean, Faculty of Graduate Studies at J.U.S.T

Sept. 94 - Aug. 96 Head of Environmental & Water Resources Div. at the Civil Engineering Dept.

Aug. 89 - May 93 Teaching & Research Assistant at Civil Engrg. Dept. at Kansas State Univ.

Sept. 86 - May 89 Teaching & Research Assistant at Civil Engrg. Dept. at J.U.S.T.

Sept. 84 - Sept. 86 Site Engineer at the Jordan Arab Forces.

PRACTICAL EXPERIENCE

Certified Lead Environmental Assessor, since 1999

Member, Executive Board, Jordan Cleaner Production Program (JCPP).

Member, Middle region medical and hazardous waste management project technical Committee.

Member, National Committee for EIA.

Head, JUST Incinerators management team.

Head, JUST Environmental management team.

Member, JUST safety team.

Environmental Auditing Experience

Environmental Auditing and environmental gap analysis for about 30 small and midsize industries and services institutions in Jordan. The performed work included an analysis of all production activities and a detailing of all inputs and outputs. The tasks have also included a comprehensive analysis of water, wastewater, liquid waste, solid waste, Air emissions and storage practices for raw and finished products. For certain industries the job has also included analysis and design of the wastewater treatment systems at the facility.

Selected Industry Profile

Arab Drip for Irrigation Systems Company

Bader Establishment for Meat and Livestock

Arab Food Industries Company Limited

Jordan International Industries Company

Al-Zaineh for Metal Forming Company
Arab Investment and International Trade Company
Modern Paints & Chemical Industries
Allied Chemical Manufacturing and Trading Company
Ivory Garments Factory L.L.C
Hashem Al Zhairi Company for Ready Mix Concrete
Ready Mix Concrete & Construction Supplies Co. Ltd
Zuhairy Brothers Company
Beladi for Dairy products company
Al-Morooj Company for dairy products.
Jordan Solphochemicals company.
Jordan Airmotive Company Ltd
Jordan Aircraft Maintenance Company
SIPES paints company
Jordan White Cement Factory
Arab Steel Pipes
Silica Industries

Project Manager/Coordinator:

Adaptation to Climate Change to Sustain Jordan's MDG Achievements. UNDP 2007.
Piloting Climate Change Adaptation to Protect Human Health. Funded by CEHA-WHO and UNDP, 2006.
Household water security , Funded by WHO, (2005).
Integrated water resources management, Funded by TEMPUS-EU, 2004.
Modeling Seasonal Water Quality Variation of King Talal Reservoir, Funded by Higher council for Science and Technology, 2001.

Steering Committee Member

Wastewater Reuse in Agriculture Project.
Environmental health mapping in the Jordan valley Project.
River bank filtration in Zaraq river Basin Project
Integrated Management of Olive waste Project.

SELECTED PUBLICATIONS

Nassim Al-Abed, and Munjed Al-Sharif "Hydrological Modeling of Zarqa River Basin - Jordan Using the Hydrological Simulation Program - FORTRAN (HSPF) Model" Water Resources Management, accepted, 2008.

Munjed Al-Sharif, J. Abu Ashour, A. Abulaban, and S. Al-Shar'a, (2007), Effect of Soil-Water Separation Technique on the Estimation of Bacterial Adsorption onto Soil, Jordan Journal of Civil Engineering, Vol.(1), No. 2. pp. 295-302.

Abu-Zreig, Majed, Al-Sharif, Munjed and Amayreh, Jumah, (2007) 'Erosion Control of Arid Land in Jordan with Two Anionic Polyacrylamides', Arid Land Research and Management, 21:4, 315 - 328

Bdour A., Altrabsheh B., Hadadin N., and Al-Sharif. M. (2007). Assessment of Medical Wastes Management Practice: A Case Study of the Northern Part of Jordan. Journal of Waste Management. Vol. 27, 746-759.

Zeaton L, Munjed Al-Sharif, and Al-Bsoul, A., Investigation of Titania Addition into Tar Sands for Removal of Phenol from Aqueous Solutions, Water Qual. Res. J. Canada, 2006 • Volume 41, No. 1, 94–99.

Awad, A., Obeidat, M., and Munjed Al-Sharif, Mathematical – Statistical Models of Generated Hazardous Hospital Solid Waste, J. of Environmental Science and Health, Vol. A39. No. 2, pp. 315-327, 2004.

Al-Sharif, Munjed, and Musa Attom, The Use of Burned Sludge as a New Soil Stabilizing Agent, Proceedings of the Environmental and Pipeline Engineering conference, ASCE, Kansas City, Missouri, USA, 2000.

Hamed, M, Al-Eideh B., and Munjed Al-Sharif, Traffic Accidents under the effect of the Gulf crises, Safety Science, Vol, 33, 1999, 56-68.

Attom, Mousa F., Al-Sharif, Munjed, M., (1998): "Soil stabilization with burned olive waste", Applied Clay Science, Vol. 13, Elsevier, Netherlands.

"Treatment of expansive soils to control Swelling", A. Basma and Munjed Al-Sharif, Geotechnical Journal of Southeast Asia Geotechnical Society, Dec. 1993.

US – Jordan Municipal Solid waste Management Collaborative Research, Reinhart, D., Chopra, M., Abu El-Sha'r, and Munjed Al-Sharif. A Report to the National Science Foundation, Washington, USA, 2002

US – Jordan Hazardous waste Management Collaborative Research, Reinhart, D., Chopra, M., Abu El-Sha'r, and Munjed Al-Sharif. A Report to the National Science Foundation, Washington, USA, 2003

Role of Universities in Promoting Appropriate Wastewater Treatment Technologies for Small Communities. Munjed Al-Sharif, TE Consultation on Appropriate and Innovative Wastewater Management in Small Communities in EMR Countries, Amman – Jordan. (6 - 9 November 2000)

Environmental Legislation in Jordan, Munjed Al-Sharif and others, Seminar on Environmental policy coordination in Jordan, Amman, 2001

"Position Paper for Jordan" , Abu-El-Sha'r, W. Y., Munjed Al-Sharif , M. Al-Sheriadeh, and T. Al-Suleiman Regional Seminar on the Environment in the Middle East: Education, Research Needs and Prospects for Cooperation, JUST, April, 28 - May 1, 1994, Irbid – Jordan.

"Managing Water Rights", Munjed Al-Sharif, J. Tracy, and J. Koelliker, Proceeding of the 10th Annual Water and the Future of Kansas Conference, Manhattan, KS, USA, March, 1993.

"Scheduling of Ground Water pumpage in Alluvial Aquifers to minimize the impact on Surface water Diversions", J. Tracy and Munjed Al-Sharif, Proceedings of the Water Resources Sessions of the Water Forum, Baltimore, Maryland. Aug. 1992.

Selected TRAINING ACTIVITIES

Environmental Audit Skills and Techniques, a 5 day Training Course Delivered several times, in Jordan and the West Bank for Palestinian trainees from the Palestinian Ministry of Environment .

Eco-Mapping for Industries, a 2 day workshop for industries in Al Hassan Industrial estate and Sahab Industrial estate.

Lab. Certification and Environmental Management Systems (ISO 14001), a One day training course. Hazardous Material and Chemical Substances Risk Assessment, a 2 days workshop.

Water Supply Networks Design using EPANET, a Two days training course.

Decentralized Wastewater Management, a One day training course.

DIMA JAMALI

Education

PhD Social Policy and Administration, University of Kent at Canterbury, UK, 2001

MA Sociology, San Jose State University, California, 1996

BA Public Administration, American University of Beirut, Lebanon, 1993

Work experience

Date	University/Company	Position last held
08-07 to present	School of Management, University of Southampton	Senior Lecturer
09-01 to 07-07	School of Business, American University of Beirut	Associate Professor
10-97 to 09-01	University of Kent at Canterbury, UK	Researcher
10-96 to 10-97	Faculty of Arts & Sciences, American University of Beirut	Instructor
03-94 to 06-96	Consulting Psychologists Press, Inc., Palo Alto, California	Research Assistant

Languages

Fluent in Arabic, English, and French

Book chapters

1. **Jamali, D.*** and Abdallah, H* Diversity management rhetoric Vs reality: Insights from the Lebanese context. In *Diversity Management in Asia* (Ozbigli, M. and Syed, J. Eds), Edward Elgar Publishing, Ltd. Cheltenham Glos, UK. 2008 (in press)
2. **Jamali, D.*** and Sidani, Y* Insights into factors influencing women entrepreneurs in Lebanon. In *International Research Handbook on Successful Women Entrepreneurs* (Fielden, S. and Davidson, M. Eds) Edward Elgar Publishing, Ltd. Cheltenham Glos, UK. 2008 (in press)

Published

3. **Jamali, D.*** and Sidani, Y.* Learning organizations: Diagnosis and measurement in a developing country context, *The Learning Organization*, 15, 1, 58-74, 2008.
4. **Jamali D.***, Safieddine A.*, and Daouk M.† Corporate governance and women: An empirical study of top and middle women managers in the Lebanese banking sector, *Corporate Governance*, 7, 5, 574-585, 2007.
5. **Jamali D.*** The case for strategic corporate social responsibility in developing countries, *Business and Society Review*, 112, 1, 1-27, 2007.
6. **Jamali D.*** and Mirshak, R.† Corporate social responsibility: Theory and practice in a developing country context, *Journal of Business Ethics*, 72, 243-262, 2007.
7. **Jamali D.*** A study of customer satisfaction in the context of a public private partnership, *International Journal of Quality and Reliability Management*, 24, 4, 370-385, 2007.
8. **Jamali D.***, Mezher T.*, and Bitar H.† Corporate social responsibility and the challenge of triple bottom line integration: Insights from the Lebanese context, *International Journal of Environment and Sustainable Development*, 5, 4, 395-414, 2006.
9. Yamut G.† and **Jamali D.*** A critical assessment of a public private partnership for the management of water services in Lebanon, *Water Resources Management*, 21, 3, 611-634, 2006.
10. **Jamali D.*** and Keshishian T.† Agility, knowledge management and organizational learning:

- Synergies and interrelationships, *The International Journal of Agile Systems and Management*, 1, 2, 133-145, 2006.
11. **Jamali D.***, Khoury G.[†] and Sahyoun H.[†] From bureaucratic organizations to learning organizations: An evolutionary roadmap, *The Learning Organization*, 13, 4, 337-352, 2006.
 12. **Jamali D.*** Insights into triple bottom line integration from a learning organization perspective, *Business Process Management Journal*, 12, 6, 809-821, 2006.
 13. **Jamali D.***, Safieddine A.*, and Daouk M.[†] The glass ceiling: Some positive trends from the Lebanese banking sector, *Women in Management Review*, 21, 8, 625-642, 2006.
 14. Sidani Y.* and **Jamali D.*** Mad cows and sane minds: Decision-making at Adonis meat company, *Case Research Journal*, 25, 4, 1-9, 2005.
 15. **Jamali D.***, Sidani Y.*, and Safieddine A.* Constraints facing working women in Lebanon: An insider view, *Women in Management Review*, 20, 8, 581-594, 2005.
 16. **Jamali D.*** Changing management paradigms: Implications for educational institutions, *The Journal of Management Development*, 24, 2, 104-115, 2005.
 17. **Jamali D.*** A public private partnership in the Lebanese telecommunications industry: critical success factors and policy lessons, *Public Works Management and Policy*, 9, 2, 103-119, 2004.
 18. **Jamali D.*** Success and failure mechanisms of public private partnerships in developing countries: Insights from the Lebanese context, *The International Journal of Public Sector Management*, 17, 5, 414-430, 2004.
 19. **Jamali D.*** Post-war telecommunications reform in Lebanon: Trends and challenges, *Journal of Policy, Regulation and Strategy for Telecommunications, Information and Media*, 5, 2, 34-44, 2003.
 20. **Jamali D.*** NGOs in development: Opportunities and challenges, *Labor and Management in Development Journal*, 4, 2, 2-18, 2003.
 21. Mezher T.*, **Jamali D.***, and Zreik C.[†] The role of financial institutions in the sustainable development of Lebanon, *Journal of Sustainable Development*, 10, 2, 69-78, 2002.
 22. El-Fadel M.^{*}, El-Sayegh Y.[†], Abou Ibrahim A.[†], **Jamali D.***, and El-Fadl K.[†] The Euphrates-Tigris basin: A case study in surface water conflict resolution, *Journal of Natural Resources & Life Sciences Education*, 31, 99-110, 2002.
 23. El-Fadel M.^{*}, Zein M.[†], Nuwayhid I.*, **Jamali D.***, and Sadek S.* Environmental management of ozone in urban areas, *Environmental Management and Health*, 13, 5, 471-494, 2002.
 24. El-Fadel M.^{*}, **Jamali D.*** and Khorbotly D.[†] Forestry and land use related GHG emissions: Estimation, economic valuation and policy options, *Water, Air, and Soil Pollution*, 137, 287-303, 2001.
 25. El-Fadel M.*, Zein M.[†], and **Jamali D.*** Water resources management in Lebanon: Institutional framework and policy options, *Water Policy*, 3, 5, 425-448, 2001.
 26. El-Fadel M.^{*}, Quba'a R.[†], El-Hougeiri N.[†], Hashisho Z.[†] and **Jamali D.*** The Israeli Palestinian Mountain Aquifer: A case study in ground water conflict resolution, *Journal of Natural Resources & Life Sciences Education*, 30, 50-61, 2001.
 27. El-Fadel M.*, Kalinian H.[†], Salhab S.[†] and **Jamali D.*** Policy planning for air quality management: Local and global perspectives, *Journal of Environmental Policy and Planning*, 3, 3, 211-231, 2001.
 28. El-Fadel M.*, Zein M.[†] and **Jamali D.*** Development of procedures for environmental impact assessment in Lebanon, *Environmental Impact Assessment Review*, 20, 5, 579-604, 2000.
 29. El-Fadel M.^{*}, Zein M.[†] and **Jamali D.*** Water resources in Lebanon: Characterization, water balance, and constraints, *Journal of Water Resources Development*, 16, 4, 619-642, 2000.

Grants and contracts

<i>Title</i>	<i>Funded by</i>	<i>Year</i>	<i>Investigator(s)</i>
Cultural diversity in the Lebanese context: Towards enhanced understanding and action	The Leverhulme Trust (under review)	08-11	Jamali D. (PI), Dajani N., Khashan H., and Higgs, M.
An Adaptive Comparative Approach for Improved Water and Sanitation Services in Poor Urban Clusters	International Development Research Center	08-11	El-Fadel M. (PI), Jamali D., and Nuwayhid I.
Capacity Building in the METAP region for Cost of Environmental Degradation	World Bank	08-09	El-Fadel M. (PI), Jamali D., Hindi K., Nuwayhid I.
Expanding economic opportunities under clustering for economic development and revitalization of industry sectors: post harvest management	Cooperative Housing Foundation	05-07	El-Fadel M. (PI) and Jamali D.
Understanding water, understanding health The case of Bebnine	International Development Research Center	05-08	Nuwayhid I. (PI) El-Fadel M., Habib R., Zurayk R., and Jamali D.
The synergetic characteristics of post-bureaucratic firms: Analysis and recommendations	University Research Board	05-06	Jamali, D. (PI)
Changing management paradigms: Implications for educational institutions	University Research Board	04-05	Jamali, D. (PI)
Public private partnerships in developing countries: The case of Lebanon	University Research Board	03-04	Jamali, D. (PI)
Corporate social responsibility in the context of developing countries: The case of Lebanon	University Research Board	02-03	Jamali, D. (PI)
A participatory approach towards integrated coastal zone management: Opportunities for socio-economic growth and environmental protection	US Agency for International Development	02-03	El-Fadel M. (PI) and others

DAN ROTHBERG

Daniel Rothberg, a long-time DAI staff member, has thirteen years of experience providing technical, management, and administrative assistance on international donor-funded programs focused on natural resource management. Mr. Rothberg currently serves as DAI's home office-based Deputy Chief of Party on the U.S. Agency for International Development (USAID)/Advancing the Blue Revolution Initiative (ABRI) contract, where he leads the project's training program. Previously, he was based in the Philippines as Deputy Chief of Party on the Environmental Governance II project, where he was the chief operations manager of a five-year, \$19 million project promoting devolution and decentralization of the control of forests, coasts, and waste in 90 municipalities throughout the country. Mr. Rothberg's technical expertise is in environmental policy and economics, with a particular focus on the economics of rational decision-making related to transboundary water and parks. He has designed projects in the Kura-Aras River Basin between Armenia, Azerbaijan, and Georgia; promoted natural resource-based enterprises in the Great Limpopo Park spanning Mozambique and South Africa; and authored a paper on alternative-financing mechanisms for Indonesian national parks that details options for the efficient use of financial resources and the generation of new funds via carbon-offset programs and privatization. He has been responsible for the competition, implementation, and financial and administrative oversight of small grants programs, indefinite quantity subcontracts up to \$100,000, and grants of up to \$500,000 in the Philippines and Indonesia. Mr. Rothberg holds a masters degree in resource economics and policy from Duke University.

Professional Experience DAI (May 1996–present)

Deputy Chief of Party, Advancing the Blue Revolution Initiative, USAID ANE Bureau (January 2008–present). Serves as U.S.-based lead on a project headquartered in Cairo, Egypt. Oversees Future Water Leaders program providing training to 25 mid-career professionals in water supply and sanitation. With the Chief of Party, manages the budget of a \$7 million, three year contract; prepares task orders for subcontractors; and contributes to strategic planning and contract compliance through reporting, management of technical assistance, and responsiveness to USAID managers in Washington, D.C.

Senior Development Specialist, Environment and Natural Resources Group (January 2007–December 2007). Manages the \$3.5 million annual budget, human resources, subcontractors, and grantees on the Philippines Environmental Governance II project, and contributes to strategic planning and contract compliance through quarterly visits to Manila and via the DAI home office. Develops new business and supports other projects in the water and natural resources sectors.

Grants Management Specialist, Orangutan Conservation Services Program, USAID, Indonesia (December 2007). Oversaw competitive process resulting in award of eleven grants totaling over \$2 million. Chaired five technical review committees; negotiated budgets with recommended grant awardees; and wrote formal proposal competition review memos and negotiation memos for presentation to the USAID technical and contracting officers. Provided administrative and financial training to several awardees.

Deputy Chief of Party for Management and Administration, Environmental Governance II, USAID, Philippines (October 2004–January 2007). Served as the senior operations manager for a five-year, \$19 million project addressing forestry, coastal resources, solid waste, municipal finance, and local governance. The project has six subcontractors; five offices and 70 full-time personnel in 15 different locations; and a small grant fund of \$350,000. Managed subcontractors and grantees, project budgets, personnel, facilities and property, policies and procedures, and compliance with USAID regulations and local law. Working with DAI Bethesda contracts staff, prepared an RFP that received USAID contracting officer approval; oversaw a nationwide competition that yielded 33 proposals; and led the review process that resulted in 12 awards with ceilings of \$100,000. Wrote and edited task order scopes of work; oversaw task order competitions and awards; and ensured subcontractor adherence to USAID regulations. Strategically allocated a \$4 million annual budget to maximize use of finances in relation to

technical results, including distribution of funds by CLIN and by region. Oversees all accounting functions on the project, including proper preparation of field expense reports, cash management, and adherence to USAID Acquisition and Federal Acquisition regulations. Wrote or reviewed quarterly and annual reports. Directly oversaw five personnel in Manila and supervised four field-based regional coordinators.

Senior Development Specialist, Environment and Natural Resources Group (February 1998–October 2004). Provided technical support to and home office management of donor-funded projects in the environment and natural resources sector. Specialized in habitat conservation, river basin management, and environmental economics and policy. Consulting assignments included:

Policy and Institutions Specialist, Great Limpopo Transboundary Natural Resources Management Initiative, USAID/RCSA, South Africa and Mozambique (January 2004). Analyzed policy impediments to the development of NRBEs in the transboundary natural resources area. Recommended improvements to institutional structures and mechanisms that led to broader inter-, intra-, and extra-governmental support to community NRBEs. Recommended capacity-building measures for communities and regional NGO service providers to engage in successful resource management within the Great Limpopo Transfrontier Conservation Area.

Water Policy Specialist, Water Quality Assessment of the Upper Litani River Basin and Lake Qaraoun, USAID, Lebanon (August 2003). Synthesized findings of a team of Lebanese engineers, chemists, and hydrologists and related them to the programmatic implications for USAID and the Government of Lebanon in terms of water quality improvement in the Litani River.

Integrated Water Resources Management Specialist, South Caucasus Regional Water Management Project, Phase II Implementation, USAID (May 2003). Served on a four-person team that visited principal stakeholders in Armenia, Azerbaijan, and Georgia to review project accomplishments and make recommendations for future program directions.

Project Management Specialist, Great Limpopo Transboundary Natural Resources Management Initiative, USAID/RCSA, South Africa (November 2002). Assisted in finalizing the annual strategic workplan; finalized the project grants management manual and explained its stipulations to project staff and grantees; and synthesized project success stories for the USAID cognizant technical officer to present in Mission planning efforts.

Project Management and Environmental Policy Specialist, Environmental Governance Program, USAID, Philippines (January–May 2002). Helped develop the contract workplan. Formulated a subcontracting procedure for the engagement of local contractors to provide services in environmental management. Wrote the technical justification for an expanded and modified workplan. Helped establish an office and operating procedures.

Integrated Water Resources Management Specialist, South Caucasus Regional Water Management Project, Phase I Design, USAID (October 2000–April 2001). Participated on an international and local team that designed the implementation phase of a multi-country project focusing on the Araks River basin. Responsible for addressing the economic, policy, and legal components of the project design, including Armenia's international agreements with its co-riparians (Turkey, Georgia, Iran, and Azerbaijan); the opportunities for NGOs to facilitate international cooperation; and the opportunities for improved water-resources monitoring and information sharing.

Environmental Policy and Communications Specialist, Indonesia Natural Resources Management Program, Protected Areas Management Component, USAID (August 1999). Wrote a discussion paper on enhanced- and alternative-financing mechanisms for Indonesian national parks. Worked with Indonesian specialists to detail options for the efficient use of financial resources and the generation of new funds through debt-for-nature swaps, carbon-offset programs, and privatization. Co-led the development of a training manual for Indonesian national park managers, entailing policy guidelines, instructional fact sheets, and reference lists for further resources.

Water Policy Specialist, Workshop on Transboundary Water Resources, USAID/RCSA and the Southern African Development Community (June–July 1999). Coordinated the technical contributions of six senior experts into a one-week course for senior Southern African policy makers on transboundary water resource management.

Technical Writer and Policy Reform Advocate, Indonesia Natural Resources Management Program, Protected Areas Management Component, USAID (February–April 1999). Documented lessons learned from the field in a range of publications in an effort to stimulate effective policy reform. Interviewed key stakeholders and audience members, then designed and wrote one-page fact sheets targeted at different audiences to promote debt-for-nature swaps, strategic planning exercises, and conservation-awareness programs. Researched and drafted a discussion paper on alternative financing mechanisms for Indonesian national parks, such as privatization, debt swaps, and conservation trusts. Lobbied senior Government of Indonesia staff, international donors, and the private sector to educate decision makers on the win-win results of debt-for-nature swaps.

Proposal Coordinator (May 1996–February 1998). Managed the preparation of proposals to international donor agencies for the company's environment and natural resources and governance and public sector management practice areas. Analyzed requests for proposals and other bidding documents, facilitated strategic planning sessions to outline DAI's response, and monitored each step of the response process from receipt of bidding document to proposal submission. Coordinated the work of proposal teams comprising 5-10 staff members, including senior managers, technical specialists, recruiters, contributing writers, and contracts specialists. Designed proposal graphics and worked with graphic artists, word processors, and editors to design proposal layout to best communicate with target audience.

Natural Resource Management Consultant, World Bank–Africa Region, Environmentally Sustainable Development Division (August 1995–May 1996). As part of a five person, multidisciplinary team, researched, co authored, and edited the Bank's Water Resources Management Strategy for Sub Saharan Africa. Reviewed draft contributions from outside experts and provided editorial feedback. Organized and participated in African stakeholder workshops in Nairobi and Dakar to review Strategy in draft form. Facilitated discussion session on improving civil society participation in water resources management.

Water Resources Management Intern, World Bank–Africa Region, Environmentally Sustainable Development Division (Summer 1994). As part of Master's degree project, wrote position paper for Bank's Water Resources Management Strategy for Sub Saharan Africa, entitled "International River Basins in Sub-Saharan Africa: A Strategy for Fostering Co-Riparian Cooperation." Created database with indicators of capacity building and international cooperation for 250 Bank river basin projects in the region. Made policy recommendations based on this analysis.

Designed project tracking system and trained office staff in its use. Monitored and evaluated rainwater catchment tank and gravity-feed pipe system project that were collaboratively implemented by Yayasan Dian Desa and communities themselves. Led staff in organization of workshops for training of women users in operation and maintenance of pipe systems, and mentored counterparts in organization of community forum prior to implementation of project requiring water sharing between two villages. Represented this community development organization in fora with other national and international non-government organizations.

EDUCATION

Master of Environmental Management, Resource Economics and Policy, Duke University, 1995
B.A., Human Biology, Stanford University, 1990